Hyundai Glovis Co Ltd - Climate Change 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Hyundai GLOVIS is a leading global logistics and distribution company based in Korea, providing comprehensive third-party logistics services as well as strategies and designs that cover the entire logistics process. Our business also includes shipping, KD distribution, trading and auto biz (preowned car auctions). Since our establishment in 2001, we have been growing significantly year by year with our best-in-class experts and cutting-edge IT systems. We aim to become a global top-tier total SCM solution provider through our continuous investment in infrastructure and engagement in socially responsible activities.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date
January 1 2022

End date
December 31 2022

Indicate if you are providing emissions data for past reporting years
Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for
3 years

Select the number of past reporting years you will be providing Scope 2 emissions data for
3 years

Select the number of past reporting years you will be providing Scope 3 emissions data for
3 years

C0.3

(C0.3) Select the countries/areas in which you operate.
Republic of Korea

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.
KRW

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.
Operational control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?
Heavy Duty Vehicles (HDV)
Marine

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	KR7086280005

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	1. Governance position and responsibility The CEO, as the representative responsible for operating the company, holds the responsibility for making decisions on significant issues that contribute to the company's sustainable growth. For climate-related issues identified through materiality assessments, the CEO operates the Business Risk Management Committee (BRMC) to make decisions. 2. Relevance to climate change On the occurrence of climate-related issues, the Environment Business Team (EBT) reports them to the CRO after conducting a materiality assessment. Substantive climate-related issues are reported to the BRMC, whose chairperson is the CEO. The BRMC makes discussions on the substantive issues and the CEO makes the final decision on them. The substantive issues on which the CEO made final decisions are reported to the Board of Directors (BOD) if the issues have a significant impact on the business' decision-making.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Overseeing and guiding employee incentives Overseeing and guiding the development of a transition plan Reviewing and guiding the risk management process	<Not Applicable>	Hyundai Glovis' BOD resolves important matters concerning the company's operations and oversees the duties of the directors and executives. The BOD has the authority to approve annual budgets, capital investment plans, and business plans, as well as significant changes to the initial budgets, capital investment plans, and business plans. Additionally, it resolves and reviews joint investments or significant cooperative agreements exceeding USD 10 million and considers mergers. In the reporting year, it addressed topics such as investments and installation of scrubbers on vessels and environmentally friendly ballast water policies, related to the regulation of sulfur compounds as air pollutants. Hyundai Glovis reports significant issues based on the materiality of risks and opportunities related to climate change to the CEO through the CRO reporting line. The CEO makes decisions on significant issues, and reports matters that have a significant impact on the company's business decisions to the Board of Directors. Therefore, the EBT continuously monitors climate change issues and reports the monitoring results to the CEO through the CRO for overall business reporting. Regarding the significant issue of emissions trading, the EBT aggregates greenhouse gas emissions on a quarterly basis, analyzes performance against emission targets, and assesses achievement. Once the performance is completed, the emission volume and key achievements are reported to the BOD and made public through the business performance report. Moreover, the EBT reports environmental management performance (plans/results) to the BOD at least twice a year, and in the reporting year, it provided a report on the progress of ESG initiatives.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Hyundai Glovis' BOD consists of nine members, including three executive directors, five independent directors, and one non-executive director. The competence of board members is judged by their academic background, experience, and tenure in the industry. Two board members have expertise in climate change-related issues. One board member is an associate professor of the Civil & Environmental Engineering Department at KAIST (Korea Advanced Institute of Science and Technology). The other board member is the former the president of the Korea Institute of Corporate Governance and Sustainability (KCGS), the country's leading ESG rating agency. Furthermore, we provide sufficient information to independent directors on the company's business and business strategy. To enhance the expertise of independent directors on climate change, we provide seminars on climate change issues.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee
Chief Risks Officer (CRO)

Climate-related responsibilities of this position
Setting climate-related corporate targets
Managing public policy engagement that may impact the climate
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line
Quarterly

Please explain
1. The reason why CRO takes responsibility for climate-related issues
As climate-related risks have significant impacts on the company, the risks must be addressed quickly and in order. Hyundai Glovis has formed the Environment Management Committee (EMC) to systematically monitor and address the risks. EMC receives reports from relevant departments on all environmental issues (including climate change), conducts materiality assessments, and makes decisions. CRO, the head of EMS, is the decision-maker on reported issues and is responsible for the company's safety and environmental risk management operations. Hyundai Glovis, a logistics company, emits GHGs mostly originating from cargo vehicles and ships. As climate change risks from cargo vehicles and ships have direct impacts on safety and assets, CRO is designated as the most suitable position for managing climate-related issues and risks. Accordingly, CRO's key performance indicators (KPIs) incorporate environmental management performance, including climate change, to implement climate-related issues and risk management.
2. CRO's position in corporate organizational structure and their responsibilities
CRO monitors the risk factors for safety, health, and the environment. In addition, CRO plays a role as the person in charge of Safety and Health Management (based on Occupational Safety and Health Act) and the head of EMC. Therefore, CRO takes the highest position in the environment-related department in Hyundai Glovis. As CRO monitors and addresses environmental issues that affect the company's business, it is possible to quickly respond to the issues through prompt decision-making when climate-related issues take place. Furthermore, CRO takes the position to communicate directly with CEO and BOD in the event of substantial risks.
3. The assessment and monitoring process of climate-related issues
Hyundai Glovis monitors environmental issues that may arise from relevant departments through EMC. Among them, climate change issues, risks, and opportunities are managed by EBT. Following the risk management manual, the team reviews issues related to domestic and international regulations, agreements, and progress in related tasks regularly. In the event of a risk occurrence, a significance assessment is conducted, and it is reported to CRO, the Chairperson of EMC. For issues with low significance, CRO makes decisions and implements responses independently. However, significant issues are reported to the CEO. Reported significant issues are considered as key agenda items in BRMC, chaired by the CEO, and decisions are made. If necessary, decisions are made through the BOD. An example of this is the greenhouse gas reduction project by the Ministry of Land, Infrastructure, and Transport. The project was classified as a non-significant issue based on the materiality assessment criteria of "impact on the business & compulsion." Therefore, CRO made independent decisions to execute the reduction project.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive
Chief Risk Officer (CRO)

Type of incentive
Monetary reward

Incentive(s)
Salary increase

Performance indicator(s)
Achievement of climate transition plan KPI
Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to
Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)
The purpose of the CRO performance indicator review is to assess our environmental management performance based on the evaluations from key external initiatives and assessment agencies. Our environmental management performance is measured through the evaluations of KCGS' ESG assessment and CDP's assessment. The achievement of performance goals is determined based on the number of ratings that exceed or fall short of the target rating. Both ESG and CDP evaluations are conducted annually, resulting in the calculation of performance achievements on a yearly basis. In the long term, the promotion process takes into account the achievement of goals across multiple years.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The environmental evaluations of KCGS and CDP provide an objective assessment of our company's impact on the environment through ratings. These evaluations help us identify climate change-related trends and determine the direction we should take. In addition, CDP requires companies to publicly disclose their emissions reduction activities, and the actual implementation of climate transition plans is reflected in CDP scores. We consider it crucial to implement climate transition plans and achieve reduction targets, and we strive to make efforts towards this. The results of these evaluations are reflected in the CRO's Key Performance Indicators (KPIs), which serves as a source of motivation for Hyundai Glovis. We analyze the evaluation results to identify critical areas for improvement and strive to enhance our performance for the following evaluations.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?
Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	2022-2025
Medium-term	3	10	2025-2032
Long-term	10	30	2032-2052

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

(1) Definition of substantive financial impact
Hyundai Glovis defines a loss of KRW 50 million as a substantive financial impact. Therefore, if climate change-related compliance costs, greenhouse gas reduction costs, reputation management costs, or adaptation costs to physical environmental changes exceed KRW 50 million, they are classified as having a significant financial impact and must be reported to the CRO, who is responsible for climate change risk management. In cases where matters that have a significant impact on the company's management decisions arise, they are reported to the BOD.

(2) Definition of substantive strategic impact

Hyundai Glovis conducts a materiality assessment of risk/opportunity factors using a matrix, where the result of the "impact on the business & compulsion" is classified into three categories: Low, Medium, and High. Cases falling under the High category (0.45 or higher) are defined as having a substantive strategic impact. The criteria for substantive strategic impact are mainly evaluated on the basis of regulation, technology and market. Internally, they are evaluated based on the impact on the business and compulsion, so if they receive a high rating, they have to be reported to the CRO, who is responsible for climate change risk management. Additionally, in cases where matters that have a significant impact on the company's management decisions arise, they are reported to the BOD.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
1. Climate change risk and opportunity identification method:
Hyundai Glovis strives to effectively respond to the risks and leverage them as opportunities to create new businesses in the face of new regulations, market changes, natural disasters, and other factors. The company has established and operated a risk management manual to identify the risks that directly impact or have compelling implications for its business operations. Climate change-related risks are monitored by the EBT based on the risk management manual. The subjects to be monitored include business sites directly managed by the company and upstream/downstream sites. Additionally, the monitoring scope for climate change-related factors takes into account both risk factors and opportunity factors.

2. Climate change risk assessment method:
Hyundai Glovis identifies the risks based on the risk management manual and conducts a materiality assessment using the matrix technique. The matrix technique sets the X-axis as the impact on the business and the Y-axis as the compulsion. When risks such as climate change regulations, physical damages, and stakeholder demands arise, an assessment is conducted regarding their impact on the business and the compulsion involved. The assessment grades of the impact on the business and those of compulsion are multiplied together to calculate the final score. The final score determines the priority based on the materiality assessment. In cases where the materiality assessment scores are the same, the priority is determined based on the following criteria:

1) Risk/opportunity factors that are already subject to legal/regulatory obligations
2) Risk/opportunity factors that are confirmed for future adoption as legal/regulatory obligations
3) Opportunity factors that generate a financial impact due to legal/regulatory changes or expansion into new business areas
4) Risks/opportunities with indirect/non-financial impacts due to engagement activities by customers, investors, civil society organizations, etc.
5) Risk/opportunity factors with a high likelihood of future adoption as legal/regulatory obligations
6) Risk/opportunity factors that have an impact on the company's business areas other than legal/regulatory requirements

