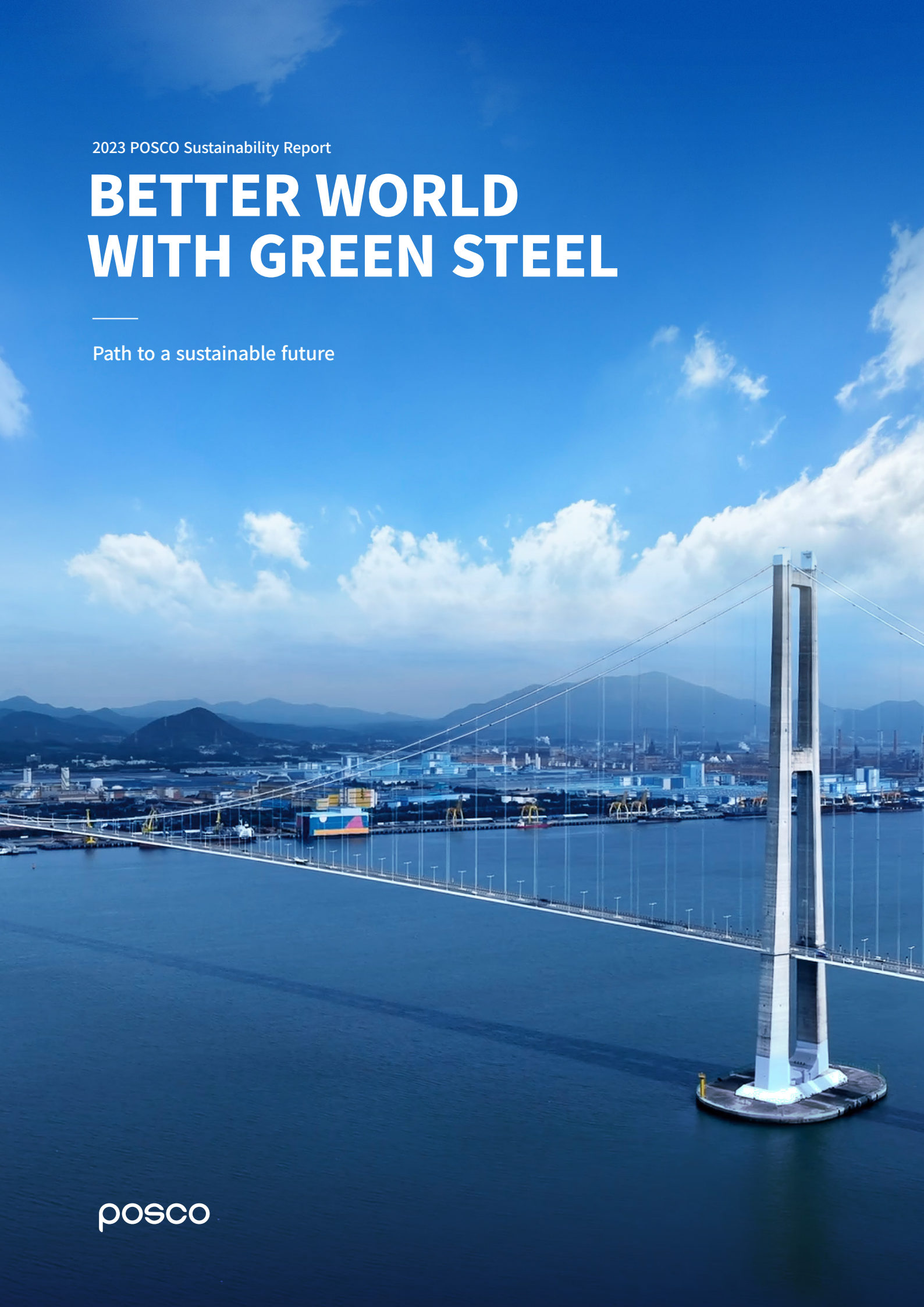


2023 POSCO Sustainability Report

BETTER WORLD WITH GREEN STEEL

Path to a sustainable future

posco



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CEO's Message

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CEO's Message

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Performance Highlights

“Building on our robust steel competitiveness, we are committed to advancing our sustainable management strategies and advancing together with all stakeholders through transparent communication.”

Hello, I am Si-woo Lee, Representative Director and CEO of POSCO.

As POSCO marks its 56th anniversary, we stand at the crucial juncture of transitioning to carbon neutrality in response to the ongoing climate change crisis. POSCO has maintained its position as the number one steel company in the World Steel Dynamics (WSD) competitiveness rankings for 14 consecutive years and has been recognized as a Sustainability Champion by the World Steel Association for three consecutive years. Thanks to our robust steel competitiveness, we are embracing our responsibility in this transformative era, steadily preparing for our next phase of growth.

Faced with a domestic economic downturn and high-cost pricing structures resulting from rising global energy and raw material costs, we have formulated the vision of ‘Better World with Green Steel.’ As a global leader in sustainable management, we plan to focus on implementing the following three strategies.



Better World with Green Steel

First, we will expedite the development of carbon neutral process technologies and pioneering of products to enable a competitive transition to a low-carbon operational system.

POSCO is showcasing its leadership in establishing a low-carbon operational system within the steel industry by constructing a new electric arc furnace in Gwangyang and accelerating the development of POSCO's proprietary hydrogen reduction ironmaking technology, HyREX. We are also working to establish a stable procurement system for low-carbon raw materials and to complete the development of Carbon Capture, Utilization, and Storage (CCUS) technology, thus transitioning to an economically sustainable and competitive low-carbon operational system.

Second, we will continue to ensure a safe and fulfilling work environment for our employees and establish a sustainable supply chain to contribute to creating a better world for our local communities.

We place the highest priority on workplace safety and support the safety management capabilities of POSCO and its contractors, striving to create an injury-free and happy work environment for everyone. We aim to cultivate a culture that respects diversity, encourages horizontal and creative thinking, and promotes the values of labor-management harmony and mutual growth. Through collaboration with our business partners, we will continue building a sustainable supply chain and work jointly to address and solve the challenges facing our local communities.

Third, we will emphasize our corporate ethics and strengthen our reputation as a trusted company among various stakeholders.

POSCO places ethical management practices at the forefront of sustainable growth, and believes it will reinforce a responsible and reliable business foundation. We will extend support for the Compliance Program (CP) externally, ensuring fair and transparent decision-making and business practices. We kindly request your continued support and encouragement as POSCO embarks on its vigorous journey toward a second leap forward.

Representative Director and CEO of POSCO **Si-woo Lee**

ESG Strategy

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POSCO is committed to becoming a leading company in the production of future materials, realizing sustainable future value by supplying steel in a safer and cleaner manner. Aligned with the POSCO Group's 'GREEN' ESG strategy framework, we prioritize key development areas, such as carbon neutrality, safety, supply chain management, and human rights. Our goal is to reinforce our management system, transparently communicate our initiatives and achievements, and establish a trusted ESG management system that garners the confidence of our stakeholders.

GREEN Framework

POSCO seeks to lead the charge toward carbon neutrality and sustain growth by innovating new value in steel production through our vision of a 'Better World with Green Steel'. To realize this vision, we are proactively identifying and addressing ESG risk factors inherent in the steel industry and working to secure sustainable market competitiveness throughout the carbon neutrality transition. Additionally, we aim to realize the future-oriented value of steel based on stakeholder ESG input, leveraging this as a driving force for sustainable competitiveness. From a management perspective, we aim to establish a fair and transparent governance structure, strengthen our compliance management system, and advance ethical management practices to global standards, thus building a management system trusted by our stakeholders. Moreover, to enhance employee creativity and job engagement, we are implementing a bi-weekly four-day workweek and fostering a flexible, horizontal reporting culture, driving innovation in our organizational culture.



Green Competency

Achieving Carbon Neutrality / Sales of Eco-friendly Materials / Minimizing Environmental Impact

We are committed to addressing climate change by improving low-carbon processes, enhancing energy efficiency, and developing eco-friendly products. Furthermore, we aim to minimize environmental impact throughout this process to create a future where humanity and nature can thrive together.



Responsible Value Chain

Managing a sustainable supply chain / Implementing strategic CSR

We will support our business partners in attaining the highest standards across all ESG areas from a value chain perspective, pursuing sustainability collaboratively.



Employee Happiness

Enhanced Safety and Health / Establishing a Workplace Culture of Respecting Human Dignity

We will continue promoting a safe working environment, a culture that respects human rights and diversity, and we will nurture creative talent to meet the challenges of the evolving times, making our company a happy workplace for all employees.



Ethics & Integrity

Ethic / Compliance

We will continuously elevate our levels of ethics and compliance to ensure all business decisions are guided by stringent ethical principles, and we will work diligently to establish a fair trade order.



New Governance for Real value

Enhanced Transparency

We will greatly enhance POSCO's value through the modernization of management systems and transparent information disclosure, thereby strengthening ESG communication.

To realize our ESG management goals, we have identified nine key focus areas connected to our GREEN strategy. The ESG Committee, under the guidance of the Board of Directors, in addition to management-led sector-specific meetings, systematically oversees performance in these areas. For crucial issues such as carbon, safety, supply chain, and human rights, these meetings facilitate in-depth discussions on ESG-related topics, including domestic and international initiatives and regulations. We develop detailed response plans and continuously monitor their implementation status.

I ESG Key Area Councils

Carbon Neutrality Committee	Safety Council	Supply Chain Management Council	Council on Respect for Human Rights
<p>Develops carbon neutrality strategies and oversees the implementation of targets</p> <ul style="list-style-type: none"> • Lead: POSCO's Representative Director and CEO • Frequency: Quarterly 	<p>Reviews safety risks and improvement activities at both domestic and international sites</p> <ul style="list-style-type: none"> • Lead: Head of the Health Safety Environment(HSE) Division • Frequency: Biannually 	<p>Monitors ESG issues within the supply chain and formulates response strategies</p> <ul style="list-style-type: none"> • Lead: Head of the Purchasing and Investment Division • Frequency: Biannually 	<p>Establishes guidelines for human rights management and monitors risks at domestic and international sites</p> <ul style="list-style-type: none"> • Lead: Head of the Corporate Audit Office • Frequency: Biannually

Implementation of Executive ESG Innovation Tasks

POSCO operates various systems to ensure that all executives and employees are fully committed to ESG management practices. Each year, all executives are required to identify and carry out an 'Executive ESG Innovation Task' aimed at improving performance in key ESG areas, with the outcomes reflected in their evaluations. In 2022, 73 innovation tasks were executed (51 domestic and 22 international), and in 2023, a total of 72 tasks were completed (50 domestic and 22 international). These tasks cover a wide range of ESG areas, including carbon emission reduction, environmental pollutant mitigation, and safety accident prevention. To enhance the effectiveness of these ESG innovation tasks, we perform a Gap Analysis based on global ESG disclosure standards and evaluation results to pinpoint improvement areas. Critical and urgent issues are prioritized as executive ESG innovation tasks for 2024.

Moreover, exemplary ESG activities conducted by various organizational units are shared during company operations meetings as 'Innovation Stories for Opening the Future,' promoting a company-wide consensus on ESG management strategy. Additionally, the ESG Ambassador program, which involves employees from departments with high ESG relevance, aims to enhance employees' understanding of ESG practices and improve their practical skills. Participation as an ambassador is recorded in personnel files to support career development as in-house ESG experts, and outstanding ambassadors receive executive recognition, fostering pride and confidence in their ESG roles.



ESG Ambassador Program Class 3 (Activities for 2024)

Participation in Initiatives

POSCO is actively involved in global ESG initiatives and establishes various public-private partnerships to serve as a role model in the steel industry through solidarity and collaboration. The World Steel Association recognizes exemplary companies that promote the sustainability of the steel industry by designating them as 'Sustainability Champions.' POSCO has been honored as a Sustainability Champion for three consecutive years (2022-2024) in acknowledgment of its ESG management efforts and achievements. In October 2022, POSCO became the first Asian steelmaker to achieve a ResponsibleSteel site certification (valid until 31.Dec.2024). ResponsibleSteel integrates the demands of diverse stakeholders across the steel industry value chain, including firms in steel, raw materials, automotive, and energy sectors, as well as citizen groups advocating for sustainability. To gain certification, companies must meet 370 ESG-related requirements verified through an independent third-party certification process. POSCO also initiated the world's first Hydrogen Iron & Steel Making Forum (HyIS), fostering the exchange of carbon reduction technologies and promoting collaboration on carbon neutrality among global steelmakers, engineering companies, and competitors. Domestically, POSCO collaborates with the Ministry of Oceans and Fisheries and the Korea Fisheries Resources Agency to develop sea forests using steel slag and attain an international blue carbon certification.