3. Climate change risks and opportunities response process
Based on the Risk Management Manual, the EBT considers risks from short-, medium- and long-term perspectives, along with opportunity factors. When risks and opportunity factors arise, the EBT conducts a materiality assessment and reports the results to the CRO. The CRO makes direct decisions regarding low-materiality risks and opportunity factors, while high-materiality risks and opportunity factors are reported to the BRMC, which consists of all internal directors. The BRMC makes decisions on significant risks and opportunity factors, and for matters that require further deliberation, the final decision is made by the BOD. The decisions regarding significant risks and opportunity factors are shared with the BOD through the Business Performance Report. Once decisions on climate change risks and opportunities are made, the relevant departments are notified of the outcomes, and these departments develop response strategies considering both financial and technical aspects and implement the countermeasures.
Hyundai Glovis has established a process to identify, assess, and respond to climate-related risks and opportunities in its directly managed facilities, as well as throughout the value chain, including upstream and downstream. As an upstream risk/opportunity factor, coastal shipping is considered as part of the agreement with the Ministry of Oceans and Fisheries for modal shift. The countermeasures include contracting and providing administrative support to transportation partners.
Regarding downstream risks/opportunities, there are environmental risks associated with specific customers. These risks are addressed through ongoing discussions and agreements with customers regarding sustainable and expanded eco-friendly transportation modes.
Hyundai Glovis identifies, evaluates, and responds to the risks and opportunities that have short-, medium- and long-term impacts. Short-term impacts include climate change-related risks such as emissions trading schemes and IMO DCS regulations with annual compliance obligations, as well as short-term physical environmental changes like typhoons and heavy rains. Medium-term impacts include risks during the transition period, such as the shift to electric and hydrogen vehicles, which align with Hyundai Glovis' reduction targets by 2030. Long-term impacts encompass long-term business strategies, physical environmental changes, and national carbon neutrality plans aligned with the 1.5°C scenario and Hyundai Glovis' reduction targets by 2050.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Hyundai Glovis is subject to both domestic and international greenhouse gas regulations. In South Korea, the company is included in the Emissions Trading Scheme and falls under the category of paid allocation. Compared to other sectors, Hyundai Glovis faces a higher greenhouse gas reduction burden of 10% (paid allocation ratio), which means that failure to achieve emission reduction targets would result in increased financial liabilities. Analysis of the financial impact arising from the greenhouse gas reduction burden in consideration of reduction rates, adjustment coefficients, and allocation ratios within the third commitment period of the Emissions Trading Scheme for 2021, suggests potential financial losses ranging from approximately KRW 450 million to KRW 940 million. Moreover, Hyundai Glovis faces significant risks in complying with the Emissions Trading Scheme as it has limited potential for emissions reduction compared to other sectors. Additionally, Hyundai Glovis' shipping business is subject to regulations under the International Maritime Organization's Data Collection System (IMO DCS). This regulation mandates the submission of a monitoring plan and the calculation of greenhouse gas emissions for all ships exceeding 5,000 tons. Failure to report fuel consumption data for two consecutive years would result in the prohibition of vessel operation, leading to a decrease in revenue. Estimating the potential damages, based on the revenue in 2022, suggests a loss of approximately KRW 4,570.9 billion.
Emerging regulation	Relevant, always included	The EBT monitors, evaluates, and assesses climate change-related issues, including domestic and international regulations, in accordance with the Risk Management Manual. Significant risk factors identified through monitoring are reported to the CRO, who subsequently reports to the CEO. Hyundai Glovis evaluates the financial costs associated with regulatory compliance and the potential losses resulting from non-compliance to identify risks associated with regulations. Currently, the identified new regulations include the Carbon Intensity Indicator (CII) and the Energy Efficiency Existing Ship Index (EEXI), which have been in effect since January 2023. Regarding CII, there is a possibility of operational losses due to compliance measures and potential voyage restrictions in case of non-compliance. As for EEXI, there are costs associated with equipment installation for regulatory compliance and a risk of vessel immobilization in the event of non-compliance.
Technology	Relevant, always included	To promote the spread of eco-friendly logistics, the government has set a vision for the transportation sector in its 2050 roadmap. The goal is to reduce greenhouse gas emissions in the transportation sector by transitioning from conventional internal combustion engine vehicles to environmentally friendly vehicles such as electric and hydrogen-powered vehicles. The existing 2030 national greenhouse gas reduction roadmap has also set a target of reducing emissions in the transportation sector by 37.8% compared to the 2018 base year. Additionally, the “K-EV100” program (a governmental initiative to convert all business vehicles to pollution-free models) is underway, targeting private companies to switch their owned or leased vehicles to electric or hydrogen-powered vehicles by 2030. With the strengthening of greenhouse gas reduction regulations in the transportation sector, the demand for eco-friendly transportation is expected to increase in line with government policies. Recently, global automotive OEMs have also established plans to transition 100% of their vehicles from internal combustion engines to eco-friendly vehicles. As eco-friendly logistics becomes a requirement in the transportation process, companies that fail to secure eco-friendly logistics technologies face the risk of obsolescence in future industries. Therefore, it is necessary to actively embrace eco-friendly logistics through the adoption of eco-friendly technologies. Hyundai Glovis is deploying hydrogen trucks on the Pyeongtaek-Ulsan route to prevent losses due to the lack of eco-friendly logistics technologies. As the demand for eco-friendly logistics increases worldwide, the market size for eco-friendly logistics is also growing rapidly. The global logistics market, measured in transaction value, amounted to USD 9.3 trillion in 2018, with an expected average annual growth rate of 7.4% to reach USD 16.4 trillion by 2026. However, companies that do not engage in eco-friendly logistics risk falling behind in the competitive logistics market. If our company fails to prepare for eco-friendly logistics and all logistics contracts are terminated, it would result in a loss of approximately KRW 9,476.9 billion (based on the revenue in 2022) in the logistics sector, as reported in our financial statements.
Legal	Not relevant, explanation provided	Our EBT systematically addresses and manages climate change-related regulations such as emissions trading schemes and IMO DCS by registering them in our internal regulatory compliance system. We regularly monitor and manage these regulations, conducting biannual compliance assessments. The findings from these assessments, including management considerations and compliance status, are incorporated into our risk evaluation, which includes both current and new types of regulations. As a result of our systematic and proactive approach to climate change-related laws, we believe there are no legal violations, and to date, we have not encountered a single instance of non-compliance.
Market	Relevant, always included	In our Pure Car Carrier business segment, we have customers not only from Hyundai Motor Group but also from global OEM companies. However, due to the changing consumer perception of the environment and increased preference for eco-friendly companies, OEMs and manufacturing industries, including consumer goods companies, are striving to adopt eco-friendly transportation methods. Some automotive OEMs have declared carbon neutrality and are demanding eco-friendly transportation in their supply chains. In the bulk shipping sector, there is a growing trend of expanding climate change assessments in global initiatives such as the Sea Cargo Charter, which evaluates climate change responses in chartering contracts for decarbonization. Major grain companies, the members of this initiative, have been requesting our company to provide information on the types and consumption of sustainable fuels, expanding the scope of environmental information requirements. There have been leading customers in the eco-friendly sector have requested CDP ratings, SAQ 5.0 evaluations, average ship transport efficiency data, and other environmental information during the bidding process. However, if our company does not implement eco-friendly transportation practices or fails to properly address the requested environmental information, it may result in a decrease in customer shipments, contract discontinuation, and ultimately impact our revenue. In the event of such issues, long-term transportation contracts could be terminated, leading to potential losses of up to KRW 263.3 billion. Additionally, there are risks of contract termination for existing long-term agreements, resulting in even greater long-term revenue losses. Moreover, the negative impact on our reputation could make it challenging to attract new customers and lead to the loss of existing ones, posing significant risks. CDP particularly encourages companies to engage in climate-related information disclosure to score higher by implementing engagement activities in their supply chains, in addition to their company-wide initiatives. Hyundai Glovis, in its CDP supply chain engagement activities, includes the participation of Modal Shift meetings with its partners. To continuously disclose supply chain engagement activities, it is necessary for the partners to participate consistently. If Modal Shift partners do not actively engage, there could be potential issues, such as contract termination, which may impact their revenue.
Reputation	Relevant, always included	As the concern for climate change increases, companies are being demanded to provide transparent disclosure of their policies and capabilities in addressing climate change from various stakeholders. This transparency is directly linked to the company's reputation and growth. Non-financial information disclosure, along with financial information, is used as an important measure by external investors to assess the company's investment value. Failure to properly address these aspects can lead to significant disadvantages. Particularly, with the recent implementation of principles such as responsible investment and stewardship codes, environmental and climate change factors, which are key factors in determining investors' investment intentions, have become even more critical, and the risks associated with inadequate response have increased. For example, some companies are avoiding logistics companies that are not environmentally friendly, and there is a trend of reducing logistics contracts with companies that emit high levels of greenhouse gases or have damaged their environmental reputation. Companies that violate environmental regulations or have low sustainability ratings face increasing difficulties in securing logistics contracts. Certain customers are setting eco-friendly logistics as a prerequisite and strongly demanding confirmation through measures such as CDP ratings and SAQ 5.0 evaluations. Therefore, our company is diligently responding to global non-financial information disclosure initiatives. However, the criteria for such evaluations are becoming more stringent, and there is a growing trend for companies to participate in more initiatives to achieve higher ratings or scores. If Hyundai Glovis does not meet these rising evaluation standards, there is a risk that customers may consider terminating their contracts with the company. Therefore, customers and Hyundai Glovis should make efforts together to maintain contracts by continuing and expanding the use of eco-friendly transportation modes.
Acute physical	Relevant, always included	Due to global warming, typhoons are becoming stronger, bringing heavy rainfall and causing increased damage due to strong winds and floods. As a logistics and distribution company, Hyundai Glovis is affected by typhoons across its business operations, including coastal transportation, logistics centers, and land transportation. Typhoons can lead to blocked transportation routes due to road closures and cause delays or disruptions in logistics due to accidents on wet roads, resulting in revenue losses. Flooding or leakage in storage warehouses can also damage products, leading to significant revenue losses. Major damages caused by typhoons include injuries, casualties, and even fatalities. Property damages include damages to external walls and external facilities of business premises such as lighting, circuit breakers, and gate signs. Therefore, typhoons are classified as physical risks resulting from climate change, as they can have an impact on human lives and assets, affecting the company's finances. Hyundai Glovis establishes risk response measures and implements them to address these risks.
Chronic physical	Relevant, always included	If global temperature continues to rise due to greenhouse gas emissions and climate change, Hyundai Glovis faces financial risks due to heatwaves affecting its logistics warehouses, vehicles, and workforce. To assess the financial impact of heatwaves, the company has utilized the "Climate Change Adaptation Risk Assessment Support Tool (CRAS)" provided by the Ministry of Environment. The financial risks associated with heatwaves have been calculated until the year 2100. The estimated magnitude of revenue losses for the period after the last 10 years (2022-2031) is approximately 11-15 million won, and the maximum potential loss is projected to be around 68-92 million won between 2091 and 2100.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Other, please specify (Tightened greenhouse gas emissions regulations)

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Hyundai Glovis is subject to domestic regulations on the Emissions Trading Scheme, as it exceeded the greenhouse gas emission limit set by the government. The regulated facilities include Pyeongtaek Port Logistics Base and Ulsan 2CC, among others. Under this scheme, penalties are imposed if emissions exceed the allocated emission permits, with a fine of approximately KRW 10,000 per ton of shortfall. Adding surcharges, the estimated penalty for the current year in accordance with the Emissions Trading Scheme is KRW 215,758,400.

On the international side, Hyundai Glovis has been directly affected by the IMO DCS regulation since 2019 due to its maritime operations. This regulation requires the measurement, third-party verification, and reporting of greenhouse gas emissions for all ships exceeding 5,000 tons. Failure to comply with this regulation for two consecutive years would result in a ban on ship operations, leading to a decrease in revenue. If Hyundai Glovis fails to meet this regulation, an estimated loss is expected to be KRW 4,570,913,381,000 based on the revenue in 2022.

Given the significant business and financial impact of these climate-related regulations, a systematic response is necessary. The EBT evaluates and manages the Emissions Trading Scheme based on the risk management manual, considering the impact and enforceability of the regulations. The Maritime Safety team handles the IMO DCS regulation, conducting assessments and management based on the impact and enforceability criteria within the business' risk evaluation framework.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
4751129139400

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Potential financial impact: K-ETS fine (KRW 215,758,400) + Loss due to non-compliance with IMO DCS (KRW 4,570,913,381,000) = KRW 4,751,129,139,400

Method for calculating K-ETS fine:
2022 GHG emissions: 79,781 t
Allocation under KAU22: 77,895 t
Shortfall under KAU22: 79,781 - 77,895 = 1,886 t

Calculated based on the maximum fine of KRW 100,000 /t
Fine: 1,886 t* KRW 100,000 = KRW 188,600,000
Surcharge: KRW 188,600,000 * 12 * 1.2% = KRW 27,158,400
K-ETS fine = Fine (KRW 188,600,000) + Surcharge (KRW 27,158,400) = KRW 215,758,400

Loss from non-compliance with IMO DCS is calculated based on the revenue from the maritime business segment, which is KRW 4,570,913,381,000 (2022 revenue)

-K-ETS: According to national enforcement decree, a business entity eligible for allocation that fails to surrender the required amount of certified emission permits will be subject to fines within the range of KRW 100,000 /tCO2e. The amount of fines can reach up to three times the average market price of emission permits for the compliance year. Additionally, non-compliant companies that do not pay the fines will be charged a surcharge of 1.2% per month. Hyundai Glovis has been allocated 77,895t of free emission permits (KAU22) and emitted 79,781t of CO2 in 2022. Assuming no fine payment until the settlement date of the following compliance year, the estimated fine under the K-ETS amounts to KRW 215,758,400. While the direct financial loss for the company is relatively minor given its business scale, non-compliance with emission trading regulations can negatively impact the company's reputation, leading to a potential decrease in customer demand and revenue loss. Therefore, the indirect loss from reputational damage and reduced customer service demand is expected to outweigh the visible financial loss.
-IMO DCS: It has been implemented since 2019, requiring the measurement, third-party verification, and submission of greenhouse gas emissions for all vessels exceeding 5,000t. Therefore, Hyundai Glovis has been reporting fuel efficiency data since 2020. If the reporting is not conducted for two consecutive years, all vessels will face a ban on operations, resulting in a loss of revenue due to the inability to provide maritime services. Failure to comply with the regulations would prevent the company from offering shipping services for all vessels, leading to an estimated revenue loss of approximately KRW 4,570.9 billion based on the revenue in 2022.

Cost of response to risk
202833738

Description of response and explanation of cost calculation
Situation: In 2022, Hyundai Glovis was subject to both domestic greenhouse gas regulations, namely the Emission Trading Scheme (ETS), and international greenhouse gas regulations, known as the International Maritime Organization's Data Collection System (IMO DCS).
Task: To comply with the ETS, Hyundai Glovis, as a company eligible for paid allocation, needs to report its greenhouse gas emissions for the reporting year and is subject to a 10% reduction burden compared to other industries. Under the IMO DCS, all ships exceeding 5,000 tons are required to implement a Monitoring Plan and report their greenhouse gas emissions.
Action: To minimize greenhouse gas risks, our company has received domestic greenhouse gas regulation consulting in 2022, and our maritime safety team has utilized the IMO DCS-related system to address overseas ships. In addition, we are implementing various reduction activities such as modal shift, upgrading logistics vehicles, idle-stop conditioning, idle-stop air heaters, and eco-driving to reduce greenhouse gas emissions. We have a systematic approach to managing risks associated with greenhouse gas regulations, which has resulted in some financial investments. The financial investment cost amounts to KRW 202,833,738, and the breakdown of the investment cost is as follows:

* Management cost: cost to respond to domestic GHG regulations + cost to respond to international GHG regulations = about KRW 202,833,738
(1) cost to respond to domestic GHG regulations: Target Management System consulting cost + external verification cost + system operation cost = about KRW 159,045,000
(2)) cost to respond to international GHG regulations: IMO DCS related system cost + external verification cost = about KRW 43,788,738

Result: As a result of implementing greenhouse gas reduction activities such as coastal shipping, Hyundai Glovis has never violated any domestic or international greenhouse gas regulations.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient modes of transport

Primary potential financial impact
Reduced direct costs

Company-specific description
As greenhouse gas emissions in Korea have rapidly increased, Korea has become a country with high greenhouse gas emissions, more than doubling the emissions compared to 1990. To reduce greenhouse gas emissions, the government has introduced greenhouse gas regulations and set reduction targets. The transportation sector has particularly high reduction targets. To achieve the reduction targets in the transportation sector, a shift to eco-friendly vehicles and a change in transportation modes are necessary.