Global ESG Regulation Response

In response to the increasing stringency of global ESG regulations, such as ESG disclosure, supply chain management, and CBAM, we are committed to building a robust ESG management system that spans our entire steel value chain, both domestically and internationally. POSCO manages overseas subsidiaries across the entire value chain of steel production, from integrated steel mills to rolling mills and processing centers. As the first step in constructing an integrated ESG system for the POSCO Group's steel sector, we assessed risks related to global ESG regulations. We conducted self-assessments of ESG management systems for 40 overseas subsidiaries, adhering to global ESG certifications and supply chain management standards like ResponsibleSteel and the Responsible Business Alliance (RBA). We are developing enhancement plans for management systems, taking into account the unique characteristics of each business site. Additionally, we are conducting ESG coaching sessions for employees at overseas subsidiaries to educate them about trends and improvement measures related to ESG regulations. These sessions include participation from ESG departments as well as other relevant departments, and address topics such as carbon neutrality, environment, supply chain management, and trade compliance, sharing headquarters' policies, strategies, and experiences.

ESG Performance Communication

Since publishing its first environmental report in 1995 and sustainability reports consistently since 2003, POSCO has been continuously engaging stakeholders about its ESG performance. We have increased the credibility of our ESG information practices by aligning our disclosures with global sustainability reporting standards such as GRI, SASB, and ISSB, and by conducting third-party verification, even for voluntary disclosures. Additionally, we have strengthened the internal control system for ESG data from domestic and international subsidiaries through our digital-based 'ESG Data Portal System.' We plan to expand the scope of consolidated disclosures for overseas business sites, starting with large-scale integrated mills (Indonesia, China, Vietnam) and some rolling mills (India, Thailand). Moving forward, POSCO aims to build a trusted ESG management system through more proactive and transparent communication on this ESG homepage.

Materiality Assessment

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POSCO regards the top 5 key issues identified through POSCO HOLDINGS' double materiality assessment in the steel sector as core improvement areas for the future enhancement of the ESG management system, and focuses on managing them intensively.

Double Materiality Assessment

POSCO HOLDINGS implements a double materiality assessment to understand the demands and expectations of various stakeholders and incorporate them into the group's ESG strategy. Through the Group ESG Council, direct communication with internal and external stakeholders, surveys, and round tables, we identify major issues impacting the sustainability of our business model and value chain.

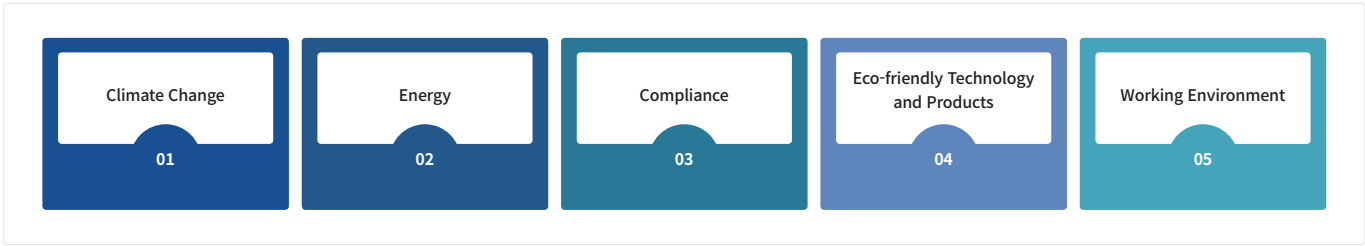
POSCO HOLDINGS Double Materiality Assessment Process

NO	Process	Purpose	Key Considerations
1	Understanding and Selection	To identify significant potential impact on the sustainability of POSCO HOLDINGS' business model and value chain	<ul style="list-style-type: none"> SASB industry indicators for each business company/value chain ESG evaluation items from the global top 4 rating agencies (MSCI, Sustainalytics, ISS ESG, KCGS) Inquiries from key stakeholders, such as investors Analysis of materiality assessment results and important ESG issue reports from peer industries for each business company
2	Issue Identification	To identify the social, environmental, and financial impact (Risk & Opportunity) of identified ESG issues	<ul style="list-style-type: none"> [Social and Environmental Impact] Social and environmental impact of ESG issues identified in 5 business models and value chains <ul style="list-style-type: none"> Positive/negative, actual/potential impact of POSCO HOLDINGS' business activities on the external environment [Financial Impact] Financial impact of ESG regulations/laws/policies related to identified issues <ul style="list-style-type: none"> Opportunities/risks that the external environment poses to POSCO HOLDINGS' financial value
3	Double Materiality Assessment	Group ESG Council	<ul style="list-style-type: none"> Analysis of agendas discussed at the CEO-chaired Group ESG Council (29 in 2023)
		Direct communication with stakeholders (ESG NDR, conference calls, etc.)	<ul style="list-style-type: none"> online/offline requests and responses from key stakeholders, such as investors (156 in 2023)
		Internal and external stakeholder surveys	<ul style="list-style-type: none"> Surveys conducted with 36 internal and external experts with high understanding of POSCO HOLDINGS' business and ESG
		Key stakeholder round tables	<ul style="list-style-type: none"> Gathering opinions from investors, government, customers/suppliers through the 3rd stakeholder roundtable
4	Selection of Key Issues	Prioritization of key ESG issues	<ul style="list-style-type: none"> Prioritization of key ESG issues based on quantitative analysis results, report to the Board of Directors, and final confirmation

[POSCO HOLDINGS Double Materiality Assessment Results →](#)

Based on the selection results of key ESG issues by business sector for internal and external stakeholders, the top 5 issues for the steel sector are as follows. POSCO will actively implement sustainable management in the steel industry by prioritizing these top 5 issues as core areas and managing them intensively.

TOP 5 Issues in the Steel Sector



Performance Highlights



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Performance Highlights

POSCO is committed to practicing sustainable management policies by taking an interest in and addressing a range of societal challenges. Leveraging our internal technical capabilities and innovative ideas, we strive to create economic, environmental, and social value at the corporate level.

Biodiversity

POSCO's 'Sea Forest' Story (2014-)



POSCO's creation of sea forests has preserved seaweed and marine life while revitalizing the fishing economy.

Coastal development, environmental pollution, and climate change have led to the disappearance of seaweed and the proliferation of calcareous algae, causing ocean desertification.

While exploring ways to encourage seaweed growth, we noticed that seaweed thrived around submerged abandoned ships, which led to the development of the 'Triton'¹⁾ artificial reef using steel slag.

To date, we have installed around 7,000 Triton reefs in over 30 locations nationwide, establishing Sea Forests that facilitate seaweed growth, increase fishermen's incomes, support the development of SME partners, and enhance the marine ecosystem

In recognition of our efforts, we received the '2023 Innovation Awards' Eco-Innovator Category from worldsteel in 2020 and from BCCCC in 2023, marking the first time an Asian company has been honored with this prestigious international award.

1) Triton: An artificial reef structure made from steel slag aggregate and blast furnace slag cement.

Resource Circulation

The Synergy of Steel and Agriculture for GHG Reduction (2019-)



Utilizing fertilizer made from steel byproducts, we have successfully reduced GHG emissions and increased rice yields, establishing a foundation for sustainable growth.

During rice cultivation, methane, which has 21 times the greenhouse effect of carbon dioxide, is released.

We discovered that iron ions present in slag at concentrations of less than 1% can inhibit the activity of methanogens. In partnership with the Ministry of Agriculture, Food and Rural Affairs, the Ministry of Environment, and fertilizer companies, we developed silicate slag fertilizer utilizing by-products from steel mills.

The application of silicate slag fertilizer results in a reduction of 0.93 tons of CO₂ per ton of fertilizer compared to fields without fertilizer, a 14% decrease in methane emissions, and a 7% increase in rice harvest.

This achievement in reducing GHGs and advancing the agricultural sector was recognized with the Worldsteel Steelie Awards (October 2023).

Water Stewardship

POSCO-Mexico's 'Oasis' Project (2021-2023)



용수재활용 기술개발을 통해 오랜 갈증을 해소하다
POSCO-Mexico의 "오아시스" 프로젝트

We are addressing water shortage problems through water recycling and have established an eco-friendly shared growth model.

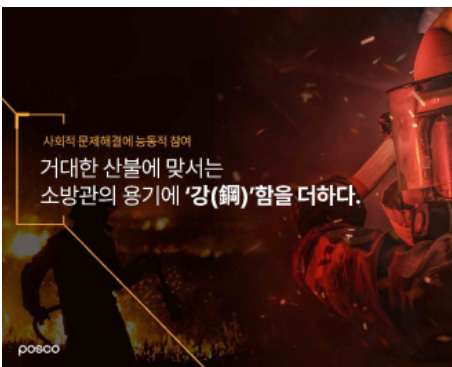
In 2021, the Mexican government declared a water shortage emergency and restricted industrial water usage.

POSCO-Mexico uses 700,000m³ of water annually and discharges 350,000m³. We explored ways to recycle the 350,000m³, which is equivalent to the annual water usage of 5,000 local households.

By developing water recycling technology and establishing a collaboration-based shared growth model to address water shortage, we achieved unit water consumption reduction that allows savings of 1 billion KRW annually. This enabled us to respond flexibly to ongoing water shortages in the region.

Local Community

Adding 'Steel' Strength to the Courage of Firefighters Battling Massive Wildfires (2023)



사회적 문제해결에 능동적 참여
거대한 산불에 맞서는
소방관의 용기에 '강(鋼)'함을 더하다.

To help firefighters overcome their challenges and resolve community issues, we have developed firefighting support equipment in collaboration with our client company.

Climate change has led to frequent wildfires, such as the Goseong wildfire (May 2020), Ulsan wildfire (March 2022), Hapcheon wildfire (March 2022), and Miryang wildfire (June 2022).

POSCO has conducted wildfire site inspections to understand the actual condition of firefighting support equipment. In collaboration with internal and external experts and partner companies, we developed firefighting support equipment using WTP (World Top Premium) steel and supplied 50 sets to the Gyeongbuk Fire Department.

The newly developed WTP steel firefighting support equipment was evaluated at the Fire Agency Public Hearing in June 2023 as lightweight and portable, making it highly effective for wildfire suppression.

Safety

Creating a Safer Workplace Through the Harmony of Humans and Robots (2021-)



By developing technologies where workers and robots/AI complement and collaborate with each other, we have created a safer and more productive workplace.

As robots and AI are increasingly utilized in the manufacturing industry, a significant productivity revolution is imminent.

POSCO's robot solution process innovation aims to achieve cost reduction, quality, safety, and environmental goals simultaneously. By establishing 'collaboration between humans and technology' as a core strategy, we have developed the following technologies to enhance work efficiency and completely prevent safety accidents:

- ① Remote ground operation solutions for raw material unloaders
- ② Coke oven door gas leakage prevention technology
- ③ CGL pot operation automation technology

Environmental

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Climate Action

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- Climate Governance
- Carbon Neutrality Roadmap
- Climate Risk Management
- Sustainable Products

Climate Governance

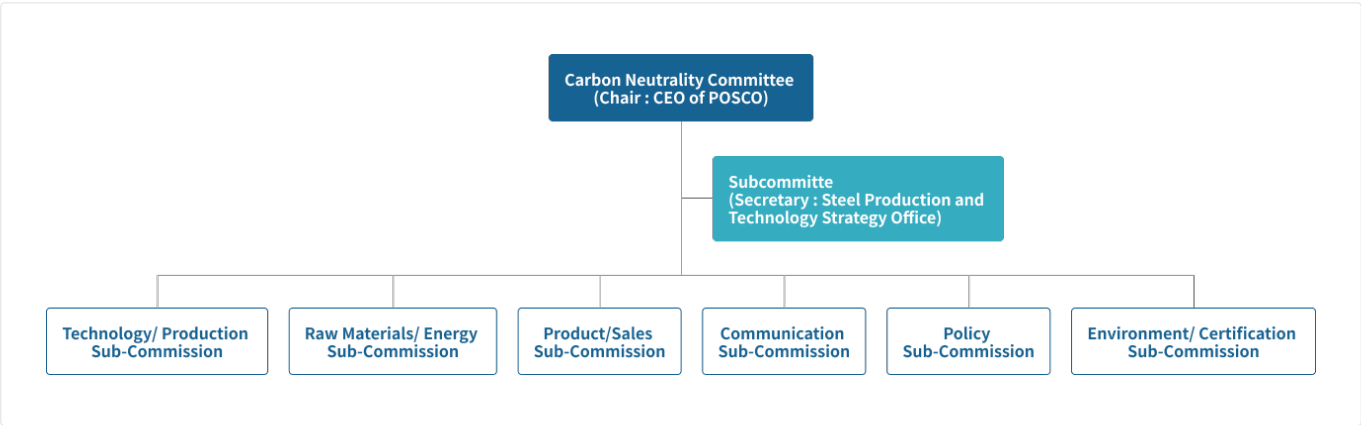
As a global leading steel company committed to building an eco-friendly future society, POSCO is dedicated to proactive and responsible climate action. We are striving to secure GX (Green Transformation) technology that combines competitiveness and economic efficiency, and to establish an implementation system to achieve the 2050 carbon neutrality goal.

Climate Change Management System

Climate change response is integrated into POSCO’s overall decision-making system. The ESG Committee under the Board of Directors reviews and discusses climate change response strategies and facility investment plans. The Carbon Neutrality Committee, chaired by the CEO of POSCO, acts as the control tower for climate change response, checking the carbon neutrality implementation status by department and addressing issues arising in the implementation process. At the monthly management briefing, GHG emission performance and the financial impact of climate change response are monitored.

The Carbon Neutrality Strategy Office, responsible for carbon neutrality strategy formulation and implementation monitoring, was integrated with the Steel Production and Technology Strategy Office directly under the CEO of POSCO in January 2024, enhancing the execution power for carbon neutrality implementation. The Steel Production and Technology Strategy Office develops technologies needed to implement the carbon neutrality roadmap and addresses issues arising in the production process. Additionally, to effectively transition to a low-carbon steel production system, the ‘HyREX Project TF Team’, which operated as a temporary organization in January 2024, was expanded and reorganized into the ‘HyREX Project Team’ directly under the CEO of POSCO in January 2024. Similarly, the existing ‘Electric Arc and Smelting Furnace Project TF Team’ was expanded and reorganized into the ‘Electric Arc and Smelting Furnace Project Team’ under the Gwangyang Steelworks, strengthening the business execution power.

POSCO Carbon Neutrality Committee



※ Advisory : POSRI Forum

Climate Action

Home > Environmental > Climate Action > Carbon Neutrality Roadmap

Climate Governance

Carbon Neutrality Roadmap

Climate Risk Management

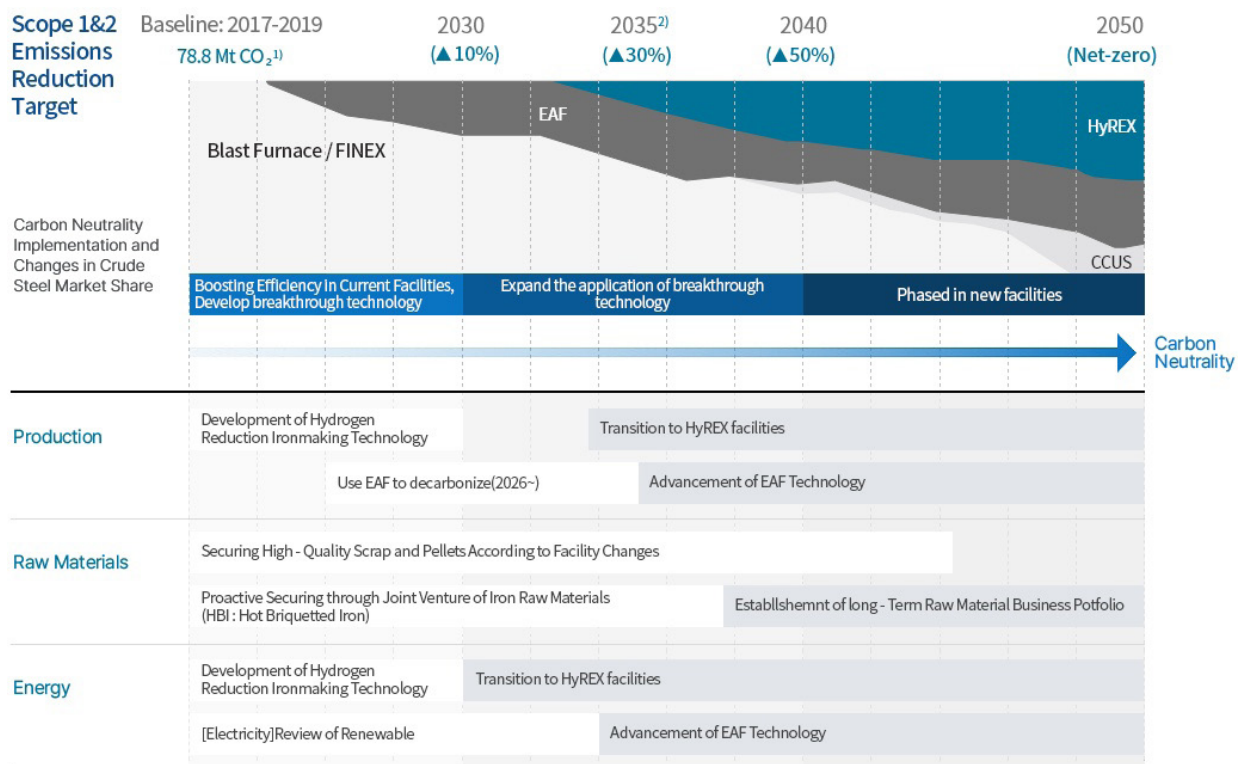
Sustainable Products

Carbon Neutrality Roadmap

POSCO is advancing towards a low-carbon production system based on the '2050 Carbon Neutrality Roadmap', which includes a mid- to long-term comprehensive carbon reduction strategy encompassing technology development, facility investment, raw material procurement, and energy procurement.

Carbon Neutrality Roadmap

In the mid- to short-term, we plan to reduce carbon emissions by expanding the use of low-carbon fuel and raw materials, operating at a low HMR (Hot Metal Ratio), and introducing EAFs using the current facilities through low-carbon bridge technology. In the long-term, we aim to achieve carbon neutrality by gradually implementing POSCO's hydrogen reduction ironmaking technology, 'HyREX (Hydrogen Reduction).'



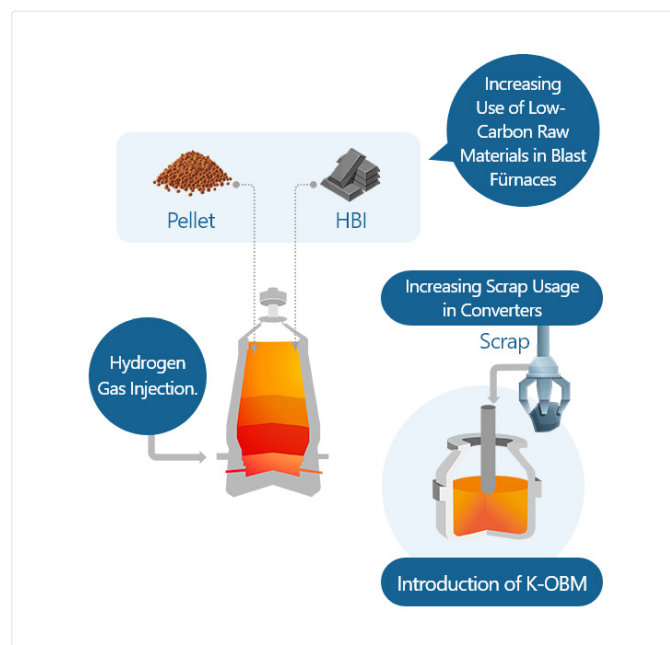
¹⁾ Average total emissions from POSCO's domestic operations between 2017 and 2019

²⁾ Added a 2035 mid-term goal (▲30%) under the net zero roadmap

Blast Furnace-Based Low-Carbon Bridge Technology : Use of Low-Carbon Fuel and Raw Materials

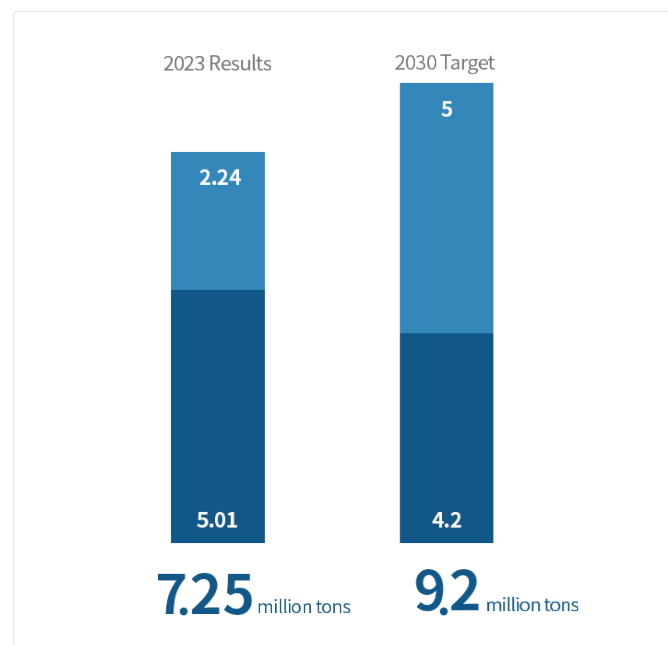
Pellets are raw materials processed into spherical shapes of a certain size after crushing and screening iron ore. Simply switching the blast furnace raw material from sintered ore to pellets can reduce the fossil fuel used in sintered ore production. HBI (Hot Briquetted Iron) is a raw material that has undergone a reduction process to remove oxygen from iron ore. When HBI is fed into the blast furnace, it reduces the amount of coking coal required for reduction. Generally, using 100kg of HBI per ton of molten iron production reduces CO₂ emissions by 100kg compared to sintered ore. POSCO is planning an HBI production project in iron ore-rich Australia to ensure a stable supply of HBI.

Key Bridge Technologies Based on Blast Furnace/Converter



Scrap Usage

● Purchased Scrap ● Self-Generated Scrap



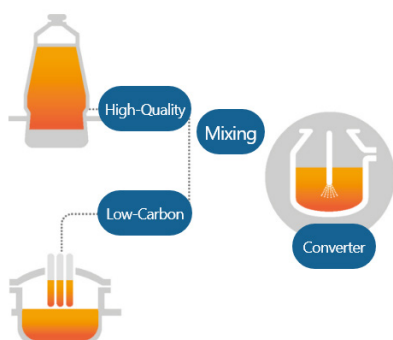
* Future scrap usage may vary according to the company's carbon neutrality strategy

Converter based Bridge Technology: Melted Scrap Charging Method, Oxygen Top & Bottom Blown(OTBB) Converter

The converter, BOF(Basic Oxygen Furnace) is a large cauldron-shaped facility that holds molten iron produced in a blast furnace. By blowing oxygen into the molten iron, impurities are removed, and refined steel with desired components is produced. Assuming the total carbon emissions for producing one ton of molten steel is 100%, approximately 80% is generated during the production of molten iron. Therefore, converter-based bridge technology aims to reduce the amount of molten iron used in the converter and increase the amount of scrap.

There are mainly two approaches to reduce the amount of molten iron in the converter.

Melted Scrap Charging Method Technology

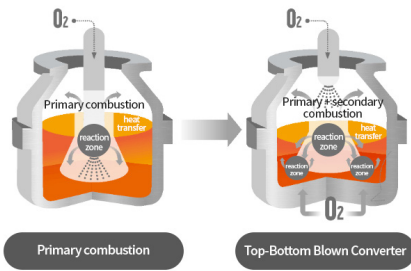


The first technology is 'Melted Scrap Charging Method,' which increases the scrap ratio used in the converter by pre-melting the scrap.

EAF can recycle steel scrap to produce steel, reducing carbon emissions to one-fourth of the levels produced by blast furnaces. However, due to the limitations in producing high-grade products depending on the components and impurities of the steel scrap, high-grade steel such as automotive steel sheets and shipbuilding plates are currently mostly produced by refining blast furnace molten iron in converters.

POSCO plans to operate a large electric arc furnace with an annual production capacity of 2.5 million tons starting in 2026. This technology, which combines blast furnace molten iron with EAF steel, aims to simultaneously reduce carbon emissions and produce high-grade steel. Producing 2.5 million tons of steel in the EAF is expected to reduce carbon emissions by up to 3.5 million tons annually compared to the company's blast furnace method.

Oxygen Top & Bottom Blown(OTBB) Converter Technology



The second technology is the 'OTBB Converter Technology,' which introduces additional heat sources by blowing oxygen from both the top and bottom of the converter to increase the use of steel scrap. Since the converter does not receive external heat, it relies on the heat generated by the oxidation reactions of impurities in the molten iron.