One of the most representative methods for greenhouse gas reduction through transportation mode change is the Modal Shift, which is being promoted by the Ministry of Land, Infrastructure and Transport. Modal Shift is a project that converts land-based logistics to maritime logistics, aiming to reduce greenhouse gas emissions by using efficient transportation modes. Hyundai Glovis conducted a risk assessment for Modal Shift and analyzed the associated opportunities. The analysis revealed positive effects, including a reduction in greenhouse gas emissions and operational costs. A notable example is that Hyundai Steel and POSCO shifted their transportation routes from road transport to coastal shipping, such as from Suncheon to Ulsan and from Gwangyang to Dangjin, resulting in a reduction of 75,944 tCO2eq in greenhouse gas emissions in 2022.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
49246515865

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure
Due to the initiatives such as the Green New Deal and low-carbon transition plans, the demand for eco-friendly transportation is increasing among stakeholders. Consequently, transportation modes that reduce greenhouse gas emissions not only fulfill customer needs but also generate more opportunities due to the positive image of environmentally friendly logistics companies. In response, Hyundai Glovis is actively reducing greenhouse gas emissions in the transportation process through the Modal Shift, recognized as an efficient transportation mode by the Ministry of Land, Infrastructure and Transport. Efforts are being made to promote the activation of the Modal Shift. The shipments of Hyundai Steel, POSCO, and other companies have been transported through the Modal Shift, and the financial impact caused by these activities has been assessed as an opportunity factor, based on the difference in operating costs.

Direct cost reduction caused by operating costs: land transportation cost (KRW 59,790,712,068)) – ship transportation cost (KRW 10,544,196,203KRW) = KRW 49,246,515,865

Cost to realize opportunity
226416000

Strategy to realize opportunity and explanation of cost calculation
Situation: Korea has implemented greenhouse gas regulations and set reduction targets for the transportation sector as part of its efforts to reduce greenhouse gas emissions. The reduction target for the transportation sector is relatively high.

Task : To achieve the reduction targets in the transportation sector, it is necessary to shift towards environmentally friendly vehicles and implement changes in transportation modes to reduce greenhouse gas emissions.

Action : Hyundai Glovis has developed and operated an inland shipping system, including a carrier management system that enables the management of vessel schedules and operations, to systematically implement and maintain the Modal Shift project. The system undergoes regular maintenance and continuous improvement. In 2022, approximately KRW 228,345,000 was spent on maintenance costs for the inland shipping system. Hyundai Glovis is committed to investing heavily in system enhancements to promote the Modal Shift and is dedicated to expanding its implementation. Ongoing discussions are being conducted with our key customer, Hyundai Steel, to facilitate their participation in the Modal Shift project. Additionally, we strive to contribute to the reduction of greenhouse gas emissions in the downstream transportation sector of our customers' Scope 3 emissions.

Result: As a result, in 2022, by shifting a portion of Hyundai Steel and POSCO's cargo from road transportation to inland shipping, Hyundai Glovis achieved a financial benefit of approximately KRW 49,246,515,865 and reduced greenhouse gas emissions by 75,944 tCO2eq. Furthermore, with the addition of Modal Shift methodology to the external project methodology of the ETS, it is expected that securing offset volumes through Modal Shift, reducing emissions, and trading emission permits will generate more opportunities from the third commitment period onward.

* Description of response and explanation of cost calculation: Efforts are being made to expand the cost of opportunity utilization with the maintenance cost of the in-house coastal shipping system for the vessel operation system in 2022, which amounted to KRW 228,345,000.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of new technologies

Primary potential financial impact
Reduced direct costs

Company-specific description
Hyundai Glovis considers greenhouse gas reduction as a significant business opportunity and analyzes its financial and market impacts. In line with this, along with greenhouse gas reduction technologies, the company has explored innovative technologies for energy savings and introduced Eco-Driving practices. Eco-Driving is a technology that analyzes the driving habits of vehicle drivers, provides real-time information to them, and monitors the vehicle’s fuel efficiency in real-time to improve driving habits and enhance fuel efficiency, thereby reducing greenhouse gas emissions. By adopting this technology, not only greenhouse gas reduction but also cost savings through energy savings can be achieved. Hyundai Glovis has equipped all vehicles within its organizational boundaries with Digital Tachographs (DTG) to monitor real-time driving conditions such as instantaneous speed, brake signals, acceleration, and engine rotations per minute. The data is analyzed, and driving habit reports are transmitted to drivers' smartphones for fuel efficiency improvement activities. In the reporting year, Eco-Driving was implemented on 871 freight vehicles with DTG installed, resulting in a fuel consumption reduction of 1,311,091 liters. As a result, there was a tangible decrease in greenhouse gas emissions from the company's freight transportation, leading to the recognition of winning the Fuel Efficiency King award from the Ministry of Land, Infrastructure, and Transport.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
2416196819

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Eco-driving is actively recommended by the Korea Transportation Safety Authority. It is estimated that by introducing the eco-driving system, greenhouse gas emissions can be reduced by approximately 5% through driving practices alone. Therefore, Hyundai Glovis has implemented the eco-driving system in 871 freight vehicles, and the reduction cost resulting from fuel savings through eco-driving is as follows.
1. 871 vehicles equipped with Eco-driving
2. Total fuel consumption of freight vehicles before Eco-driving is installed: 26,221,823 ℓ (based on 878 freight vehicles)
3. Estimated total fuel consumption of freight vehicles after Eco-driving is installed: 24,910,732 ℓ (estimated 5% fuel efficiency improvement)
4. Fuel savings through the installation of Eco-driving: 26,221,823 - 24,910,732=1,311,091 ℓ
When converted to the average fuel cost in 2022 (1ℓ = 1,843 KRW), the company can get the financial gain of KRW 2,416,196,819
* Financial impact calculation method: Fuel savings through Eco-driving installation (1,311,091 ℓ) × diesel unit price (KRW 1,843 /ℓ) = 2,416,196,819KRW

Cost to realize opportunity
47034000

Strategy to realize opportunity and explanation of cost calculation
Situation: Eco-Driving is actively recommended by the Korea Transportation Safety Authority, and it is estimated that the introduction of the Eco-Driving system can reduce greenhouse gas emissions by approximately 5% through the driving practice alone.

Task & Action: Therefore, Hyundai Glovis has introduced the Eco-Driving system to 871 cargo vehicles. In 2022, the eco-driving terminals were installed in approximately 871 vehicles, including those from collaborating transportation companies. The installation and maintenance cost for each terminal is KRW 14,000 per month. Among this amount, KRW 4,500 is borne by Hyundai Glovis, while the remaining KRW 9,500 is covered by the drivers. When calculated annually, the total management cost for 2022 amounts to approximately KRW 47,034,000.

*Opportunity utilization cost calculation method: the number of trucks equipped with Eco-Driving in 2022 (871 trucks) × 1 month maintenance fee paid by Hyundai Glovis (KRW 4,500/truck) × 12 months = KRW 47,034,000

Result: Hyundai Glovis is putting a lot of effort into reducing greenhouse gas emissions from cargo vehicles, considering that a significant amount of greenhouse gases emitted due to the nature of logistics operations. One of the key initiatives is Eco-Driving, and to promote Eco-Driving, Hyundai Glovis provides support for the management cost of all terminals, including those of collaborating transportation companies. The terminals installed in the vehicles enable real-time data collection and monitoring of vehicle operation information. By analyzing driving habits, Hyundai Glovis prepares driving habit reports and provides them to drivers via smartphones. Through this process, drivers can improve their driving habits, enhance fuel efficiency, and reduce greenhouse gas emissions. Hyundai Glovis continuously monitors and manages the Eco-Driving program to ensure that greenhouse gas emissions are consistently reduced. As a result, approximately 3,479 tCO2eq of greenhouse gas emissions were reduced in 2022. Hyundai Glovis will continue to implement ongoing monitoring and management to ensure the continuous reduction of greenhouse gas emissions through Eco-Driving.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Markets

Primary climate-related opportunity driver
Use of public-sector incentives

Primary potential financial impact
Reduced direct costs

Company-specific description
As greenhouse gas emissions in Korea have more than doubled compared to the 1990 levels due to a rapid increase, Korea has introduced greenhouse gas regulations and set reduction targets. These reduction targets include ambitious goals for emission reduction in the transportation sector. In line with this, the Ministry of Land, Infrastructure and Transport (MOLIT) is making efforts to promote various reduction activities, including providing subsidies to encourage greenhouse gas reduction in the transportation sector.

To participate in the national greenhouse gas reduction policy, Hyundai Glovis is implementing projects promoted by the government, such as the installation of idle-stop air conditioners and heaters, as well as lightweight trailers, on an annual basis. While receiving partial government subsidies, these projects involve investment from Hyundai Glovis, requiring a thorough assessment of risks and opportunities. After obtaining approval from the CRO, the projects were implemented.

The evaluation results indicated not only greenhouse gas emissions reduction but also opportunities such as energy savings, strengthening cooperation with the government, and enhancing the company's reputation through environmentally friendly transportation. Based on these factors, Hyundai Glovis carried out the greenhouse gas reduction projects, installing 23 idle-stop air conditioners and 1 idle-stop heater. As a result, approximately 112.86 tCO2eq was reduced in 2022, and a direct cost savings of KRW 97,774,448 was achieved.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
97774448

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The total investment cost for the installation of idle-stop air conditioners and idle-stop heaters that resulted in greenhouse gas reduction in 2022 is KRW 46,905,000. Among the total cost, the government subsidy is KRW 600,000 per unit for idle-stop air conditioners and KRW 240,000 per unit for idle-stop heaters. Therefore, the government subsidy amount for the installed reduction equipment in 2022 is KRW 14,040,000 (23 units of idle-stop air conditioners × government subsidy of KRW 600,000 per unit + 1 unit of idle-stop heater × government subsidy of KRW 240,000 per unit).

The financial benefit is KRW 83,734,448 , which is the sum of the financial benefit derived from the reduction of greenhouse gases through the installation of idle-stop heaters and idle-stop air conditioners (KRW 5,356,336 + KRW 3,777,925) and the fuel cost savings resulting from the installation (KRW 74,600,187).

- Financial benefit from the reduction of greenhouse gases through the installation of idle-stop heaters and idle-stop air conditioners:
Greenhouse gas reduction (112.86 tCO2eq) × Internal carbon price (KRW 47,460/tCO2eq tCO2eq) = KRW 5,356,336
- Fuel cost savings from the installation of idle-stop heaters:
Number of idle-stop heaters (1 unit) × Annual fuel savings per unit (2,050 liters) × Fuel price (KRW 1,843/liter) = KRW 3,777,925
- Fuel cost savings from the installation of idle-stop air conditioners:
Number of idle-stop air conditioners (23 units) × Annual fuel savings per unit (1,760 liters) × Fuel price (KRW 1,843/liter) = KRW 74,600,187

Our company utilized incentives from the public sector to install idle-stop heaters and idle-stop air conditioners in 2022. As a result, we achieved a direct cost reduction of KRW 97,774,448 through government subsidies and financial benefits from greenhouse gas reduction.

* Calculation method for direct cost reduction: Government subsidies (KRW 14,040,000) + Financial benefits (KRW 83,734,448) = KRW 97,774,448.

Cost to realize opportunity
832003497

Strategy to realize opportunity and explanation of cost calculation
Situation: South Korea has implemented GHG regulations to reduce GHG emissions. Reduction targets for the transportation sector are set, and the GHG reduction target for transportation is relatively high.
Task & Action: Hyundai Glovis actively strives to reduce GHG emissions in line with national policies and actively participates in the projects carried out by the government. We participated in the Green Logistics Conversion Project led by the Ministry of Land, Infrastructure and Transport(LIT), introducing idle-stop air conditioning and idle-stop heaters, and also joining in the installation of lightweight trailers. By actively engaging in green industries promoted by the government, Hyundai Glovis aims to maximize GHG reduction efforts. The implementation of idle-stop air conditioning and idle-stop heaters has been expanded beyond the initial pilot project and includes a larger number of vehicles. The company receives government subsidies for these initiatives. Hyundai Glovis regularly monitors the projects pursued by the Ministry of LIT and aligns its efforts accordingly to support the direction of these initiatives.
Result: As a result, Hyundai Glovis achieved first place in the Minister of LIT's Fuel Efficiency Champion Competition and received recognition as an exemplary company in the Environmental Information Disclosure category from the Ministry of Environment. Additionally, the company was designated as an Excellent Green Logistics Practitioner by the Ministry of LIT. In response to the recent focus on expanding eco-friendly logistics, Hyundai Glovis has entered into a multi-party agreement with the Ministry of Environment, Ministry of LIT, Ministry of Trade, Industry, and Energy, and Hyundai Motor Company to promote the deployment and expansion of hydrogen-powered vehicles in the logistics market. Hyundai Glovis consistently aligns its actions with the government's policy direction and leverages government subsidies to minimize direct costs in transitioning to eco-friendly logistics practices.
The cost of opportunity utilization related to the reduction in direct costs through the utilization of incentives in the public sector is KRW 832,003,497.
This cost includes the personnel expenses for government policy monitoring and analysis of opportunity factors, calculated as the annual salary per person (KRW 92,444,833) multiplied by the number of personnel (9 individuals).