Increasing the amount of steel scrap lowers the temperature of the molten iron.

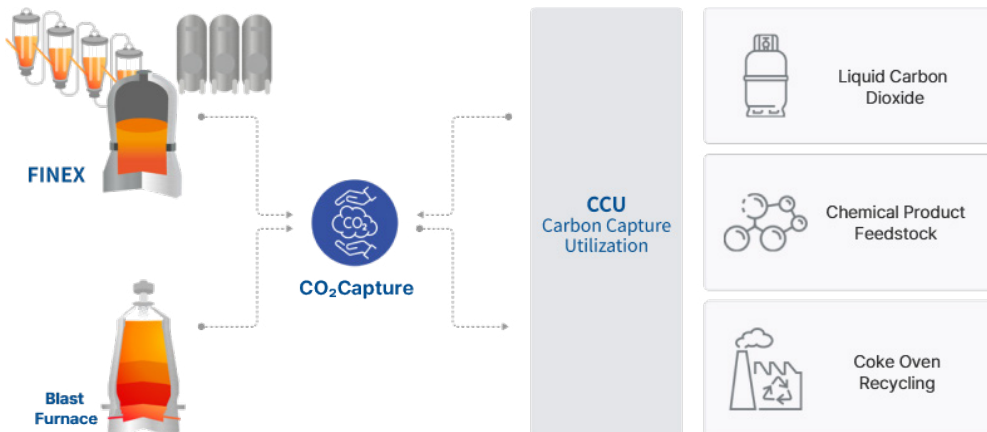
However, OTBB Converter technology supplies additional heat by injecting oxygen from the bottom, as well as the top, maximizing secondary combustion and heat transfer efficiency within the converter. One of the main advantages of steel is the ease of scrap recovery and its repetitive recyclability. Technologies that enable the extensive use of steel scrap instead of molten iron, like Melted Scrap Charging Method or OTBB Converter technology, are collectively referred to as 'Low HMR (Hot Metal Ratio) Operation Technology.'

We expect that using molten iron from FINEX process may allow the hot metal ratio (HMR) in the converter to be below 70%. Currently, development and investment in OTBB Converter technology are underway, with plans to complete a 300-ton OTBB converter at Pohang Steelworks by 2026.

FINEX-Based Bridge Technology : Carbon Capture and Utilization (CCU)

Since 2021, POSCO, in collaboration with the Research Institute of Industrial Science & Technology (RIST), has been conducting a public-private joint national R&D project to demonstrate carbon dioxide capture and conversion technology. This technology separates and captures high-purity CO₂ from high-temperature gases generated in blast furnaces, converters, and FINEX melting furnaces, then injects the CO₂ into the coke oven to be used as a heat source for byproduct gas power generation.

In January 2024, demonstration results at Pohang Steelworks revealed that injecting CO₂ at a medium purity level of 65-70% into the coke oven is economically feasible, as it does not require additional energy for further purification. Additionally, the calorific value of the coke oven gas (COG) increased by approximately 7%. Expanding this application to Pohang and Gwangyang Steelworks is expected to reduce CO₂ emissions by 320,000 tons annually. Furthermore, the commercialization of liquid carbon dioxide production using medium purity CO₂ byproduct gas is underway. This will enable the economic production of liquid carbon dioxide with a purity level of 99.99%, potentially expanding the industrial gas product portfolio and reducing CO₂ emissions by 170,000 tons annually (assuming the production of 200,000 tons of liquid carbon dioxide per unit).



Key CCU Patent List (POSCO, RIST)

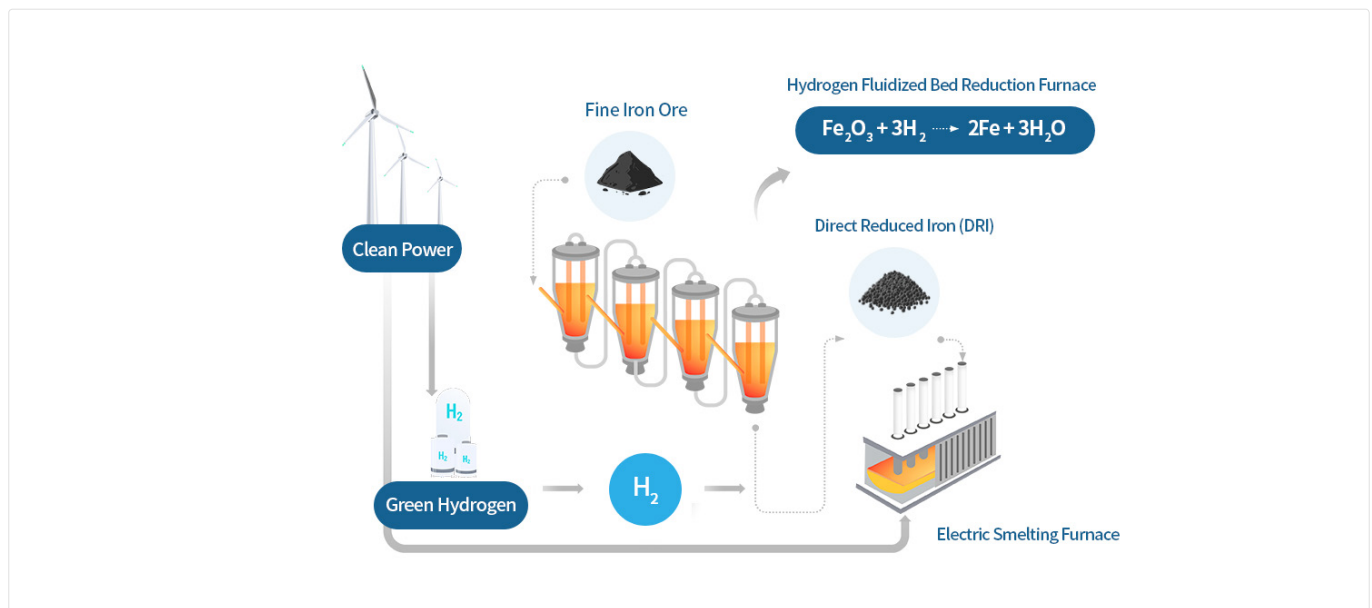
Division	Main Content
1019408380000	Method for heating injected gas in coke oven
1015337740000	Gas injection device for coke oven
1015608860000	Coke oven and its use in injecting reaction gas
1018193400000	Gas dispersion device for coke furnace
1018791060000	Method for heating injected gas in coke oven and coke oven
1020430120000	Device and method for producing injected gas for coke oven

POSCO's Hydrogen Reduction Ironmaking (HyREX)

Hydrogen reduction ironmaking is a technology that replaces metallurgical coal used as a reducing agent and heat source in the ironmaking process with hydrogen, drastically reducing GHG emissions. Recognized for its strategic importance to national security and its overall impact on the national economy, hydrogen reduction ironmaking technology was designated as a National Strategic Technology in January 2024.

Features of HyREX

POSCO's proprietary hydrogen reduction ironmaking technology, HyREX, is based on the fluidized bed reduction furnace technology of the already commercialized FINEX process. This differs significantly in terms of raw materials and equipment technology from the shaft furnace method used by overseas steel companies. From a raw material perspective, the shaft furnace uses pellets made by processing iron ore into uniform spherical shapes, but HyREX can use fine ore directly, making raw material procurement easier and production costs more economical. From an equipment technology perspective, HyREX's fluidized bed reduction furnace technology offers superior temperature control compared to the shaft furnace. Most importantly, POSCO's FINEX process, based on the fluidized bed reduction furnace, already incorporates hydrogen injection and direct reduced iron (DRI) manufacturing technology, which are key components of hydrogen reduction ironmaking, making it the most advantageous technology for implementing hydrogen reduction ironmaking.



[Watch POSCO hydrogen reduction ironmaking video / only in Korean →](#)

HyREX Implementation Plan

POSCO embarked on obtaining the necessary permits and approvals for the 1.35 million square meter construction site of its hydrogen reduction ironmaking plant at Pohang Steelworks in 2021. In July 2022, POSCO entered into an engineering partnership agreement with Primetals, leveraging their expertise in FINEX facility design, to collaboratively work on the main facilities of the HyREX demonstration plant. In 2023, POSCO introduced a hydrogen fluidized bed reduction experimental furnace with a capacity of 50kg per batch at RIST to validate the hydrogen fluidized bed reduction technology. By April 2024, POSCO had completed and successfully tested a 1-ton per hour electric smelting furnace (ESF) pilot facility at Pohang Steelworks. This achievement laid a solid foundation for the development of core technologies essential to the electric smelting furnace and the commercialization of HyREX technology.

POSCO plans to develop and commercialize the core technology of the hydrogen reduction ironmaking process, the hydrogen fluidized bed reduction furnace, by 2030. By 2050, POSCO aims to gradually transition existing blast furnace facilities to HyREX facilities, achieving carbon neutrality. POSCO is also actively involved in forming technology development partnerships to drive the implementation of carbon neutrality within the global steel industry.

In partnership with the worldsteel and Swedish steel company SSAB, POSCO spearheaded the international Hydrogen Iron and Steel Making Forum (HyIS) from 2021 to 2022. From 2023 onwards, the HyIS forum will expand and evolve into the 'Breakthrough Technology Conference,' overseen by the worldsteel. POSCO will continue to accelerate low-carbon technology development in the steel industry through collaboration with global steelmakers, fostering cooperation over competition.

[2021 HyIS Forum: Read Article →](#)

[2022 HyIS Forum: Inside the Event →](#)



2021 World's First International Hydrogen Reduction Ironmaking Forum



2022 HylS Forum

Opening of the POSCO Hydrogen Reduction Ironmaking Development Center (January 2024)

The Hydrogen Reduction Ironmaking Development Center at Pohang Steelworks is home to several key departments: the 'HyREX Project Team' overseeing the initiative, the 'Investment Planning and Engineering Office' dedicated to managing investment projects, the 'Low Carbon Iron and Steel Making R&D Center' leading research and development, and 'POSCO E&C' responsible for design. These units have consolidated their capabilities by co-locating at the center. By integrating all stages from technical research to facility construction and pilot operations, POSCO aims to establish a demonstration plant that will lay the foundation for the realization of its proprietary hydrogen reduction ironmaking technology, HyREX.



Opening Ceremony of the Hydrogen Reduction Ironmaking Development Center



Panorama of the Hydrogen Reduction Ironmaking Development Center

Climate Action

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Climate Risk Management

We assess the business impact of climate change by employing a range of climate scenarios. Utilizing the Net Zero Emissions by 2050 (NZE) scenario from the International Energy Agency (IEA) and the Shared Socioeconomic Pathways (SSP) scenarios from the IPCC's Sixth Assessment Report, we have identified both the risks and opportunities associated with climate change.

NZE Scenario

- Outlines a roadmap to achieve global net zero emissions by 2050 and restrict global temperature rise to within 1.5°C by 2100.
- Details changes in carbon pricing, energy mix, and production methods across major industries involved in the low-carbon transition process.

SSP Scenario

- Building on the existing RCP scenario, it incorporates socioeconomic factors such as future population changes, economic development, and urbanization.
- Highlights changes in the magnitude of global temperature rise and the capacity of socioeconomic systems to adapt to and mitigate climate change.

Transition Risks

Regulatory Tightening

Nations around the world are adopting diverse policy packages, such as the Green New Deal, to facilitate the low-carbon transition. They are also tightening regulations on carbon emissions through measures like the reduction in carbon emission allowances and the Carbon Border Adjustment Mechanism (CBAM). As a result, carbon prices are anticipated to rise substantially. Companies that lag or fail in the GHG reduction trend may face increased carbon costs and diminished product sales competitiveness, likely leading to a decline in profitability.

Considering the potential risks associated with carbon costs, we are accelerating new low-carbon investment projects to bolster the execution capability of our 2050 carbon neutrality roadmap. For new investments anticipated to affect carbon emissions, we implement an internal carbon pricing system within the investment decision-making process. Additionally, to enhance our response capability to carbon trade regulations such as CBAM, we are establishing a system for calculating carbon emissions per product unit. Furthermore, to prepare for the anticipated global climate disclosure mandate within the next 1-2 years, we are strengthening our disclosure system by setting internal standards for various disclosure items, including climate change scenario analysis and the disclosure of Scope 1, 2, and 3 emissions.

Expansion of Low-Carbon Market and Technology Needs

With the growing demand for low-carbon steel products and technologies, automotive, machinery, and energy companies are increasingly requiring reductions in the carbon intensity of steel products. This is part of their Scope 3 management and their direct and indirect efforts to reduce GHG emissions.

Therefore, possessing the capacity to supply low-carbon steel is essential for maintaining market share and ensuring a sustainable growth driver. To achieve this, POSCO is committed to identifying economic and efficient carbon reduction methods, constructing new electric arc furnaces, and expanding scrap utilization technology in converters to establish production lines optimized for low-carbon products. In the long term, POSCO will continue to expand its supply of low-carbon steel, spearheaded by the development of hydrogen reduction ironmaking technology.

Reputational Risk

Negative issues, such as exaggerated promotion or lack of communication regarding low-carbon transition efforts, can lead to a loss of trust from stakeholders and a decline in corporate value. With heightened regulations on greenwashing both domestically and internationally, it is essential to exercise caution when promoting low-carbon, eco-friendly products and activities.

POSCO has formed a Greenwashing Review Committee, comprising in-house experts, to proactively prevent and monitor greenwashing risks. This committee reviews presentation materials to ensure accuracy and mitigate risks of brand value decline and potential legal litigation.

Additionally, we are working to effectively communicate our carbon neutrality efforts. We engage with a range of stakeholders through ESG Non-Deal Roadshows (NDR) for investors and ESG rating agencies, client invitation briefings, and community public hearings.

Financial Impact Analysis

To assess the financial impact of transition risks, we employed the S&P Global Carbon Price Risk Model to analyze policy and market risks. Policy risk evaluates how changes in future carbon prices, driven by carbon regulations and the company's carbon reduction plans, affect POSCO's profitability.

Market risk examines the financial impact of potential risks within POSCO's value chain, such as the carbon risks faced by suppliers and customers, on POSCO's future business activities. The findings from this analysis will be incorporated into our climate change response strategy to mitigate transition risks.

I Comprehensive Business Impact and Response Status Due to Transition Risks in the Steel Industry

Risk		Business Impact	Response
Policy/Legal Risks	Heightened regulations on GHG Emission trading system	<ul style="list-style-type: none"> Increased costs for emission allowances due to the reduction in free allocation quotas 	<ul style="list-style-type: none"> Financial impact analysis and development of response measures in response to scenarios involving reduced free allocation quotas Implementation of carbon neutrality and reduction technology development, and the introduction of high-efficiency production technology Facilitation of low-carbon investment projects through the implementation of an internal carbon pricing system
	Implementation of EU Carbon Border Adjustment Mechanism (CBAM)	<ul style="list-style-type: none"> Incurrence of carbon costs as a result of CBAM implementation 	<ul style="list-style-type: none"> Formation of a CBAM response TF and establishment of a collaborative framework with EU entities Establishment of a low-carbon production and sales system, including the operation of Gwangyang Electric Arc Furnace
	Enhanced global climate disclosure requirements	<ul style="list-style-type: none"> Strengthened requirements for global climate disclosures, encompassing physical and transition risks, and Scope 3 emissions. 	<ul style="list-style-type: none"> Conducting physical risk analysis and developing response measures for key domestic and international worksites. Disclosing the impact analysis of transition risks and the current response status. Enhancing the Scope 3 calculation system through the operation of dedicated working groups.
Market Risks	Increased demand for low-carbon steel supply	<ul style="list-style-type: none"> Weakening of market competitiveness due to non-supply of low-carbon steel at the appropriate time 	<ul style="list-style-type: none"> Production of low-carbon steel products using existing facilities like electric arc furnaces (mixing) Conducting research projects on future demand and price forecasts for low carbon steel.
	Increased demand for low-carbon raw materials	<ul style="list-style-type: none"> Intensifying competition to secure the supply chain for low-carbon steel raw materials 	<ul style="list-style-type: none"> Development of hydrogen reduction ironmaking (HyREX) using fine iron ore as the primary raw material due to its easier availability Securing the supply chain by establishing HBI (Hot Briquetted Iron) production facilities
Technology Risks	Risks in the development process of hydrogen reduction ironmaking technology	<ul style="list-style-type: none"> Increasing demand for large-scale facility investments to develop and commercialize HyREX technology 	<ul style="list-style-type: none"> Securing technology, workforce, and supply chain through over 20 years of FINEX *Developing HyREX technology based on FINEX fluidized bed reduction furnace technology Establishing a foundation for implementation through tax benefits and other support due to its designation as a national strategic technology
	Devaluation of existing blast furnace facilities	<ul style="list-style-type: none"> Existing blast furnace facilities becoming stranded assets due to the introduction of hydrogen reduction ironmaking 	<ul style="list-style-type: none"> Development of low-carbon production technologies (bridge technologies) utilizing existing facilities like blast furnaces
Reputational Risks	Reputational decline due to negative issues	<ul style="list-style-type: none"> Reputational decline resulting from inadequate issue management responses 	<ul style="list-style-type: none"> Operation of communication channels with stakeholders through ESG NDR, client briefings, and community public hearings
	Risk of greenwashing	<ul style="list-style-type: none"> Decline in brand value due to greenwashing-related litigation 	<ul style="list-style-type: none"> Strengthening risk prevention and post-monitoring by operating the Greenwashing Review Committee

Physical Risks

To assess the resilience of the company against climate change, physical risks were measured and evaluated based on the SSP (Shared Socioeconomic Pathways) scenarios outlined in the IPCC Sixth Assessment Report.

Using the S&P Global Climonomics Methodology, we analyzed the asset value loss risk at five global worksites (Pohang Steelworks, Gwangyang Steelworks, PT KRAKATAU POSCO in Indonesia, POSCO Zhangjiagang Pohang Stainless Steel in China, and POSCO YAMATO VINA in Vietnam) due to eight factors: extreme temperature, drought, wildfire, water stress, coastal flooding, fluvial flooding, typhoon, and pluvial flooding. The results indicated that four factors—extreme temperature, drought, coastal flooding, and fluvial flooding—pose significant risks. The analysis model particularly identified abnormal temperature as the most critical physical risk due to projected global temperature increases resulting from climate change.

Physical Risk Analysis Results

Category	Coastal Flooding	River Flooding	Abnormal Temperature	Drought
Pohang Steelworks	Less than 1%	Less than 1%	1 to 10%	Less than 1%
Gwangyang Steelworks	Less than 1%	Less than 1%	1 to 10%	Less than 1%
PT KRAKATAU POSCO (Indonesia)	Less than 1%	Less than 1%	1 to 10%	Less than 1%
POSCO Zhangjiagang Pohang Stainless Steel (China)	Less than 1%	Less than 1%	1 to 10%	Less than 1%
POSCO YAMATO VINA (Vietnam)	Less than 1%	Less than 1%	1 to 10%	Less than 1%

Physical Risk Response Activities

To prevent natural disasters and minimize their post-impact effects, POSCO has established and operates a comprehensive Business Continuity Plan (BCP). This plan encompasses natural disaster prevention, damage recovery, alternative production, and market protection strategies. The BCP classifies disasters into natural disasters—such as typhoons and heavy rain, heavy snow and cold waves, earthquakes and tsunamis, droughts (water shortages), and lightning—and social disasters, including explosions and fires. The BCP employs a four-stage management system: prevention, preparation, response, and recovery.

In the prevention stage, inspection items defined in the checklists for each type of disaster are periodically reviewed, and any deficiencies are promptly remediated. During the preparation stage, starting one week before the anticipated disaster occurrence, weather forecasts are closely monitored, and inspection activities such as securing emergency equipment and materials are initiated. In the response and recovery stage, alerts are issued, and the disaster headquarters and recovery organization are activated to quickly recover from the damage and ensure business continuity. When a disaster occurs, the recovery activities are detailed across ten stages, from disaster declaration to recovery completion.

BCP 10 Steps

Step 1 Disaster Declaration	<ul style="list-style-type: none"> ✓ Confirm the extent of damage and operate the situation room
Step 2 Damage Investigation	<ul style="list-style-type: none"> ✓ Conduct detailed damage investigations by each department ✓ Assess damage to production facilities, infrastructure, materials, products, raw materials, etc.
Step 3 Establishing Recovery Plan	<ul style="list-style-type: none"> ✓ Develop recovery methods, priorities, procurement plans, and recovery processes
Step 4 Securing Recovery Resources	<ul style="list-style-type: none"> ✓ Secure recovery personnel, equipment, materials, welfare, and budget ✓ Mobilize directly managed companies, partners, and group companies, and secure civil, government, and military support
Step 5 Alternative Production	<ul style="list-style-type: none"> ✓ Implement parallel production at Pohang and Gwangyang Steelworks and overseas subsidiaries
Step 6 Sharing Updates	<ul style="list-style-type: none"> ✓ Share recovery process and normalization plans with external parties ✓ Inform government, National Assembly, local communities, media, etc.
Step 7 Recovery Execution	<ul style="list-style-type: none"> ✓ Execute recovery work on facilities, systems, and infrastructure ✓ Ensure safety as the top priority in cooperation with partners, group companies, and contractors
Step 8 Process Management	<ul style="list-style-type: none"> ✓ Monitor progress and issues related to recovery and production
Step 9 Test Run	<ul style="list-style-type: none"> ✓ Conduct test runs of restored plants
Step 10 Settlement	<ul style="list-style-type: none"> ✓ Settle emergency recovery costs, file insurance claims, and perform accounting

POSCO, prompted by the flood damage at Pohang Steelworks caused by the Naengcheon Stream flooding in 2022, is enhancing its efforts to mitigate physical risks at key domestic and international worksites. This includes installing flood barriers and panels, and reinforcing drainage systems for production facilities. At Pohang Steelworks, to prevent coastal flooding risks from tsunamis, 2.3 km of retaining walls have been installed at the raw material pier, and the breakwater has been reinforced. Furthermore, to prepare for extreme heat during the summer, the efficiency of the plant's cooling system has been improved, and measures to ensure worker safety and health have been strengthened.

Physical Risk Response Status at Key Domestic and International worksites

Pohang Steelworks	<ul style="list-style-type: none"> • Installed a 2.3 km retaining wall at the raw material pier and reinforced coastal facilities¹⁾, and breakwaters²⁾ in tsunami vulnerable sections • Installed floodgates and flood barriers at 1,853 flood vulnerable sites and critical facilities • Reinforced external flood barriers (1.9 km) and the Naengcheon stream embankment (1.7 km) • Developed a CCTV-based drainage monitoring management system with water level measurement gauges and improved the drainage system • Equipped with large engine pumps for emergency response during flooding
Gwangyang Steelworks	<ul style="list-style-type: none"> • Installed floodgates and flood barriers at 662 low-lying vulnerable sites in ironmaking and rolling mill areas • Developed a drainage management system and improved the drainage system • Equipped with large engine pumps for emergency response during flooding
PT KRAKATAU POSCO (Indonesia)	<ul style="list-style-type: none"> • Constructed drainage facilities and maintained drainage systems considering maximum daily rainfall • Installed floodgates and flood barriers at 96 critical facilities, including electrical rooms and ironmaking substations
POSCO YAMATO VINA (Vietnam)	<ul style="list-style-type: none"> • Located critical facilities, including electric arc furnaces, refining, continuous casting, rolling equipment, and electrical rooms, on the 2nd to 3rd floors to prepare for coastal flooding • Conducted drainage expansion construction near the port pier and product warehouse (March to October 2023) and implemented port dredging construction (once every two years)

¹⁾ Installation of protective facilities to prevent erosion at the boundary sections of rivers, coasts, and dykes

²⁾ Construction of breakwaters offshore to reduce wave impact

Just Transition

We acknowledge the impact that changes in facilities and processes during the transition to low-carbon processes have on employees and the local community. To facilitate smooth adaptation and participation of stakeholders, we are promoting a just transition through active communication.

Employees

Following the 2050 Carbon Neutrality Roadmap, we are formulating and gradually executing a workforce transition plan. For the Gwangyang EAF, we have devised a recruitment plan from the facility investment stage to hire production and technical staff with experience and expertise in electric arc furnace operations. We will build their capabilities through pre-job training.

Furthermore, since POSCO's proprietary hydrogen reduction ironmaking process, HyREX, is based on the already implemented FINEX technology, the workforce transition requirement is minimal compared to other steel companies. This offers the advantage of utilizing accumulated know-how. As the equipment transition progresses, we plan to conduct voluntary reskilling training for employees in departments expected to downsize or close, facilitating their reassignment to other roles. Additionally, 'Technical Research Laboratories' in POSCO and the POSCO Group University, a specialized training company, will collaborate to develop training programs for cultivating skilled technicians. We will also actively communicate about the job transition process through the employee representative body and various channels.