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan
Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan
Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan
We have a different feedback mechanism in place

Description of feedback mechanism
Hyundai Glovis receives climate-related requests from stakeholders, including shareholders, shippers, investors, and customers. These climate-related requests include the company's medium- to long-term greenhouse gas reduction goals and plans, key climate-related objectives and challenges, and significant environmental achievements. The requests come in various forms, and the company responds to them through evaluations, providing information and data, and conducting interviews, among other methods.

Frequency of feedback collection
More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	The International Energy Agency's Net Zero Emissions by 2050 (IEA NZE 2050) scenario provides a roadmap to limit the global average temperature increase to within 1.5°C by 2050. To achieve this scenario, clean energy investments need to increase by more than three times by 2030, and the use of fossil fuels must be significantly reduced, with a discontinuation of internal combustion engine vehicle sales by 2035. Additionally, the scenario assumes carbon neutrality in electricity production by 2040 and an increase in the share of electric vehicles. It assumes strengthened domestic and international greenhouse gas emission regulations and enhanced policies to achieve carbon neutrality by 2050. Hyundai Glovis is expected to continue its efforts in transitioning to environmentally friendly transportation modes, eco-driving practices, and implementing transportation services utilizing electric vehicles. Increased investment in emission reduction activities and the adoption of electric vehicles will be crucial for achieving the goals in line with the scenario.
Physical climate scenarios: RCP 6.0	Company-wide	<Not Applicable>	According to the scenario, if greenhouse gas emissions continue on the current trajectory, it is projected that carbon dioxide concentrations will continue to increase until 2100. The Climate Change Projection Analysis for the Korean Peninsula, conducted by the Korea Meteorological Administration, assumes that by the latter half of the 21st century, parts of South Korea will experience an expansion of tropical and subtropical climates. Under the RCP 6.0 scenario, which represents a warming projection, an increase in the number of heatwave days, tropical nights, and summer days is anticipated, while the number of cold wave days and freezing days is expected to decrease. The increase in heatwave days may also have implications for the health of personnel within business facilities.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

What business strategies will Hyundai Glovis establish in response to the changes caused by climate change according to the scenario?

Results of the climate-related scenario analysis with respect to the focal questions

According to the IEA NZE 2050 scenario, GHG regulations are expected to increase, and minimizing the use of fossil fuels is inevitable. Currently, both nations and companies are implementing or formulating carbon neutrality plans in line with the IEA NZE 2050 scenario, and Hyundai Glovis is also developing a business plan to minimize GHG emissions. In fact, the IMO, by which our company is regulated, announced strengthened emission controls starting in 2023, and further strengthening is expected in the future. The automotive OEM companies, with whom Hyundai Glovis has contracts, are also declaring carbon neutrality, which may increase the demand for GHG reduction. Therefore, it is necessary to expand the reduction activities currently being implemented to more vessels and vehicles such as coastal shipping. In fact, active coastal shipping has led to a 21% increase in revenue from KRW 36,267,984,361 in 2021 to KRW 44,022,961,501 in 2022.
Furthermore, according to the scenario, an increase in the use of renewable energy and electric vehicles is expected. As the electric vehicle market grows, the amount of discarded electric vehicle batteries also increases, and since recycling is inevitable, there is a need for logistics for collecting and transporting them. Therefore, it is necessary to increase investment in dedicated transportation equipment, such as "platform containers," for transporting used electric vehicle batteries economically. Hyundai Glovis has developed the first domestic container for transporting used batteries and obtained a patent for it, and continues to expand its usage. In line with the trend of electric vehicle conversion, Hyundai Glovis signed an MOU with SSG in 2019 for cold chain logistics transportation, and since 2020, it has been providing delivery services with cold chain fresh goods delivery vehicles at the Kimpo Online Logistics Center NEO, operating 26 vehicles as of May 2022. In addition, in line with the domestic initiative, K-EV100, Hyundai Glovis has set a strategy to switch to 100% zero-emission vehicles, such as electric vehicles and hydrogen fuel cell vehicles, by 2025, for replaceable vehicle types (approved by the Ministry of Environment).
According to the physical change scenario, RCP 6.0, the risk of heatwaves in Korea is expected to increase significantly. In particular, Ulsan, where the KD logistics center is located, is projected to be in a tropical climate zone according to the RCP 6.0 scenario. Therefore, it can be expected that measures will be taken to protect employees from heatwaves in all facilities, including Ulsan, and to maintain the appropriate temperature within the logistics center. Based on the fact that some lines in the logistics center have already been converted to automated devices, an increase in the conversion to automation devices can be anticipated. Additionally, the introduction of unmanned vehicles and hardware packing robots suggests a transition to smart logistics factories.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	1. Impact of identified risks and opportunities on company's strategy Recently, global automotive OEM companies have declared carbon neutrality, encompassing transportation processes, and have been receiving requests about emission reduction plans and transportation efficiency improvement plans from shipping companies responsible for transportation, in addition to car manufacturers. Failure to adequately respond to these requirements may result in significant disadvantages such as reduced transport volume and contract termination. Therefore, Hyundai Glovis has established dedicated organizations for environmental management and ship technology since 2016, and has proactively responded by developing transportation efficiency improvement measures for car carrier vessels, setting mid- to long-term greenhouse gas reduction targets, and implementing reduction strategies. Additionally, Hyundai Glovis has obtained certification from the Clean Shipping Index (CSI) to conduct environmentally friendly transportation practices. 2. Period affected by the company's strategy If environmentally friendly transportation practices are not implemented, it can have short-term impacts of more than 3 years and long-term impacts of more than 15 years on revenue due to the downgraded ratings of supply chain evaluation and reputation by shippers. Additionally, there is a risk of losing customers in the worst-case scenario, which emphasizes the need for proactive responses.
Supply chain and/or value chain	Yes	1. Impact of identified risks and opportunities on company's strategy Hyundai Glovis has established a system to evaluate the environmental management performance and risk factors of its partner companies in order to spread the culture of environmental management throughout the logistics industry. Through this system, it diagnoses risk factors and provides incentives to excellent partner companies that are actively engaged in leading activities when it comes to bidding or allocating transportation volumes. The evaluation of environmental performance includes evaluating the greenhouse gas management system and reduction performance of partner companies, as well as conducting environmental management risk assessments. Furthermore, to reduce greenhouse gas emissions, Hyundai Glovis encourages partner companies to establish greenhouse gas inventories and participate in the initiatives related to national environmental policies, such as Green Logistics Certification systems and voluntary agreements, by incorporating their activities into the performance evaluation program for partner companies. For partner companies with inadequate evaluation results, Hyundai Glovis provides support such as consulting for developing green logistics business items. Therefore, through such engagement activities, Hyundai Glovis encourages partner companies to actively participate in greenhouse gas reduction efforts. 2. Period affected by the company's strategy With the increasing international interest in eco-friendly transportation, it is expected that the incentive system for partner company performance evaluations will be continuously maintained until all partner companies participate. It is anticipated that the impact of eco-friendly transportation will last for approximately 10 years until it stabilizes. In response, our company expects to gain ancillary benefits such as customer expansion and image improvement with early participation and growing demand for eco-friendly transportation companies.
Investment in R&D	Yes	1. Impact of identified risks and opportunities on company's strategy Due to the global regulations on exhaust emissions from internal combustion engines, the adoption of electric vehicles (EVs) is increasing worldwide. As the EV market grows, the quantity of batteries being used and discarded also increases. If the performance of a used battery drops below approximately 70% compared to a new one, it loses its value as a driving battery and becomes unsuitable for reuse. Consequently, there is a demand for logistics and recycling of used batteries. Our company has developed a dedicated container, called the "Platform Container," which allows for the economical transportation of used batteries. We have obtained a patent for this container, which can safely transport used batteries of various sizes and can be stacked for efficient storage. By utilizing this container, we can transport up to 17 units of used batteries based on an 11-ton cargo truck, which is more than three times the efficiency compared to conventional methods. Transporting with the "Platform Container" reduces greenhouse gas emissions by approximately one-third compared to previous methods, making a significant impact on our company's greenhouse gas reduction efforts. 2. Period affected by the company's strategy The Korea Energy Economics Institute (KEEI) estimates that the quantity of used batteries in the country will increase dramatically from approximately 4,700 units to around 80,000 units by 2030 within the next 10 years.
Operations	Yes	1. Impact of identified risks and opportunities on company's strategy Hyundai Glovis recognizes the need to undertake greenhouse gas reduction activities as the company falls under the category of a business entity eligible for paid allocation (10% paid allocation) according to the ETS, which demands more stringent targets. Accordingly, Hyundai Glovis is actively exploring various energy-saving directions and implementing greenhouse gas reduction technologies through energy diagnostics, consultations with energy and climate change experts, and other relevant consulting services. In 2022, the company implemented a range of greenhouse gas reduction activities such as coastal shipping, eco-driving, and installation of eco-friendly air conditioning systems. To achieve continuous reduction in greenhouse gas emissions, Hyundai Glovis annually formulates business plans, secures budgets, and actively engages in greenhouse gas reduction efforts. 2. Period affected by the company's strategy Domestic greenhouse gas regulations in South Korea are gradually becoming stricter, and the greenhouse gas reduction targets are continuously strengthened over time. Consequently, there is a need to continuously develop greenhouse gas reduction measures. Moreover, considering the government's announcement of the 2050 Net Zero target, the demand for greenhouse gas reduction is expected to persist at least until 2050.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues	Due to the changing consumer perception of the environment and the increasing preference for eco-friendly companies, OEM manufacturers and consumer goods industries are making efforts to adopt eco-friendly transportation methods. In addition, global automotive OEM companies have declared carbon neutrality, including the transportation process, and are requesting emission reduction plans and transportation efficiency improvement plans from shipping companies involved in the transportation. Failure to respond adequately to these requirements can have a significant impact on revenue, such as reduced transportation volume and contract termination. A notable example is that leading eco-friendly companies request CDP ratings, average shipping efficiency data for vessels, and other information when recruiting transportation companies through bidding processes. Therefore, our company reports to the CDP annually and has achieved a leadership rating, while continuously monitoring average shipping efficiency data for vessels. Moreover, there is an increasing demand for supplier evaluations such as SAQ 5.0 assessment and RSA evaluation. SAQ 5.0 assessment is closely related to global OEM bidding and includes factors such as systematizing sustainable management, which encompasses the overall business process including supplier management. SAQ 5.0 assessment is organized by the Drive Sustainability Initiative, formed by major automotive OEMs, and in collaboration with CSR Europe, it has enhanced SAQ certification. With the increasing customer demand for eco-friendly transportation, a failure to respond appropriately can lead to a decline in shipper ratings and reputation, resulting in significant short-term damage to revenue for over three years and potentially even the loss of customers. On the other hand, companies that proactively respond to eco-friendly transportation, like ours, are expected to have a positive long-term impact on revenue for over 10 years. Furthermore, due to recent issues such as greenhouse gas emission efficiency and fine dust, regulations on inland transportation have been strengthened. In response, the steel industry is actively adopting coastal shipping for the transportation of raw materials and products. Therefore, Hyundai Glovis, leveraging its experience in leading coastal shipping for steel products and raw materials within South Korea in collaboration with the Ministry of Oceans and Fisheries, strategically pursues new customer business every year. As a result, revenue from coastal shipping is gradually increasing, which directly affects overall revenue. In 2022, the Modal Shift to coastal shipping resulted in approximately KRW 44 billion in revenue profit. The coastal shipping business, a key sector of eco-friendly transportation, is expected to expand continuously in the domestic market. Our company strategically pursues new customer business every year, and we invest human and material resources and reflect the performance in the following year's business plan to respond to short-term impacts. Moreover, we anticipate a long-term impact of over 10-15 years.

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization’s climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with our climate transition plan	<Not Applicable>

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization’s climate transition.

Financial Metric
Revenue/Turnover

Type of alignment being reported for this financial metric
Alignment with our climate transition plan

Taxonomy under which information is being reported
<Not Applicable>

Objective under which alignment is being reported
<Not Applicable>

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
2224808479780

Percentage share of selected financial metric aligned in the reporting year (%)
8.25

Percentage share of selected financial metric planned to align in 2025 (%)
8.16

Percentage share of selected financial metric planned to align in 2030 (%)
8.91

Describe the methodology used to identify spending/revenue that is aligned
Hyundai Glovis has classified the revenue generated from eco-friendly businesses such as Eco-Driving, which involves improving drivers' driving habits to reduce greenhouse gas emissions, coastal shipping, which involves transitioning freight transportation from road to maritime to reduce greenhouse gas emissions, and the use of foldable containers to reduce greenhouse gas emissions through packaging efficiency, as the eco-friendly revenue. The company has determined that these businesses align with the 1.5°C transition plan.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Is this a science-based target?
No, but we anticipate setting one in the next two years

Target ambition
<Not Applicable>

Year target was set
2017

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2016

Base year Scope 1 emissions covered by target (metric tons CO2e)
3989509

Base year Scope 2 emissions covered by target (metric tons CO2e)
6062

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
3995571

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year
2030

Targeted reduction from base year (%)
26.57

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
2933947.7853

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
3924263

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
11019

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
3935282

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
5.6789451441147

Target status in reporting year
Retired

Please explain target coverage and identify any exclusions
The target is retired because as Korean government's emissions reduction target has changed from 2DCs to Net-Zero, Hyundai Glovis set new reduction targets accordingly.

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Is this a science-based target?
No, but we anticipate setting one in the next two years

Target ambition
<Not Applicable>

Year target was set
2017

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2016

Base year Scope 1 emissions covered by target (metric tons CO2e)
3989509

Base year Scope 2 emissions covered by target (metric tons CO2e)
6062

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
3995571

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2050

Targeted reduction from base year (%)
52.05

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
1915876.2945

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
3924263

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
11019

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
3935282

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
2.89893511006969

Target status in reporting year
Retired

Please explain target coverage and identify any exclusions
The target is retired because as Korean government's emissions reduction target has changed from 2DCs to Net-Zero, Hyundai Glovis set new reduction targets accordingly.

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 3

Is this a science-based target?
No, but we anticipate setting one in the next two years

Target ambition
<Not Applicable>

Year target was set
2020

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
163182

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
289501

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
43524

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
841705

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
813

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
1338725

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
1338725

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
12.17

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
21.59

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
3.25

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
62.77

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
0.06

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
99.8

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
99.8

Target year
2050

Targeted reduction from base year (%)
51.16

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
653833.29

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
204749

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

272925

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
38416

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
1092971

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
1081

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
1610376

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
1610376

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
-39.6633505755238

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Hyundai Glovis targeted following Scope3 categories: “products & services; fuel and energy-related activities not included in Scope1 and 2; downstream transportation & distribution; use of sold products; and disposal of sold products” ; "capital goods" and "business travel" are excluded from target.

Plan for achieving target, and progress made to the end of the reporting year
The Scope 3 emissions have increased compared to the baseline year. Emissions have increased from the use of purchased products and services, as well as from the use of sold products. Therefore, an emission reduction plan is necessary.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 4

Is this a science-based target?
No, but we anticipate setting one in the next two years

Target ambition
<Not Applicable>

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
4048198

Base year Scope 2 emissions covered by target (metric tons CO2e)
8532

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
4056730

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2030

Targeted reduction from base year (%)
37.8

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
2523286.06

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
3924263

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
11019

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
3935282

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
7.91995043522752

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
The target covers emissions from shipping and offices.

Plan for achieving target, and progress made to the end of the reporting year
The emissions have decreased compared to the baseline year in the reporting year. A continuous plan to reduce scope 1+2 emissions is necessary.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 5

Is this a science-based target?
No, but we anticipate setting one in the next two years

Target ambition
<Not Applicable>

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
4048198

Base year Scope 2 emissions covered by target (metric tons CO2e)
8532

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
4056730

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2050

Targeted reduction from base year (%)
73.77

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
1064080.279

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
3924263

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
11019

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
3935282

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
4.05820965774163

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
The target covers emissions from shipping and offices.

Plan for achieving target, and progress made to the end of the reporting year
The emissions have decreased compared to the baseline year in the reporting year. A continuous plan to reduce scope 1+2 emissions is necessary.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
No other climate-related targets

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	2	49
Implemented*	7	173816
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
93602

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
81310736688

Investment required (unit currency – as specified in C0.4)
434501950

Payback period
1-3 years

Estimated lifetime of the initiative
21-30 years

Comment
Realization of improved fuel efficiency of ship engine by applying fuel additives that remove sludge through completely burning condensed substances in fuel

---

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
231

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
135910904

Investment required (unit currency – as specified in C0.4)
120110000

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Fuel saving by installing air conditioners without car engine running which enable to avoid engine running only for cooling

---

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
153

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
71163721

Investment required (unit currency – as specified in C0.4)
29260000

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Fuel saving by installing heaters without car engine running which enable to avoid engine running only for heating.

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
5

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2647142

Investment required (unit currency – as specified in C0.4)
3000000

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Energy reduction activity that save fuel by efficiently controlling the power generation of vehicles.

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
3479

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2416196819

Investment required (unit currency – as specified in C0.4)
212657339

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Realization of energy saving by improving driving habits through Eco-driving.

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
402

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
200523101

Investment required (unit currency – as specified in C0.4)
1194600000

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Energy reduction activity that saves fuel due to fuel efficiency improvement by making trailers lighter

---

Initiative category & Initiative type

Transportation	Other, please specify (Eco-friendly logistics (Modal Shift))

Estimated annual CO2e savings (metric tonnes CO2e)
75944

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
49246515865

Investment required (unit currency – as specified in C0.4)
42546915625

Payback period
1-3 years

Estimated lifetime of the initiative
21-30 years

Comment
Promotion of the transition into sea transportation, an eco-friendly transportation method with higher efficiency, from land transportation

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Partnering with governments on technology development	Since 2009, Hyundai Glovis has been using coastal shipping to transport steel products, contributing to greenhouse gas reduction and preventing road damage and traffic congestion. Through these efforts, the company achieved a reduction of 75,944 tCO2eq in 2022. Starting from 2016, Hyundai Glovis has also entered into an agreement with the Ministry of Oceans and Fisheries for sustainable transportation, and in 2022, it received a subsidy of KRW 1.06 billion to support the ongoing Modal Shift project for vehicle transition.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (Green logistics certification)

Type of product(s) or service(s)

Shipping	Other, please specify (Modal shift to coastal shipping)

Description of product(s) or service(s)
To reduce greenhouse gas emissions, transportation of steel-related logistics can be achieved by using coastal shipping, which has better unit efficiency, instead of short-distance truck transportation that requires additional processes such as loading and unloading. Coastal shipping involves the process of cargo loading onto ships rather than using trucks. This method allows for the avoidance of greenhouse gas emissions.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Use stage

Functional unit used
Transport 4,787,985ton cargo with coastal shipping of 9,212tons per time instead of road transport of 25 tons per time

Reference product/service or baseline scenario used
Greenhouse gas emissions from road transport

Life cycle stage(s) covered for the reference product/service or baseline scenario
Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
75944

Explain your calculation of avoided emissions, including any assumptions
Calculate the amount of greenhouse gas emission from road transport and coastal shipping. The numbers are calculated based on their performance in 2022. Then calculate their difference which is the avoided emissions.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0.16

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (Taxonomy of approaches to mitigation of climate change in transportation sectors)

Type of product(s) or service(s)

Road	Other, please specify (Eco-driving)

Description of product(s) or service(s)
Eco-driving minimizes fuel consumption and the emission of carbon dioxide. Therefore, fuel efficiency of cargo vehicles is improved.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Use stage

Functional unit used
Transport with 871 cargo trucks from eco-driving.

Reference product/service or baseline scenario used
CO2 emissions from cargo vehicles without eco-driving.

Life cycle stage(s) covered for the reference product/service or baseline scenario
Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
3479

Explain your calculation of avoided emissions, including any assumptions
Calculate CO2 emissions from eco-driving vehicles and vehicles without eco-driving. The numbers are calculated based on their performance in 2022. Then calculate their difference which is the avoided emissions.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
1.27

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	Previously, the emissions from coastal shipping were categorized as Scope 3, category 9: Downstream transportation and distribution, in the calculation of Scope 3 emissions. However, starting from the reporting year, they have been redefined and included under Scope 3, category 4: Upstream transportation and distribution.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	No, because the impact does not meet our significance threshold	<Not Applicable>	When additional categories are added to Scope 3, the emissions from the new categories are recalculated for the baseline emissions of the reference year.	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

4048198

Comment

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
8532

Comment

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
163182

Comment

Scope 3 category 2: Capital goods

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
329

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
289501

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
43524

Comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1888

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 10: Processing of sold products

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
841705

Comment

Scope 3 category 11: Use of sold products

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
813

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 14: Franchises

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3 category 15: Investments

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3: Other (upstream)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

Scope 3: Other (downstream)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
ISO 14064-1
Korea GHG and Energy Target Management System Operating Guidelines
Other, please specify (IPCC Guidelines for National Greenhouse Gas Protocol and Accounting Tool)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
3924263

Start date
January 1 2022

End date
December 31 2022

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
3854998

Start date
January 1 2021

End date
December 31 2021

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
3123760

Start date
January 1 2020

End date
December 31 2020

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
4048198

Start date
January 1 2019

End date
December 31 2019

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
11019

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2022

End date
December 31 2022

Comment

Past year 1

Scope 2, location-based
10710

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2021

End date
December 31 2021

Comment

Past year 2

Scope 2, location-based
9439

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2020

End date
December 31 2020

Comment

Past year 3

Scope 2, location-based
8532

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2019

End date
December 31 2019

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
204749

Emissions calculation methodology
Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Scope 3 emissions calculation method: purchase quantity of vehicles certified by the Environmental Product Declaration (unit) × emission factor in the pre-manufacturing of phase products certified by the Environmental Product Declaration (kgCO2eq/unit) + emission factor in the manufacturing phase of products certified by the Environmental Product Declaration (kgCO2eq/unit))
Emissions calculation method: ∑ {Purchase quantity per vehicle × emission factor per vehicle before the phase of use of the Environmental Product Declaration (in the pre-manufacturing phase + in the manufacturing phase) } = 204,749 tCO2eq
In addition to logistics business, Hyundai Glovis operates a used car auction business. The amount of emissions occurred in the pre-use phase (pre-manufacturing phase + manufacturing phase) over the life cycle of products purchased (used car) during the reporting period was calculated.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
71

Emissions calculation methodology
Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
1. Scope 3 emissions calculation method: capital goods purchased in 2022 × emission factor of products certified by the Environmental Product Declaration
2. Emissions calculation method: ∑ Purchase quantity per product × emission factor of products certified by the Environmental Product Declaration (kgCO2eq/unit) Hyundai Glovis has managed the quantity of office supplies purchased in 2022, and accordingly, the GHG emissions of capital goods were calculated based on the emission factors of the office supplies certified by the Environmental Product Declaration.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
272925

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
1. Scope 3 emissions calculation method: Fuel purchase quantity × density × emission factor of fuel production
2. Emissions calculation method: ∑ (Purchase quantity per fuel × density × emission factor of production per fuel) = 272,925tCO2eq
The GHG emissions from the production and transportation generated by fuel purchases excluded in Scope 1 or 2 were calculated. The GHG emissions were calculated by applying the production emission factor of the domestic LCI DB into the fuel consumption quantity in Scope1 and 2 which was verified by a third-party.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
38416

Emissions calculation methodology
Other, please specify (Calculated based on the information on Hyundai Glovis' transport history and actual fuel efficiency of ships provided by its partners. The amount of emissions was verified by the Korean Standards Association as a third-party.)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Scope 3 emissions were calculated based on the information on Hyundai Glovis' transport history and actual fuel efficiency of ships provided by its partners. The amount of emissions was verified by the Korean Standards Association as a third-party.

Waste generated in operations

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Logistics services do not generate waste

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
1315

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Emissions calculation method: Travel distance per public transportation × GHG emission factor per public transportation = 1,315 tCO2eq
→ To calculate Scope 3 emissions of business travels, travel distance per public transport was calculated based on the business travel details of the company's personnel and general affairs system, and the emission factor was calculated based on the guidelines for low-carbon green events by the Korean Ministry of Environment. (The amount of emissions from business travels was verified by the Korean Standards Association as a third-party.)
The GHG emissions from business travels per transportation mean were calculated. The amount of emissions was verified by the Korean Standards Association as a third-party.

Employee commuting

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Excluded because the proportion of total Scope3 GHG emissions generated by employee commuting is less than 5% which does not affect the materiality standard.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Emissions of upstream leased assets are already calculated in Scope1, 2.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The logistics services contracted with Hyundai Glovis are applicable to upstream transportation and distribution. Therefore, all logistics services are reported to upstream transportation and distribution, so that downstream transportation and distribution are not relevant.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant, because Hyundai Glovis, which operates a used car auction business other than logistics, only sells final products as used cars without any processing process.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
1092971

Emissions calculation methodology
Other, please specify (sales amount (unit) of vehicles certified by the Environmental Product Declaration × emission factor in the disposal phase of vehicles certified by the Environmental Product Declaration (kgCO2eq/unit))

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
In addition to logistics business, Hyundai Glovis operates a used car auction business. The amount of emissions occurred in the use phase over the life cycle of products sold (used cars) during the reporting period was calculated.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
1081

Emissions calculation methodology
Other, please specify (the sales amount(unit) of vehicles certified by the Environmental Product Declaration × emission factor (kgCO2eq/unit) in the disposal phase of vehicles certified by the Environmental Product Declaration)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
In addition to logistics business, Hyundai Glovis operates a used car auction business. The amount of emissions occurred in the disposal phase over the life cycle of products sold (used cars) during the reporting period was calculated.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant, because Hyundai Glovis does not own downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant, because Hyundai Glovis does not franchise business.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant. Hyundai Glovis has an investment stake in Hyundai Engineering, but the amount is insignificant, less than 20%. Otherwise, the company invests in funds.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Upstream scope 3 emissions calculated in Category4. Upstream transportation and distribution

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The logistics services contracted with Hyundai Glovis are applicable to upstream transportation and distribution. Therefore, all logistics services are reported to upstream transportation and distribution, so that downstream transportation and distribution are not relevant.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date
January 1 2021

End date
December 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)
186669

Scope 3: Capital goods (metric tons CO2e)
291

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
270053

Scope 3: Upstream transportation and distribution (metric tons CO2e)
51071

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
356

Scope 3: Employee commuting (metric tons CO2e)
0

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
962149

Scope 3: End of life treatment of sold products (metric tons CO2e)
1183

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

Past year 2

Start date
January 1 2020

End date
December 31 2020

Scope 3: Purchased goods and services (metric tons CO2e)
173594

Scope 3: Capital goods (metric tons CO2e)
381

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
217762

Scope 3: Upstream transportation and distribution (metric tons CO2e)
51198

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
423

Scope 3: Employee commuting (metric tons CO2e)
0

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
881111

Scope 3: End of life treatment of sold products (metric tons CO2e)
1080

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

Past year 3

Start date
January 1 2019

End date
December 31 2019

Scope 3: Purchased goods and services (metric tons CO2e)
163182

Scope 3: Capital goods (metric tons CO2e)
329

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
289501

Scope 3: Upstream transportation and distribution (metric tons CO2e)
43524

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
1888

Scope 3: Employee commuting (metric tons CO2e)
0

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
841705

Scope 3: End of life treatment of sold products (metric tons CO2e)
813

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
1.5e-7

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
3935282

Metric denominator
unit total revenue

Metric denominator: Unit total
26981880971123

Scope 2 figure used
Location-based

% change from previous year
17.8

Direction of change
Decreased

Reason(s) for change
Other emissions reduction activities

Please explain
As a result of various reduction activities such as modal shift, eco-driving, and idle-free heaters implemented in 2022, the revenue in 2022 decreased by 17.8% compared to the revenue in 2021. (The intensity figure in 2021 : 0.00000018 units, the intensity figure in 2022: 0.00000015 units)

C-TS6.15

(C-TS6.15) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?