Local Community

From its founding, POSCO has regarded growing alongside the local community as a crucial social responsibility. The company prioritizes Pohang, Gwangyang, and the Seoul/Incheon areas, where POSCO Group's worksites are located, collaborating with local residents to address various social issues. This approach aims to present a model of mutual development for both the company and society. During the low-carbon transition process, POSCO recognizes the local community as key stakeholders, objectively reviewing the environmental and social impacts on the community and incorporating these impacts into its decision-making process.

Additionally, we are committed to promoting a fair transition by sharing the reviewed content with local residents and experts through various communication channels and undergoing a thorough feedback collection process. For the permit process necessary for the 'hydrogen reduction ironmaking site development,' critical to achieving carbon neutrality, we conducted seven separate briefings and two joint briefings with residents from nearby areas such as Songdo-dong, Haedo-dong, and Cheongrim-dong starting in May 2023. These sessions included the disclosure of the Environmental Impact Assessment Report and the Traffic Impact Assessment Report, and we gathered resident feedback. Furthermore, we organized a public hearing for the land development project, facilitating in-depth discussions on the impacts on seagrass habitats and the coastline. Through active communication with stakeholders, we aim to build sufficient consensus.

Opportunity Factors

The NZE scenario indicates that steel demand will continue to rise until 2050 driven by population growth, urbanization, and infrastructure expansion. However, as we strive for carbon neutrality, factors such as improved energy efficiency, material lightening, enhanced durability, and changes in consumption patterns are expected to somewhat offset the increase in steel demand. POSCO intends to elevate its production capabilities for high-strength lightweight products, premium electrical steel sheets, and other critical products for a future low-carbon society. This strategy aims to expand POSCO's market share in high-value sectors and sustain its world-class competitiveness.

The growth of the electric vehicle (EV) market presents significant opportunities for POSCO. According to the NZE scenario, by 2030, EVs will constitute 60% of global vehicle sales, and by 2050, all vehicles are projected to be either battery electric vehicles (BEVs) or fuel cell vehicles (FCVs). As EV production increases, the demand for ultra-high-strength steel, necessary for extending driving range, and high-efficiency electrical steel sheets, crucial for enhancing the energy efficiency of drive motors, is expected to rise. We are actively developing and expanding sales of next-generation automotive steel sheets like 'Giga Steel.' To meet the growing demand for non-oriented electrical steel sheets, essential for EV drive motors, we have invested around 1 trillion KRW in the Gwangyang Steelworks to establish a non-oriented electrical steel sheet plant. This investment aims to expand our market share in premium electrical steel sheets, positioning us as a global leader. Furthermore, we are enhancing our supply capabilities for products with improved corrosion resistance and fatigue performance, which are vital for extending the lifespan and stability of solar and wind energy structures, recognized as key future energy sources.

Starting in 2023, POSCO has been actively promoting its low-carbon products to domestic and international customers at the forefront of carbon neutrality. By June 2024, 13 companies, including automotive and wind tower manufacturers, have signed memorandums of understanding (MOUs) with POSCO for the supply of low-carbon steel, with a projected supply volume of 3.7 million tons by 2030.

I Key Findings

Opportunity		Business Impact	Response
Products & Services	Growing demand for high-strength, high-efficiency products	• As demand for low-carbon industries, such as EVs and renewable energy, continues to grow, the sales of high-value products, including high-strength lightweight products and high-efficiency products, are increasing.	• Expanding production of ultra-high-strength steel (Giga Steel) and premium Hyper NO ³⁾ (Non-Oriented Electrical Steel) through new plant construction • Enhancing sales management and marketing for low-carbon eco-friendly products
	Providing low-carbon production process solutions	• Offering proprietary technology solutions for global steelmakers transitioning to low-carbon production processes	• Using hydrogen fluidized bed reduction furnace and ESF ⁴⁾ echnology as a basis for accelerating the development of proprietary HyREX ⁵⁾ technology

3) Hyper NO: Non-Oriented Electrical Steel
4) ESF: Electric Smelting Furnace
5) HyREX: Hydrogen Reduction

Climate Action

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Climate Governance

Carbon Neutrality Roadmap

Climate Risk Management

Sustainable Products

Sustainable Products

We strive to contribute to the realization of an eco-friendly society by expanding our low-carbon steel product portfolio, which helps reduce the carbon footprint across the entire steel value chain.

Product Brands

POSCO identifies the eco-friendly future growth market as its primary target and is increasing the sales of products that contribute to the decarbonization of the steel value chain. To facilitate energy transition across industries like infrastructure, transportation, and energy, POSCO is intensifying efforts to make steel products lighter, stronger, and more durable.

In the steel construction materials sector, POSCO has launched 'INNOVILT,' a premium construction material brand made from high-quality steel, to create a safe, high-standard construction market and promote a sustainable construction culture. In the mobility sector, POSCO has introduced 'e Autopos,' an eco-friendly automotive steel brand, to offer green vehicle solutions to global automotive manufacturers. Furthermore, POSCO is enhancing the development and sales of products under 'Greenable,' to support the expansion of renewable energy infrastructure.

AHSS(Advanced High Strength Steel)



AHSS(Advanced High Strength Steel) (Giga Steel)

Globally, the transition to low-carbon economies is driving the lightweighting and electrification of vehicles, increasing the demand for lighter and stronger steel materials. In South Korea, under the 'Automobile Greenhouse Gas Management System' standards set by the Ministry of Environment, if the GHG emissions per unit distance exceed a certain threshold during driving, automobile manufacturers are required to pay fines or purchase carbon credits. This has heightened the need for lightweight materials. POSCO's GPa-grade AHSS helps reduce GHG emissions by improving fuel efficiency through vehicle lightweighting.

High-Efficiency Non-Oriented Electrical Steel



Electric motors are extensively used in various sectors, including industry, buildings, and transportation. The expected growth of EVs in the transportation sector is significantly increasing the demand for high-efficiency electric motors. POSCO has invested 1 trillion KRW to complete a new electrical steel plant with an annual capacity of 300,000 tons at the Gwangyang Steelworks in November 2023. This facility has commenced production of high-efficiency electrical steel, branded as Hyper NO, which reduce core loss¹⁾ compared to conventional electrical steel, thereby contributing to GHG reduction. POSCO aims to continually increase the sales share of these products.

[Watch the video on High-Efficiency Non-Oriented Electrical Steel Hyper NO / Only in Korean →](#)

1) Core loss refers to the energy loss due to magnetic resistance during the magnetization process of the iron core acting as a magnetic pathway.

Blast Furnace Granulated Slag



PosMent Construction Materials

Blast furnace granulated slag is utilized as a substitute for cement clinker and as a silicate fertilizer. Due to its chemical composition being similar to that of cement, granulated slag is pulverized and used as a cement alternative. Additionally, POSCO has developed and is promoting PosMent, which features a higher slag content and enhanced physical properties, including improved compressive strength, compared to traditional slag cement. Silicate fertilizer is rich in silicon, a crucial nutrient for rice plant growth. Silicon strengthens rice plant stems more than threefold, enhances the texture and taste of rice, and aids in improving yield and quality. Furthermore, silicate fertilizer is produced by grinding granulated slag into small beads. The trace amounts of iron ions (Fe3+) in the slag help suppress methane generation caused by the decomposition of organic matter by microorganisms. This results in approximately a 14% reduction in GHG emissions from paddy fields compared to when no fertilizer is applied.

Environmental Product Declaration Certification

In January 2023, POSCO renewed its Environmental Product Declaration (EPD) certification from the Ministry of Environment for 14 products²⁾, including hot-rolled, cold-rolled, and electrical steel. Leveraging this EPD certification, POSCO plans to promote low-carbon product certification for products with improved carbon emission intensity. With the strengthening of carbon regulations and the increasing emphasis on social responsibility for producing low-carbon products³⁾, there has been a rise in information disclosure requests from various customers, including domestic and international automakers and auto parts manufacturers, regarding the carbon emission intensity of products certified by third-party agencies. POSCO is using its EPD certificates to address these requests and is developing a system to calculate the carbon emission intensity of each product on a monthly and quarterly basis to support customers in complying with the EU Carbon Border Adjustment Mechanism (CBAM).

2) Hot-rolled, pickling, cold-rolled, heavy plates, wire rods, HGI, GI, GA, EG, electrical steel, STS300, STS400, PosMAC, 980DP (Giga Steel)
3) A certification system that awards certificates to EPD-certified products with carbon footprint values below the maximum allowable carbon emissions

[Check the certification: Product Homepage →](#)

Eco-Friendly Achievements Under the EU Taxonomy

Based on the eligibility criteria of the EU Taxonomy, an eco-friendly classification system, POSCO’s eligibility ratios for revenue and capital expenditure in 2023 are 96.5% and 87.5%, respectively.

I EU Taxonomy Baseline Revenue / Investment Eligibility

Division	Turnover	Capital Expenditure
Eligibility ratio	96.5%	87.5%
Amount	37,610.4 billion KRW	2,999.7 billion KRW

Environmental Management

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Overview

Pollutants and Waste

Water

Biodiversity

Resource Circulation

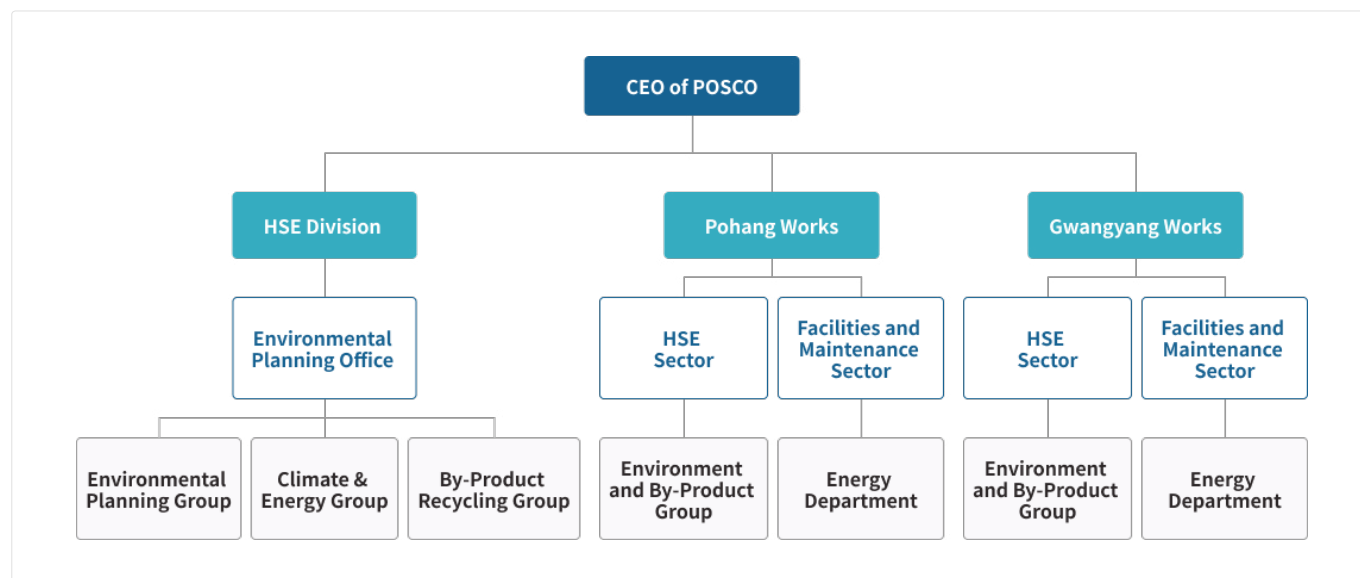
Policy

Overview

To achieve an ‘environmental improvement that local residents can experience,’ we are establishing a robust environmental management system that can minimize the environmental impact of the steelworks on neighboring areas. Based on ISO 14001, we identify the environmental impact of various pollutants, establish and implement management guidelines, conduct internal audits, and provide training, thereby building a comprehensive environmental management process. Additionally, we set internal targets that exceed legal standards and are committed to minimizing pollutant emissions through continuous improvement.

Environmental Management System

Environmental responsibilities for air quality, water resources, and by-products are managed by the Environmental Planning Office under the HSE Division and the Environment and By-Product Group at the Pohang and Gwangyang Steelworks. The performance and issues of major environmental metrics are reported monthly as regular agenda items at the management briefings chaired by the CEO of POSCO.



Environmental Management Policy

We proactively address the rapidly changing external environmental conditions, guided by the vision ‘Better World with Green Steel.’ With the goal of achieving ‘environmental improvement that employees and local residents can feel,’ we implement systematic environmental management practices and carry out various improvement activities. Specifically, we mandatorily review and evaluate our environmental impact during the formulation of the company’s mid-to-long-term business strategy and investment decision-making processes to minimize potential environmental risks.