HDV

Scopes used for calculation of intensities
Report just Scope 1

Intensity figure
1e-10

Metric numerator: emissions in metric tons CO2e
66113

Metric denominator: unit
t.km

Metric denominator: unit total
448723512.65

% change from previous year
-1.1

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.
The emissions intensity from heavy duty vehicles decreased by about 1.1% compared to 2021 (2021 intensity: 0.00000000014892). The company made great efforts to reduce the emissions intensity through many greenhouse gas reduction activities. The activities include improving fuel efficiency through eco-driving, in-vehicle air conditioners and power generation control devices, and seek ways to implement eco-friendly vehicles

* The HDV's original metric denominator is 448,723,512,656,472. However, we revised metric denominator by dividing by 10^6 due to ORS's limitation on the range.

Marine

Scopes used for calculation of intensities
Report just Scope 1

Intensity figure
0.0000143551

Metric numerator: emissions in metric tons CO2e
3855501

Metric denominator: unit
t.km

Metric denominator: unit total
268579.7

% change from previous year
0.3

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.
The emissions intensity from marine increased about 0.3% compared to 2021((2021 intensity: 0.00001431349436). There was increase in ballast voyage and longer waiting time.

* The HDV's original metric denominator is 268,579,707,803. However, we revised metric denominator by dividing by 10^6 due to ORS's limitation on the range.

ALL

Scopes used for calculation of intensities
Report just Scope 1

Intensity figure
8.7e-9

Metric numerator: emissions in metric tons CO2e
3921614

Metric denominator: unit
t.km

Metric denominator: unit total
448992092.36

% change from previous year
-0.8

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.
Intensity figure in marine increased 0.3% and in HDV decreased 1.1%. Therefore, overall theres 0.8% of change from previous year.

*The total metric denominator is 448,992,092,364,275. However, we revised metric denominator by dividing by 10^6 due to ORS's limitation on the range.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	3923118	IPCC Second Assessment Report (SAR - 100 year)
CH4	77	IPCC Second Assessment Report (SAR - 100 year)
N2O	1069	IPCC Second Assessment Report (SAR - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Republic of Korea	3924263

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.
By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Headquarters	66773.249	37.50337	127.043
Sihwa Auction House	1.617	37.33481	126.7416
Yangsan Auction House	1.946	35.37013	129.0636
Asan KD	264.541	36.8759	126.8748
Ulsan1CC	15.716	35.51368	129.3671
Ulsan2CC	60.865	35.57587	129.3745
JeonjuCC	14.906	35.93829	127.1681
Pohang Business Office	10.839	35.95002	129.3886
Dangjin Business Office	18.478	36.97736	126.6858
Pyeongtaek Port Logistics Base	757.528	36.97851	126.8359
Bundang Auction House	2.152	37.34685	127.1748
Ulsan KD	53.05	35.69901	129.1903
Hyangnam Logistics Center	9.074	37.12299	126.9868
Incheon Business Office	0.931	37.48964	126.64817
Gwangyang Business Office	1.31	34.91693	127.59163
Ulsan Business Office	0.879	35.57687	129.37002
Ulsan Office	3.633	35.53324	129.38774
Seosan Business Office	0.843	36.83173	126.4784
Asan2KD	97.712	36.89826	127.063
JeonjuKD	0	35.53324	129.38774
GwangjuKD	0.421	35.13271	126.75047
Ulsan Logistic	0	37.50337	127.043
PyeongtaekLogistic	0	37.50337	127.043
Gwangyang Logistic	0.885	37.50337	127.043
Rugby team	25.667	37.50337	127.043
Chungju Office	1.532	36.98328	127.8195
PyeongtaekInternational Terminal	2.077	36.95927	126.86872
Hyundai L&C Cheongju Warehouse	13.86	36.60596	127.48602
Mokpo Port Logistics Base	388.446	34.752055	126.35601
Hyundai L&C Cheongju	26.065	36.60596	127.48602
Samyang packaging	210.422	37.57262	127.00106
Autobell	0	37.49706	126.66637
Jeju Logistics Center	3.257	33.47444	126.63623
Autobell Bundang Center	0.367	37.34693	127.17404
Autobell Sihwa Center	0	37.3346	126.74128
Vessels	3855501	37.50337	127.043

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	3924263	<Not Applicable>	Emissions from logistic and distribution(same amount as the total Scope 1 emissions)

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Republic of Korea	11019	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Headquarters	570.666	0
Ulsan Business Office	22.762	0
Sihwa Auction House	162.767	0
Incheon Business Office	31.764	0
Bundang Auction House	153.788	0
Yangsan Auction House	109.321	0
Asan KD Center	769.112	0
Ulsan KD Center	569.082	0
Ulsan1CC	424.596	0
Ulsan2CC	1632.427	0
JeonjuCC	476.004	0
Pohang Business Office	59.738	0
Dangjin Business Office	342.848	0
Gwangyang Business Office	31.621	0
Daegu Business Office	2.173	0
Seosan Office	41.651	0
Ulsan Office	0	0
Changwon Office	1.805	0
Pyeongtaek Port Logistics Base	997.996	0
Hyangnam Logistics Center	59.736	0
Asan KD	421.602	0
Hyundai Department Store Oryu-dong Warehouse	0	0
Chungju Office	72.1	0
Gyeongbuk Haitai Confectionery Logistics Center	138.108	0
Gyeongnam Haitai Confectionery Logistics Center	249.589	0
Gwangju Haitai Confectionery Logistics Center	114.725	0
Kangwon Haitai Confectionery Logistics Center	0	0
Cheongju Haitai Confectionery Logistics Center	0	0
Pyeongtaek International Terminal	261.968	0
Hyundai L&C Cheongju Warehouse	26.184	0
Hyundai Department Store Gimpo Center	845.07	0
Suwon Autobell Studio	18.203	0
Mokpo Port Logistics Base	418.523	0
Hyundai L&C Cheongju	11.613	0
Hyundai L&C West Seoul Center	16.466	0
Hyundai L&C East Seoul Center	6.667	0
Cherish	129.757	0
Jeil pet food	35.392	0
Foodnamoo	945.296	0
Daejeon autobell live studio	10.749	0
Busan autobell live studio	274.701	0
Daegu autobell live studio	8.12	0
Incheon autobell live studio	8.903	0
Samyang packaging	171.475	0
Autobell	17.867	0
Ebay Korea	318.339	0
Jeju distribution center	29.324	0
Ansan live studio (branch6)	3.729	0
Ansan live studio (branch7)	4.637	0
Rugby team	0.024	0

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name
Gmarine service

Primary activity
Marine freight

Select the unique identifier(s) you are able to provide for this subsidiary
No unique identifier

ISIN code – bond
<Not Applicable>

ISIN code – equity
<Not Applicable>

CUSIP number
<Not Applicable>

Ticker symbol
<Not Applicable>

SEDOL code
<Not Applicable>

LEI number
<Not Applicable>

Other unique identifier
<Not Applicable>

Scope 1 emissions (metric tons CO2e)
48

Scope 2, location-based emissions (metric tons CO2e)
145

Scope 2, market-based emissions (metric tons CO2e)
0

Comment

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	11019	0	Emissions from logistic and distribution(same amount as the total Scope 2 emissions)

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?
Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	0	No change	0	
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	69574	Increased	5.02	The greenhouse gas emissions increased compared to the previous year due to the increase in fuel consumption resulting from the operation of international shipping vessels. Greenhouse gas emissions value (%) = (2022 greenhouse gas increase / 2021 greenhouse gas emissions) × 100 = 69,574 tCO2eq / 3,865,708 tCO2eq × 100 = 5.02%
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	15038255	15038255
Consumption of purchased or acquired electricity	<Not Applicable>	0	23985	23985
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	0	15062240	15062240

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
15026419

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
15026419

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
11836

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
155

MWh fuel consumed for self-generation of steam
11681

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
15038255

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
15026573

MWh fuel consumed for self-generation of steam
11681

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

C-TS8.2f

(C-TS8.2f) Provide details on the average emission factor used for all transport movements per mode that directly source energy from the grid.

Category	Emission factor unit	Average emission factor: unit value	Comment
HDV	gCO2e/kWh	0	There are no HDV that directly source energy from the grid.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
Republic of Korea

Consumption of purchased electricity (MWh)
23985

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
23985

C-TS8.5

(C-TS8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity
Heavy Duty Vehicles (HDV)

Metric figure
5.55e-8

Metric numerator
Liters of fuel

Metric denominator
t.km

Metric numerator: Unit total
24910732

Metric denominator: Unit total
448723512.656472

% change from last year
-1.1

Please explain
The greenhouse gas emissions per t.km for freight vehicles decreased by approximately 1.1% compared to 2021 (2021 emissions per t.km : 0.00000005611538). This reduction can be attributed to our efforts in improving fuel efficiency through eco-driving, implementing idle-free air conditioning and power control devices in vehicles, as well as exploring the introduction of eco-friendly vehicles. We have made significant efforts to reduce greenhouse gas emissions per unit and achieve a more sustainable outcome.

* The HDV's original metric denominator is 448,723,512,656,472. However, we revised metric denominator by dividing by 10^6 due to ORS's limitation on the range.

Activity
Marine

Metric figure
0.0045599232

Metric numerator
Liters of fuel

Metric denominator
t.km

Metric numerator: Unit total
1224702843

Metric denominator: Unit total
268579.707803

% change from last year
0.4

Please explain
The greenhouse gas emissions per t.km for ships increased by approximately 0.4% compared to 2021 (2021 emissions per t.km: 0.00454246750843). This increase can be attributed to the higher fuel consumption resulting from operational activities compared to the previous year.

* The Marine's original metric denominator is 268,579,040,252. However, we revised metric denominator by dividing by 10^6 due to ORS's limitation on the range.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity
Heavy Duty Vehicles (HDV)

Metric
Fleet adoption

Technology
Other, please specify (By attaching a Digital Tachographs to our HDVs, it is possible to collect and analyze driving data in real time. Through Eco-driving program, we expect changes in drivers' behavior, contributing to increasing energy efficiency of HDVs.)

Metric figure
871

Metric unit
Units

Explanation
Hyundai Glovis is advancing its integrated transportation management system within its logistics business and actively practicing Eco-Driving for freight vehicles. The adoption of Eco-Driving has resulted in approximately a 5% improvement in fuel efficiency for freight vehicles. In 2022, our company implemented Eco-Driving in 871 freight vehicles.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Activity
Heavy Duty Vehicles (HDV)

Technology area
Management

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
0.2

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)
212657339

Average % of total R&D investment planned over the next 5 years
0.21

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Hyundai Glovis' Eco-Driving is an environmentally friendly driving system implemented to monitor the fuel efficiency of cargo vehicles in real-time. It analyzes the drivers' driving habits and provides them with real-time information, resulting in improved driving habits and increased fuel efficiency. As a result, it successfully reduces greenhouse gas emissions.

Activity
Marine

Technology area
Other, please specify (fuel additives)

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
0.36

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)
434501950

Average % of total R&D investment planned over the next 5 years
0.43

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Hyundai Glovis is making efforts to increase fuel efficiency and reduce greenhouse gas emissions from ships by using fuel additives. These additives help in complete combustion of condensed substances within the fuel, thereby improving sludge and engine fuel efficiency and ultimately reducing greenhouse gas emissions.

Activity
Heavy Duty Vehicles (HDV)

Technology area
Other, please specify (The electric vehicle battery transportation container)

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
0.01

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)
46366000

Average % of total R&D investment planned over the next 5 years
0.03

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
According to the IEA NZE 2050 scenario applied in Hyundai Glovis' climate transition plan, it is expected that the sale of internal combustion engine vehicles will be discontinued by 2050, and the use of electric vehicles will increase. As a result, the retrieval and transportation of electric vehicle batteries are also expected to increase.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
온실가스배출량검증성명서현대글로비스2023.pdf
온실가스 배출량 검증 의견서_현대글로비스(2022)_국,영.pdf

Page/ section reference
p1 of each document

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
온실가스배출량검증성명서현대글로비스2023.pdf

Page/ section reference
P.1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
온실가스 배출량 검증 의견서_현대글로비스(2022)_국,영.pdf

Page/section reference
P.1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
온실가스 배출량 검증 의견서_현대글로비스(2022)_국,영.pdf

Page/section reference
P.1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C0. Introduction	Other, please specify (Company Introduction and Information)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C1. Governance	Other, please specify (Climate Change Responsibility)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C2. Risks and opportunities	Other, please specify (Risks and opportunities)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C3. Business strategy	Other, please specify (Business strategy)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C4. Targets and performance	Other, please specify (Emissions reduction activities)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	1. CDP verification confirmed the accuracy of the question. 2. The emissions reduction activities and emissions reduction are disclosed through the company's sustainability report verified by a third-party. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C5. Emissions performance	Other, please specify (Base year emissions)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C6. Emissions data	Other, please specify (Emissions data)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C7. Emissions breakdown	Other, please specify (Emissions breakdown)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C8. Energy	Other, please specify (Energy usage and management)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C9. Additional metrics	Other, please specify (R&D metrics)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C11. Carbon pricing	Other, please specify (Carbon pricing)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C12. Engagement	Other, please specify (Engagement)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf
C16. Sign off	Other, please specify (Signature)	1. ISO14064-3 2. The WRI/WBCSD GHG Protocol / A Corporate Accounting and Reporting Standard - Revised edition 3. CDP Response Verification Guideline	CDP verification confirmed the accuracy of the question. CDP Climate Change Questionnaire 2023 Respond_Verification Statement_영문_현대글로비스_R0.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Korea ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Korea ETS

% of Scope 1 emissions covered by the ETS
100

% of Scope 2 emissions covered by the ETS
100

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
77895

Allowances purchased
1886

Verified Scope 1 emissions in metric tons CO2e
68762

Verified Scope 2 emissions in metric tons CO2e
11019

Details of ownership
Facilities we own and operate

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Since 2021, Hyundai Glovis has been participating in the Emission Trading Scheme (ETS). The ETS is a market-based approach that allows companies to buy and sell carbon emission permits, providing an efficient way to reduce greenhouse gas emissions. Hyundai Glovis' EBT regularly monitors the greenhouse gas emissions, reviewing and managing the status, issues, and market prices of emission permits. They also execute and manage greenhouse gas reduction projects, considering the reduction targets for the transportation sector set by the government, and actively participate in national greenhouse gas reduction initiatives.

The reduction projects implemented by Hyundai Glovis include the introduction of fuel additives, installation of idle-stop air conditioning and heaters, deployment of power control devices, implementation of Eco-Driving programs, trailer lightweighting, and the Modal Shift, which involves shifting from road transportation to more environmentally friendly modes such as maritime transport. Through the Modal Shift project, Hyundai Glovis achieved a reduction of 75,944 tCO2eq in emissions for the reporting year (January 1, 2022, to December 31, 2022). Additionally, we benchmark greenhouse gas reduction projects of peer groups, and expand our own reduction projects. We also continuously collaborate with Hyundai Motor Group (Hyundai and Kia) to replace freight vehicles with environmentally friendly vehicles.

In addition, Hyundai Glovis is actively involved in the K-EV100 initiative, which aims to achieve a 100% transition to zero-emission vehicles (ZEVs) by 2030. We are expanding the operation of cold-chain electric refrigerated trucks to support this initiative. As a result of these reduction efforts, the Scope 1 & 2 emissions of Hyundai Glovis were reduced by 2,058 tCO2eq compared to the base year in 2022.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price
Shadow price

How the price is determined
Alignment with the price of allowances under an Emissions Trading Scheme

Objective(s) for implementing this internal carbon price
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Navigate GHG regulations

Scope(s) covered
Scope 1
Scope 2

Pricing approach used – spatial variance
Uniform

Pricing approach used – temporal variance
Evolutionary

Indicate how you expect the price to change over time
Year 2030 minimum $50 maximum $100
Year 2050 minimum $78 maximum $156

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
47460

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
94920

Business decision-making processes this internal carbon price is applied to
Operations
Product and R&D

Mandatory enforcement of this internal carbon price within these business decision-making processes
Yes, for some decision-making processes, please specify (Environmentally friendly transportation and facility investment)

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
Hyundai Glovis has set an internal carbon price based on the results of the IDB GHG Accounting Manual, with a price of KRW 47,460. The company evaluates and monitors the appropriateness of the internal carbon price by analyzing the price trends and the domestic emission trading market outlook. Based on this analysis, Hyundai Glovis manages the relevance of the internal carbon price. The internal carbon price is being implemented by Hyundai Glovis in two main aspects: environmentally friendly transportation and facility investment.
Firstly, in the case of environmentally friendly transportation, Hyundai Glovis considers regulations, stakeholder requirements, company conditions, and social impacts. The internal carbon price is utilized to enhance the cost-effectiveness of environmentally friendly transportation. A notable example is the implementation of the Eco-Driving program, where the internal carbon price is taken into account during the economic analysis to improve the cost-effectiveness of environmentally friendly transportation. As a result, Eco-Driving contributed to a reduction of 3,479 tCO2eq in 2022.

In terms of facility investment, energy savings and investment costs only were considered previously. However, in recent years, Hyundai Glovis have also considered the internal carbon price, thereby increasing the cost-effectiveness of facility investments for greenhouse gas reduction. Examples include the installation of idle-stop heaters, idle-stop air conditioners, and lightweight trailers. Prior to investing in these reduction projects, the economic feasibility was evaluated by setting an internal carbon price, and the results showed that the investment costs could be recovered within two years. Consequently, Hyundai Glovis is actively carrying out these reduction projects.

By implementing an internal carbon price, Hyundai Glovis aims to enhance accessibility for greenhouse gas reduction and contributes to both the company's own greenhouse gas reduction efforts and global greenhouse gas reduction initiatives.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number
0.45

% total procurement spend (direct and indirect)
0.2

% of supplier-related Scope 3 emissions as reported in C6.5
100

Rationale for the coverage of your engagement
Hyundai Glovis is actively promoting the Modal Shift, which involves shifting freight transportation from road to coastal shipping, to improve energy efficiency and reduce greenhouse gas emissions. This initiative is implemented on transportation routes such as Suncheon-Ulsan and Gwangyang-Dangjin, in collaboration with Hyundai Steel and POSCO. As part of the engagement activities with coastal shipping partners, we hold an annual coastal shipping cooperation meeting. During these meetings, we share cargo plans with our partners and engage in discussions regarding market conditions and operational updates. It serves as a platform to foster collaboration and exchange information among the participating coastal shipping companies. By transporting bulk cargo in large quantities through coastal shipping, the Modal Shift not only achieves greenhouse gas and energy reduction but also contributes to alleviating road congestion and reducing logistics costs. Due to its significant emission reduction benefits, Hyundai Glovis has selected companies that participate in coastal shipping as the engagement target suppliers and collaborates with them to mitigate climate change. In 2022, the Modal Shift resulted in a greenhouse gas reduction effect of 75,944 tCO2eq and a direct cost reduction of approximately KRW 49 billion.

Impact of engagement, including measures of success
Hyundai Glovis is actively promoting the Modal Shift, which involves shifting freight transportation from road to coastal shipping, in order to improve energy efficiency and reduce greenhouse gas emissions. This initiative is being implemented on transportation routes such as Suncheon-Ulsan and Gwangyang-Dangjin, in collaboration with Hyundai Steel and POSCO. By transporting cargo in large quantities through coastal shipping, the Modal Shift not only achieves greenhouse gas and energy reduction but also offers benefits such as alleviating road congestion and reducing logistics costs. Given the clear reduction benefits associated with coastal shipping, Hyundai Glovis has selected companies that are also engaged in coastal shipping as the engagement target suppliers, working together to mitigate climate change. In 2022, through the Modal Shift, a greenhouse gas reduction effect of 75,944 tCO2eq was achieved, along with a direct cost reduction of approximately KRW 49 billion won.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
100

Please explain the rationale for selecting this group of customers and scope of engagement
Hyundai Glovis' Distribution and Sales division encompasses several operations, including the automotive Completely Knocked Down (CKD) business, trading business involved in importing and exporting raw materials, wholesale-type used car auctions, and the export of used cars.
Within the used car business, Hyundai Glovis engages in climate change-related engagement activities through used car advertisements. These advertisements aim to encourage potential customers to purchase used cars, thereby promoting greenhouse gas reduction through the auction activities. In this context, potential customers are defined as all consumers who come across Hyundai Glovis' used car advertisements.
From a climate change perspective, the greenhouse gas emissions resulting from the purchase of new cars are significant. This includes emissions during the manufacturing process of new cars and the emissions generated from the production and transportation of components. In comparison, purchasing a used car can reduce emissions associated with the manufacturing process because the vehicle has already been manufactured. Therefore, individuals who purchase used cars can contribute to greenhouse gas reduction efforts.

Impact of engagement, including measures of success
As of the reporting year, our used car business operates auction centers offline in Bundang, Siheung, Yangsan, and Incheon. Additionally, we are enhancing various auction services through online platforms, including augmented reality-based performance inspection information. We also plan to continue expanding our supplementary services to meet diverse customer needs.
The current used car market faces challenges such as complex distribution structures, inadequate quality assurance, and reduced transparency regarding prices and quality, leading to a lack of trust from consumers. Therefore, our company aims to advance the "modernization of a distribution network where customers can trade used cars with peace of mind." We differentiate ourselves from existing companies by providing transparent product information and one-on-one services through skilled professionals to build customer trust.
Our used car export business leverages our domestic used car acquisition capabilities and utilizes networks in importing countries. We export used cars to regions such as Central and South America, Southeast Asia, the Middle East, and Africa. We strive to build customer trust and differentiate ourselves from existing companies by supplying high-quality vehicles that meet the standards of the importing countries. Additionally, we are actively pursuing business expansion through the development of new export markets and customer acquisition. As a result, the number of used cars purchased during the reporting year increased by 0.59% compared to the previous year.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Climate-related disclosure through a non-public platform

Description of this climate related requirement
Hyundai Glovis conducts an annual safety and environmental assessment of its partners, evaluating their implementation of greenhouse gas strategies, completion of greenhouse gas education, compliance with environmental regulations, and other environmental efforts. Partners must comply with environmental laws and regulations specific to the countries in which they are operating, and must obtain and maintain all necessary environmental permits for their business operations. Additionally, partners are required to establish and operate an environmental management system consisting of organization, planning, procedures, and performance evaluation to mitigate the environmental impact of their business operations. They are also expected to establish a system for measuring energy consumption and greenhouse gas emissions while making efforts to reduce energy consumption and greenhouse gas emissions.

% suppliers by procurement spend that have to comply with this climate-related requirement
19

% suppliers by procurement spend in compliance with this climate-related requirement
17

Mechanisms for monitoring compliance with this climate-related requirement
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
Yes

Attach commitment or position statement(s)
Sustainability Report p46
2023 현대글로비스 지속가능경영 보고서_230725.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan
Hyundai Glovis collects and reviews all engagement activities, environmental management strategies including the companywide response to climate change, and all matters related to energy and greenhouse gases through the EBT. These issues are then discussed and reported to the CEO. Business site and departments establish greenhouse gas performance and reduction plans and report them to the EBT. The team compiles this information to establish companywide greenhouse gas reduction targets and gradually incorporates achievable performance indicators into employees' KPIs. The EBT monitors greenhouse gas emissions analysis, carbon pricing, and regulatory trends, then reports to the CEO the significant issues identified through the materiality assessment to incorporate them into the business strategies and action plans.

In particular, for the transportation sector, Hyundai Glovis required the partner companies' completion of education organized by the Foundation of Korea Logistics Industry Promotion (KLIP) as a mandatory performance evaluation item, encouraging their participation in engagement activities in line with the company's strategy. Additionally, in order to maintain the certification as an excellent green logistics practitioner by the Ministry of Land, Infrastructure and Transport, the management and support of partner logistics companies are essential components. The company aims to maintain this certification and continues to collaborate with the KLIP, to which 100% capital is contributed by Hyundai Glovis, to ensure ongoing support and management of partner companies.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Name of policy : Korea ETS
Description of policy: The government implements a system to allocate emission permits to greenhouse gas-emitting facilities on a yearly basis, allowing them to engage in emitting activities within the allocated permits. The system evaluates the actual greenhouse gas emissions from facilities eligible for allocation and allows for inter-facility trading of surplus or deficit in emission permits.