Board of Directors

POSCO presents the mid-term management strategy and the following year's management plan as resolutions to the Board of Directors every December. These reports also cover key environmental issues and investment plans concerning air quality, water quality, chemical substances, and by-product resource utilization.

- 8th Board Meeting of 2023: Report on the 2024 Environmental Management Plan within the 'Mid-Term Management Strategy and 2024 Management Plan'

Environmental Advisory Committee

Since 2022, POSCO has been operating an Environmental Advisory Committee to collect expert opinions on the environmental impact around the steelworks and to enhance local environmental conditions and communication with the local community. The committee is composed of the chairperson (Professor Jang Yoon-seok, Distinguished Professor at UNIST), non-executive members (President of the Korean Society of Environmental Health, environmental expert professors, etc.), and executive members (Head of HSE Division, Head of Environmental Planning Office, Deputy Head of HSE Sector at the steelworks, Head of Environment Research Laboratory at RIST). In 2024, the committee focused on 'management of environmental hazard exposure and strengthening response capabilities for health damage.

Performance Compensation

POSCO's CEO evaluates executives using a combination of Key Performance Indicators (KPIs) and overall major job performance, which then determines their performance bonuses. In 2023, 30% of the KPIs for the executive director, who was the head of HSE (then the head of Safety, Health, and Environment Division), was based on total air emissions, reflecting environmental performance.

Environmental Consulting Support Team

In February 2021, POSCO launched the Environmental Consulting Support Team, comprising the Environment, Equipment, and Purchasing departments, along with RIST. This team undertakes comprehensive odor improvement activities, ranging from cause analysis to solution proposals for odor-emitting worksites within the Pohang steel industrial complex. The support team utilizes POSCO's equipment operation know-how and environmental improvement technologies to resolve issues in collaboration with Pohang City. Since 2021, the team has identified the causes of odor emissions at various worksites (fertilizer companies, steel secondary raw material companies) and conducted performance diagnoses of prevention facilities (such as scrubbers) that collect and remove odor substances, leading to the formulation of improvement measures. Particularly for fundamental odor improvement, the team has collaborated with RIST to develop technologies that replace odor-generating raw materials in steel secondary raw material manufacturing with odor-free POSCO by-products and substitute odor-causing binders in fertilizer manufacturing with odorless binders. Customized eco-friendly consulting reports were issued to detail the odor diagnosis results and improvement measures for each worksite and were provided to the respective companies. Each worksite is continuously improving prevention facilities, such as installing new scrubbers, and conducting low-odor raw material replacement tests.

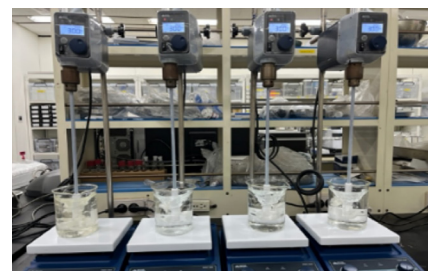
Thanks to the activities of the Environmental Consulting Support Team, support from Pohang City, and the efforts of the worksites in managing odors, complaints in the Ocheon area near the Pohang steel industrial complex decreased by 43% in 2022 compared to 2020, the year before the improvements. For the improvement measures identified by the support team that require investment in facilities, Pohang City is linking them to the SME Small-Scale Prevention Facility Support Project, applying them to each worksite.



Voluntary Odor Improvement Agreement Ceremony for Pohang Steel Industrial Complex worksites



Odor Diagnosis for Each worksite



Binder Test

Environmental Education and Integrated Environmental Manager System

Environmental Education

To strengthen the environmental management capabilities of the steelworks, POSCO offers a variety of educational programs for employees. Training on ISO 14001 requirements and internal audit techniques is provided for responsible personnel. On-site managers and environmental officers receive specialized training from expert consultants on the application and implementation of integrated environmental permits, including permit changes, post-management, and key issues. Furthermore, to enhance overall employee awareness of environmental management practices, an e-learning program titled 'Easy-to-Understand POSCO Environmental Management' is available.

POSCO Environmental Education Status

Programs	Participants	Performance (2023)
ISO 14001 Internal Auditor and Working-level staff Training Program	Departmental representatives	March, April (Total of 199 participants)
Environmental Education for Operations Department	On-site managers and environmental officers	February (Total of 181 participants)
Environmental Education for Investment Department	Investment department representatives	June (Total of 67 participants)
Environmental Education for Environmental Department	Environmental supervisory department representatives	August, September (Total of 53 participants)
Environmental Education for Maintenance Department	Leaders/part managers in maintenance department	December (Total of 304 participants)
Steelworks Environmental Management e-Learning Program	All general employees at POSCO	Ongoing
Environmental Training for New Employees	New employees	Ongoing
Joint Labor-Management Committee Material Distribution	POSCO and partner company staff	25 times

Integrated Environmental Manager System

We have established an Integrated Environmental Management System and appointed Integrated Environmental Managers for the air quality, water quality, and waste sectors. These managers specialize in addressing various environmental issues within the steelworks, ensuring strict adherence to all relevant regulations. They are responsible for monitoring environmental concerns such as air pollution, water pollution, and waste management, and for devising effective management strategies. Additionally, to stay ahead of evolving environmental regulations, policy trends, and new or revised laws, we provide targeted training for our Integrated Environmental Managers.

Environmental Investment

We are continuously making environmental investments to enhance air pollutant reduction and expand by-product recycling. Over the past six years (2018–2023), we have allocated approximately 1.92 trillion KRW for Tele-Monitoring Systems (TMS), steelmaking dust collectors, and nitrogen oxide reduction facilities. Looking ahead, we plan to invest around 1.2 trillion KRW in environmental facilities over the next three years (2024–2026).

We will particularly focus on obtaining and implementing the necessary permits and approvals for our facilities in line with the “Act on the Integrated Control of Environmental Pollution Facilities.” By continuing our environmental investments, we aim to comply with increasingly stringent environmental regulations and improve the environmental management standards both inside and outside the steelworks.

POSCO's Environmental Investment Plan

(Unit: 100 million KRW)

Classification	Key Details	Implementation Results(2018-2023)
Air Quality Improvement	<ul style="list-style-type: none"> Investments to reduce nitrogen oxides (SCR, SNCR) in sintering, power generation, and rolling areas Investments aimed at reducing fugitive dust in fuel and raw material yards (silos, dust-proof nets, etc.) Investments in dust collection systems to mitigate fugitive dust in steelmaking areas (dry dust collectors, etc.) 	17,014
Water Quality Improvement	<ul style="list-style-type: none"> Investments in treatment facilities and management systems for contaminated water in raw material areas Investments in capacity expansion facilities for wastewater treatment (BET equipment, etc.) 	1,560
By-product Recycling	<ul style="list-style-type: none"> Investments to enhance the processing capacity of recycling facilities for slag, dust, and sludge Installation of dedicated waste storage facilities and investments in utility expansion 	292
Other (Chemical Substances, Soil, etc.)	<ul style="list-style-type: none"> Investments to strengthen the management of hazardous chemical handling facilities (containment facilities, alarm systems, etc.) 	312
Total		19,178

Environmental Risk Prevention

We identify both risks and opportunities from domestic and international environmental regulations and issues, assessing their impacts on corporate management to integrate them into our mid- to long-term business strategy and investment decision-making. Through continuous monitoring of environmental regulations and policies, we analyze potential business risks and actively participate in policy development to ensure sensible policy advancement. In new project initiatives, we perform environmental impact assessments to identify and mitigate environmental impact. To prevent environmental accidents and violations at our steelworks, the environmental department conducts regular diagnostics and reports the results to the CEO. Additionally, Pohang and Gwangyang Steelworks carry out daily environmental inspections to maintain rigorous environmental oversight.

Environmental Certification and Management System

We have established an environmental management system based on the ISO 14001 certification, the international standard for environmental management, and applied it to our worksite environmental management policies. Each year, the environmental department supervises internal audits conducted by individual departments, and we undergo post-management and re-certification audits by external professional certification agencies. The results of these audits are reported to the top management, and we adjust our environmental strategies and objectives accordingly to maintain an efficient environmental management system.

We have improved our environmental management system, POEMS (POSCO Environment Management System), by establishing the new 'POEMS 3.0'. POEMS 3.0 includes media-specific management functions for air, water quality, by-products, and soil, as well as features for retrieving information on environmental permits and issues. This allows for more systematic management of company-wide environmental data. Moreover, to ensure meticulous environmental management at our steelworks, we have implemented a mobile environmental monitoring system for on-site inspections.

Monitoring and Information Disclosure

We operate a 24-hour Environmental Monitoring Center to strengthen real-time environmental monitoring and have established a response system to promptly address any issues at at-risk sites. Key environmental information, such as air quality concentration around our steelworks, is transparently disclosed via regional environmental information display boards. Furthermore, we participate as members of local consultative bodies with local communities, NGOs, and environmental expert organizations, such as the Pohang Sustainable Development Council and the Gwangyang Sustainable Environment Council. This ensures transparent and detailed communication of our environmental management and improvement activities to external stakeholders. Air and water pollutants from the steelworks' production processes are automatically measured and transmitted in real-time to government agencies through the Tele-Monitoring System (TMS).

* As of 2023, TMS installations totaled: 246 for air (2024: 301, an additional 55) and 6 for water

In 2021 we successfully conducted a pilot project in collaboration with the Ministry of Environment to transmit TMS data using wireless communication (LTE), leading to its legislation through the revision of the Air Pollution Process Test Standards. The implementation of the TMS wireless network eliminates the need for extensive cable construction, thereby reducing the risk of safety incidents and installation costs while simplifying maintenance. This initiative has been acclaimed as an excellent example of regulatory innovation achieved through public-private partnership.

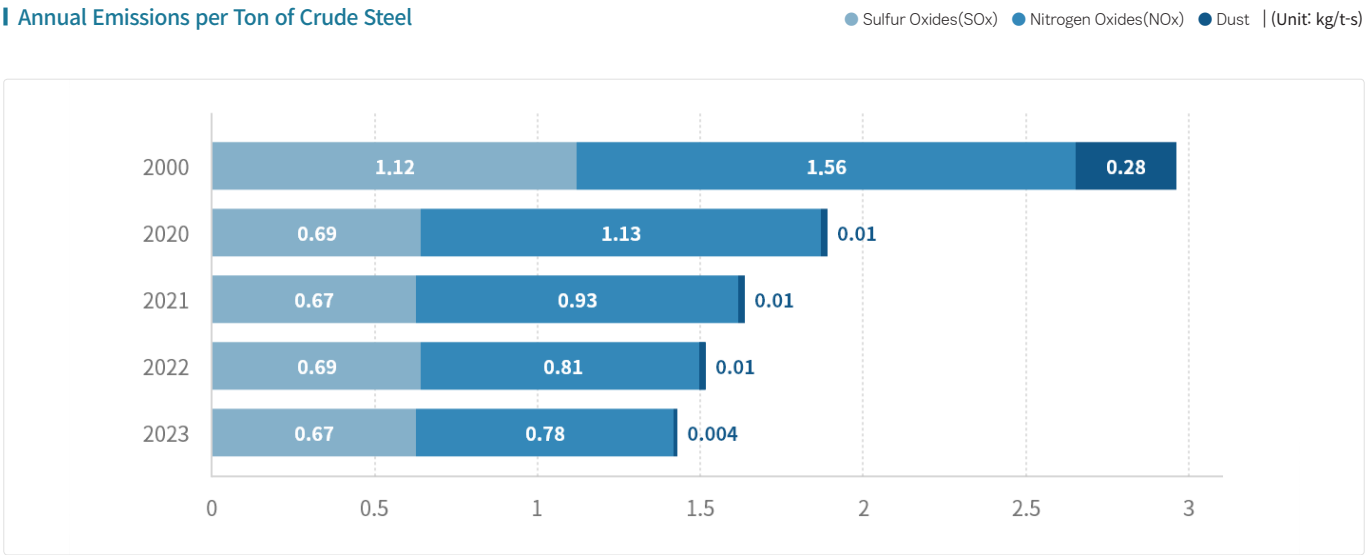
Environmental Load Rate

To drive continuous environmental improvement, we track performance against KPIs and set targets, integrating these into the KPIs for our environmental department and executives. In 2023, the total emissions of air pollutants (sulfur oxides, nitrogen oxides, dust) from our steelworks' chimneys amounted to 51.7 thousand tons, representing a reduction of approximately 16% from the previous year. The unit emissions for air pollutants in 2023 were 1.49kg/t-S, a 50% improvement from 2.96kg/t-S in 2000.