Category of policy, law, or regulation that may impact the climate
Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate
Emissions trading schemes

Policy, law, or regulation geographic coverage
National

Country/area/region the policy, law, or regulation applies to
Republic of Korea

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
To effectively respond to the domestic greenhouse gas emissions trading scheme, Hyundai Glovis actively participates in the emission permit trading program and green logistics programs conducted by the Ministry of Land, Infrastructure, and Transport. As an exemplary case among excellent green logistics practitioners, Hyundai Glovis gave presentations at workshops organized by the Ministry, encouraging logistics companies to participate in green logistics. Since 2012, Hyundai Glovis has been selected as an excellent green logistics practitioner for ten consecutive years. Additionally, Hyundai Glovis is engaged in activities related to hydrogen supply chain development, starting with a memorandum of understanding with the Ministry of Environment, Ministry of Land, Infrastructure and Transport, and Ministry of Trade, Industry, and Energy for a pilot project on the dissemination of hydrogen fuel cell vehicles.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
When the amount of emissions increase, Korea ETS acts as a reduction pressure to prevent exceeding the total emission allowance.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports

Status
Complete

Attach the document
[현대글로비스]사업보고서(2023.03.21).pdf

Page/Section reference
Governance: p.344 (PDF page) / Page 342
Emissions figures: p40 (PDF page) / Page 38
Risks&opportunities: p381 (PDF page) / Page 379
Strategy: p38 (PDF page) / Page 36

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Task Force on Climate-related Financial Disclosures (TCFD) UN Global Compact	Hyundai Glovis has committed to supporting and developing the principles set forth by the United Nations Global Compact (UNGC) as a participating company. Companies that have joined the UNGC are required to integrate these principles into their business strategies, operations, and corporate culture. Implementing measures to achieve environmental sustainability within Hyundai Glovis' business activities can be seen as our role. Furthermore, as a participating company in the Task Force on Climate-related Financial Disclosures (TCFD), Hyundai Glovis evaluates climate-related risks and opportunities within its business operations and value chain. We integrate climate considerations into our corporate management and strategies, and play a role in transparently and consistently disclosing climate-related financial information to stakeholders.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	Hyundai Glovis follows the risk assessment manual to report significant risks to the CRO through a materiality assessment. The CRO presents the major issues to the BRMC, chaired by the CEO, for decision-making. The BRMC discusses significant issues and the final decision is made by the CEO. In cases where the decisions on significant issues have a significant impact on the company's management decision-making, they are reported to the BOD.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to avoidance of negative impacts on threatened and protected species	Other, please specify (NOAA(National Oceanic and Atmospheric Administration) VSR(Vessel Speed Reduction) program Ballast Water Management Convention)

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
Yes

Value chain stage(s) covered
Direct operations

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
Other, please specify (Assess impacts on biodiversity by monitoring information disclosed on initiative website)

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
Hyundai Glovis, as a participant in the Vessel Speed Reduction (VSR)) initiative, discloses the impact of participating companies on marine biodiversity on the VSR website. In 2022, as a result of the VSR initiative, NOx emissions decreased by 921 tons, greenhouse gas emissions in the respective regions decreased by 32,604 tons, and marine noise decreased by 4.6 dB/transit. Furthermore, in terms of the VSR's key objective of whale protection, the collision risk rate with ships decreased by 44%.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No and we don't plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?
Yes

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area
Other biodiversity sensitive area, please specify (whale habitat)

Country/area
United States of America

Name of the biodiversity-sensitive area
The designated areas for the VSR initiative include the Southern California coast and the outer region of San Francisco Bay. The period corresponds to the peak season for whale feeding activities and migration, starting from mid-May to mid-November each year.

Proximity
Overlap

Briefly describe your organization's activities in the reporting year located in or near to the selected area
Hyundai Glovis operates shipping services in the western coastal region of the United States.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
Yes, but mitigation measures have been implemented

Mitigation measures implemented within the selected area
Operational controls

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented
The vessels that do not comply with speed reduction measures in VSR areas can have negative impacts on biodiversity. These impacts include an increased risk of collisions between ships and marine life, including endangered species such as whales. High-speed vessels generate underwater noise that disrupts communication and behavior of marine animals. Additionally, water pollution caused by ships operating at high speeds can have adverse effects on marine life. To mitigate these issues, the VSR initiative encourages voluntary vessel speed reduction in the designated areas.

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Species management

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments	p48-51 2023 현대글로비스 지속가능경영 보고서_230725.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Hyundai GLOVIS is a leading global logistics and distribution company based in Korea, providing comprehensive third-party logistics services as well as strategies and designs that cover the entire logistics process. Our business also includes shipping, KD distribution, trading and auto biz (preowned car auctions). Since our establishment in 2001, we have been growing significantly year by year with our best-in-class experts and cutting-edge IT systems. We aim to become a global top-tier total SCM solution provider through our continuous investment in infrastructure and engagement in socially responsible activities.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	26981880971123

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
General Motors Company

Scope of emissions
Scope 1

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Allocation level
Facility

Allocation level detail
Emission allocation is based on the product unit through PCTC vessel operated in 2022. The total emissions below are the data that are combined by distributing emissions per customers.

Emissions in metric tonnes of CO2e
313225

Uncertainty (±%)

Major sources of emissions
The major source of emissions from maritime transportation services of Hyundai Glovis for General Motor Company is car carrier ships. Since the ship's greenhouse gas emissions are only direct combustion, this is all scope 1. All greenhouse gas emissions correspond to scope 1, as there are no services or products provided to GM by Hyundai Glovis other than maritime transportation.

Verified
No

Allocation method
Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member
325027

Unit for market value or quantity of goods/services supplied
Other, please specify (EA)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Hyundai Glovis calculates greenhouse gas emissions by aggregating fuel usage by all shipment. In addition, we manage cargo shipments according to customers in every shipping section. By applying the above system, Hyundai Glovis calculated emissions for each section. In 2022 approximately 325,027 units of GM'cargo was shipped, accounting for approximately 10% of the total volume of 3,170,343 units. As a result of allocating greenhouse gas emissions by cargo share for each shipment, it was calculated by 313,225 tCO2.

Requesting member
BMW AG

Scope of emissions
Scope 1

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Allocation level
Facility

Allocation level detail
Emission allocation is based on theproduct unit through PCTC vessel operated in 2022. The total emissions below are the data that are combined by distributing emissions per customers.

Emissions in metric tonnes of CO2e
75430

Uncertainty (±%)

Major sources of emissions
The major source of emissions from maritime transportation services of Hyundai Glovis for General Motor Company is car carrier ships. Since the ship's greenhouse gas emissions are only direct combustion, this is all scope 1. All greenhouse gas emissions correspond to scope 1, as there are no services or products provided to GM by Hyundai Glovis other than maritime transportation.

Verified
No

Allocation method
Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member
78272

Unit for market value or quantity of goods/services supplied
Other, please specify (EA)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Hyundai Glovis calculates greenhouse gas emissions by aggregating fuel usage by all shipments. In addition, we manage cargo shipments according to customers in every shipping section. In 2022 approximately 75,430 units of BMW's cargo was shipped, accounting for approximately 2% of the total volume of 3,170,343 units. As a result of allocating greenhouse gas emissions by cargo share for each shipment, it was calculated by 75,430 tCO2.

Requesting member
Samsung SDS

Scope of emissions
Scope 1

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Allocation level
Facility

Allocation level detail

Emissions in metric tonnes of CO2e
0

Uncertainty (±%)

Major sources of emissions

Verified
No

Allocation method
Please select

Market value or quantity of goods/services supplied to the requesting member
0

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

* Please not that we do not have transaction and business records with Samsung SDS in 2022. Hyundai Glovis is able to and willing to allocate Samsung SDS's emissions if we have the transaction and business records.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

Hyundai Glovis is third-party verified for all Scope 1 and Scope 2 greenhouse gas emissions, including ships' greenhouse gases. Verified data are being released to the outside world through In mainstream reports, sustainability reports and CDP reports. Mainstream reports (annual reports) and sustainable management reports can be found through the link below.

mainstream reports(annual report) : https://www.glovis.net/Kor/ir/disclosure/index.do
Sustainability Report: https://www.glovis.net/Eng/manage/contentsid/620/index.do

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
We face no challenges	Hyundai Glovis systematically manages cargo transportation performance through fleet operating system at the request of all customers. Since all vessels are coded and managed, information such as routes, types of cargo transport, units, and fuel consumption can be tracked by route. However, since this process requires sufficient consistency review and verification through third parties, it is difficult to immediately perform allocation tasks for each performance, but annual performance calculations are sufficient. The company is preparing to expand the carbon tracking system, which is currently being applied to shipping businesses, to other logistics businesses (land transportation, etc.). In addition, the company plans to provide customers with a system that can immediately check their carbon footprint and mission allocation with B/L No. within a few years.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Hyundai Glovis understands the risks and opportunities of our customer, the global automotive industry, as consumers' perception of the environment changes. We value the interests our PCTC business customers have in climate change, environmental pollution, and carbon footprint information, and strive to meet the various requests that accompany this concern. One of the important factors is the carbon footprint system response, which has short, medium, and long-term plans as follows:

1) The short-term goal is to receive third-party external verification of the calculation methodology and calculation results. This will allow us to provide verified and reliable data to our customers.

2) We would like to establish an automated IT system that calculates and manages all allocated emissions for each customer who has shipped the cargo on every voyage in the medium term. With this IT technology, we will be able to quickly query and provide the carbon footprint data that customers want. As this information is provided more often, we will change the line to be greener to achieve carbon neutrality.

3) In the long term, Hyundai Glovis will open an IT system where customers can directly view carbon emissions, carbon footprint data, navigation-related information (fuel quota, travel distance, departure and arrival location) for each transportation order. In the future, our customers will be able to easily inquire various information related to carbon footprints through our IT system using order ID (e.g., B/L No.). If technically possible, the two company systems can interface easily through open A/P, etc.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
General Motors Company

Group type of project
Change to supplier operations

Type of project
Implementation of energy reduction projects

Emissions targeted
Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
3-5 years

Estimated lifetime CO2e savings
250580

Estimated payback
Other, please specify (10years)

Details of proposal
Hyundai Glovis is currently considering introducing LNG vessels to reduce ship's greenhouse gas emissions and improve emissions. LNG vessels emit about 20% less greenhouse gases than conventional B-C oil fuels, making them environmentally friendly and able to provide customers with lower emissions allocation. The introduction of such eco-friendly fuel ships will be gradually carried out depending on IMO regulations and whether a stable supply infrastructure for fuel is established. It aims to provide improvement of carbon footprint by promoting ship conversion that can drastically reduce greenhouse gas compared to existing ships with various customers

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Requesting member
BMW AG

Group type of project
Change to supplier operations

Type of project
Implementation of energy reduction projects

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
3-5 years

Estimated lifetime CO2e savings
60344

Estimated payback
Other, please specify (10)

Details of proposal

Requesting member
Samsung SDS

Group type of project
Change to supplier operations

Type of project
Implementation of energy reduction projects

Emissions targeted
Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
3-5 years

Estimated lifetime CO2e savings
0

Estimated payback
Other, please specify (10 years)

Details of proposal
* Please not that we do not have transaction and business records with Samsung SDS in 2022. Hyundai Glovis is able to and willing to allocate Samsung SDS's estimeated lifetime CO2e savings if we have the transaction and business records.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.
55

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service
Marine Transport of Vehicles Using Large PCTC vessels

Description of good/ service
Hyundai Glovis can track greenhouse gas emissions from finished vehicle transportation service by product unit through PCTC vessel. We can provide emission allocation to all customers. In particular, carbon footprints, which are drawing attention recently, can also be provided in CBM and EA units.

Type of product
Intermediate

SKU (Stock Keeping Unit)
3,170,343 EA of cars

Total emissions in kg CO2e per unit
964

±% change from previous figure supplied
14

Date of previous figure supplied
July 27 2022

Explanation of change
As of 2022, Hyundai Glovis' PCTC ship produced 3,055,225tCO2, with 3,170,343 cars shipped in the process. The CO2 emissions per car calculated therefrom are approximately 964 kgCO2.

Methods used to estimate lifecycle emissions
GHG Protocol Product Accounting & Reporting Standard

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service
Marine Transport of Vehicles Using Large PCTC Ships

Please select the scope
Scope 1 & 2

Please select the lifecycle stage
Transportation

Emissions at the lifecycle stage in kg CO2e per unit
964

Is this stage under your ownership or control?
Yes

Type of data used
Primary

Data quality
As of 2022, Hyundai Glovis' PCTC ship produced 3,055,225tCO2, with 3,170,343 cars shipped in the process. The CO2 emissions per car calculated therefrom are approximately 964 kgCO2.

If you are verifying/assuring this product emission data, please tell us how
We are not being verified for product unit greenhouse gas emissions.

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
Marine Transport of Vehicles Using Large PCTC vessels	Initiative 1	The transport efficiency of ships varies greatly depending on the speed of operation of vessel. Hyundai Glovis aims to minimize greenhouse gas emissions by navigating at economic speed. In order to improve optimal fuel efficiency, it periodically updates economic speed to reflect changes in hull characteristics, and monitors changes in engines, etc. in real time. This economic speed operation is expected to improve fuel efficiency by up to 20%. Economic speed is the speed at which the optimum fuel efficiency is achieved regardless of time change when navigating the same distance. Most shipping companies want to reduce fuel consumption and minimize greenhouse gas emissions by following this economic speed. Recent internal tests conducted on the entire PCTC fleet of Hyundai Glovis showed that on average one vessel operating at the fastest speed would produce 370 tCO2e per 1,000 miles, but the existing operation at a known economic speed would produce 340 tCO2e, an improvement of 9%. However, as a result of remeasurement and analysis of fuel consumption rate by speed, the maximum rate of reduction in fuel consumption was slightly different in some vessels. When operating at a new self-renewed economic speed, it showed an average efficiency of 300 tCO2e per 1000 miles, an improvement of 20% over the peak speed. (Efficiency improved by 11% over economic speed) Although the company has previously observed an economic speed improvement of 9% compared to the highest speed operation, it intends to further reduce greenhouse gas emissions by 11% by testing the speed of the economy. The reported emission production per unit, 88 kgCO2e/unit, is a reduction in fuel efficiency from 804 kgCO2e/unit, the average PCTC transportation efficiency of Hyundai Glovis, by 11%.	Planned	88

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

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I have read and accept the applicable Terms