*Emission calculations are based on the standards set by the "Special Act on the Improvement of Air Quality in Air Control Zones."

In 2023, the generation of by-products was 19.524 million tons, with 19.243 million tons being recycled, achieving a recycling rate of 98.6%. Our long-term objective is to consistently maintain a by-product recycling rate of over 98% through 2030.

Annual Emissions per Ton of Crude Steel



Total Air Emissions and By-product Recycling Goals and Performance

Metric	Unit	2020	2021	2022	2023 Performance	2024 Goal
Total Air Pollutant Emissions	Thousand tons	65.9	61.4	51.8	51.7	51.3
Intensity of Air Pollutant Emissions (based on crude steel production)	kg/t-s	1.83	1.61	1.51	1.45	-
By-product Recycling Rate	%	98.8	98.6	98.3	98.6	maintained above 98%

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Pollutants and Waste

We are dedicated to adhering to stringent air regulations, and advancing initiatives to reduce air pollutants, thereby improving air quality. Furthermore, we are meticulously managing chemical substances, hazardous waste, and soil contamination to minimize their environmental impact.

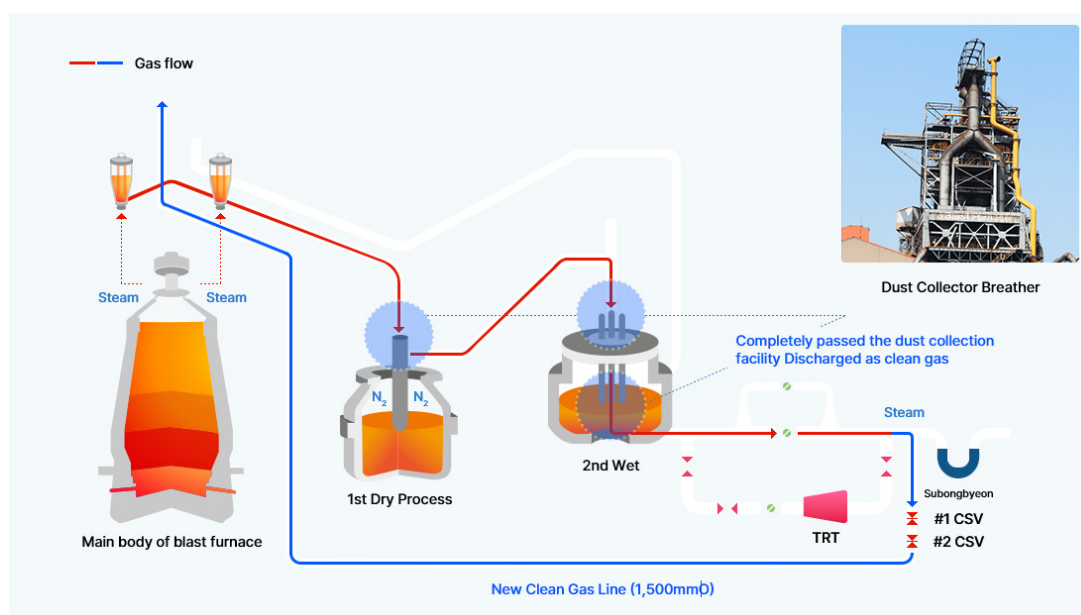
Air Pollutants

We adhere to various regulations, including the Total Air Pollutant Emissions Management System and the Seasonal Fine Dust Management System, and engage in numerous activities aimed at improving air quality by mitigating fine dust generation. We have designated total air pollutant emissions as a KPI, and systematically monitor the execution of our goals and detailed plans. Furthermore, we are committed to reducing airborne pollutants through enhancements to our control facilities.

Installation of Blast Furnace Dust Collector Breathers

Blast furnaces, which operate continuously for 15 years without shutting down, require parts replacement and repairs every two months. During these maintenance periods, the supply of hot air (blast) to the furnace is temporarily stopped (blowdown) and then restarted (blow-in). For safety, the top breather is opened to release residual gases from the furnace. In 2022, we installed dust collector breathers on all eight blast furnaces (three in Pohang, five in Gwangyang) to treat residual gases during these maintenance processes, reducing pollutants by approximately 90%. These breathers are now used during blowdown and blow-in to minimize pollutant emissions.

I Schematic of Blast Furnace Breather Equipment



Enhancing the Efficiency of Air Pollutant Reduction Equipment

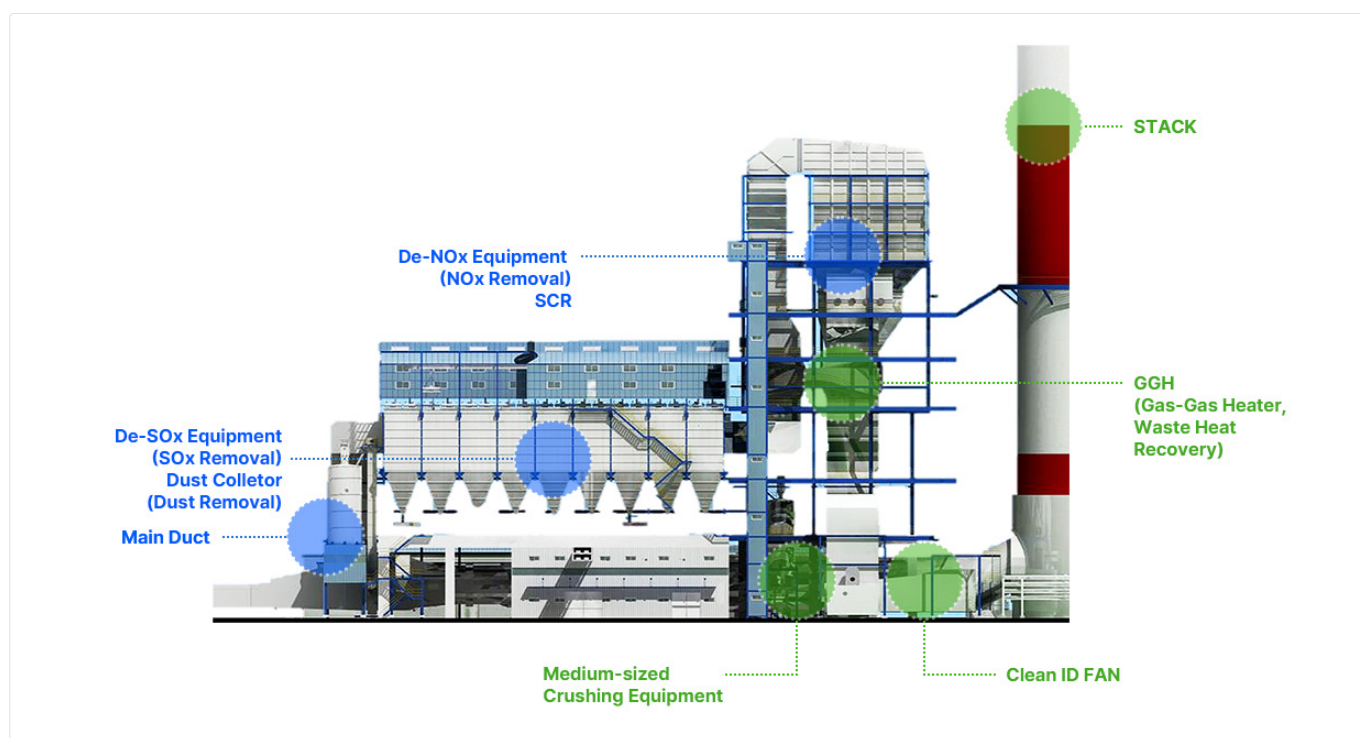
POSCO operates numerous systems to reduce nitrogen oxides (NOx) using De-NOx equipment, treat sulfur oxides (SOx) using De-SOx equipment, and collect dust. Due to stricter regulations, there has been an increasing trend in power consumption and chemical usage, necessitating improvements. To address it, POSCO has initiated projects focused on optimizing combustion and reducing air leakage in De-NOx equipment, aiming to reduce energy consumption and optimize operations to minimize energy usage while effectively lowering air pollutant emissions.

- Sulfur Oxides (SOx): Since 2004, we have been proactively installing activated carbon adsorption equipment and sodium bicarbonate (NaHCO_3) De-SOx equipment at our sinter plants, which are primary sources of SOx emissions. Recently, efforts have been made to further reduce SOx emissions by improving the efficiency of existing De-SOx equipment and enhancing the quality of off-gas (improving H₂S removal efficiency).
- Nitrogen Oxides (NOx): To mitigate nitrogen oxides from their point of origin, we are upgrading existing burners in combustion facilities to low NOx burners. Additionally, we are managing emissions closely by utilizing SCR¹⁾ and SNCR²⁾ technologies at major emission sources, including sintering, power generation, and rolling processes

1) SCR: Selective Catalytic Reduction

2) SNCR: Selective Non-Catalytic Reduction

I Sintered Flue Gas Cleaning Facility Process Diagram



Fugitive Dust Reduction

We are committed to reducing fugitive dust to enhance the living conditions of residents near our steelworks. To prevent fugitive dust at its source during facility operations, we operate over 1,500 dust collectors across both steelworks. For open yards, we are working on yard enclosures, taking into account the characteristics of fuel and raw materials and operational efficiency. Until the enclosures are complete, we are strengthening fugitive dust reduction measures such as dust covers and automatic watering.



Silo



Automatic Watering



Dust Covers

Chemical Substances

Chemical Substance Registration and Management System

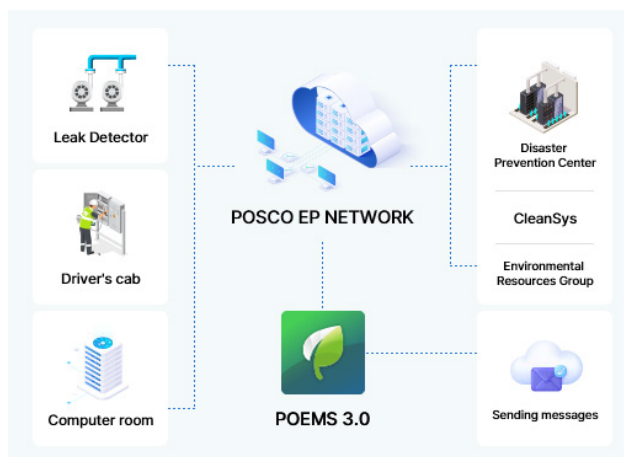
In compliance with strengthened chemical substance management standards, we systematically manage chemical substances. Under the “Act on the Registration and Evaluation of Chemical Substances,” we have successfully registered 131 types of manufactured and imported chemical substances that each have an annual handling amount of over 1,000 tons. Furthermore, we plan to register and manage complex chemical substances, such as blast furnace slag and other chemical substances with an annual handling amount of less than 1,000 tons by the legal deadline.

If unauthorized hazardous chemical substances are detected, we block their entry and collaborate with suppliers to switch to non-hazardous chemical substances. If conversion is not feasible, we obtain government approval to handle them with appropriate disaster prevention equipment and facilities, including facility improvement and the use of protective equipment. We apply worker exposure standards that are stricter than legal requirements to manage the work environment and minimize worker exposure. Since 2022, we have implemented an in-house banned chemical substances policy, replacing them with low-toxicity products to reduce chemical exposure to workers and the environment.

To ensure systematic management of chemical substance handling sites, we have been operating a monitoring system since 2016 that tracks the entire distribution process, from the entry stage to the usage stage, of chemical substances. For vehicles transporting chemical substances, we have implemented a tracking system that allows for immediate location identification and damage minimization in case of an accident. Additionally, we are enhancing on-site chemical substance management by improving facilities to meet strict standards and installing leak detection systems.



Chemical Substance Transportation Monitoring System



Chemical Substance Equipment Leak Detection System

Chemical Accident Prevention and Response System

We are making comprehensive efforts to prevent chemical accidents. An emergency response system has been established to ensure the safety of hazardous chemical substance handling facilities and to minimize damage in the event of an accident. Employees receive chemical accident response and safety training to enhance their response capabilities. Managing departments for chemical substances have been established at both steelworks, with over 50 chemical substance managers appointed at each site to ensure responsible management practices. We are improving our early response capabilities by operating the safety and disaster prevention center, which is equipped with specialized disaster prevention vehicles and staffed with professional personnel. Regular joint public-private training and in-house fire drills further strengthen our ability to respond to accidents. Moreover, we serve as the leading company in the chemical safety community, supporting chemical safety for SMEs and actively participating in the local government chemical safety committee.



Specialized disaster prevention vehicle for chemical substances



Joint public-private training

Supply Chain Chemical Substance Management

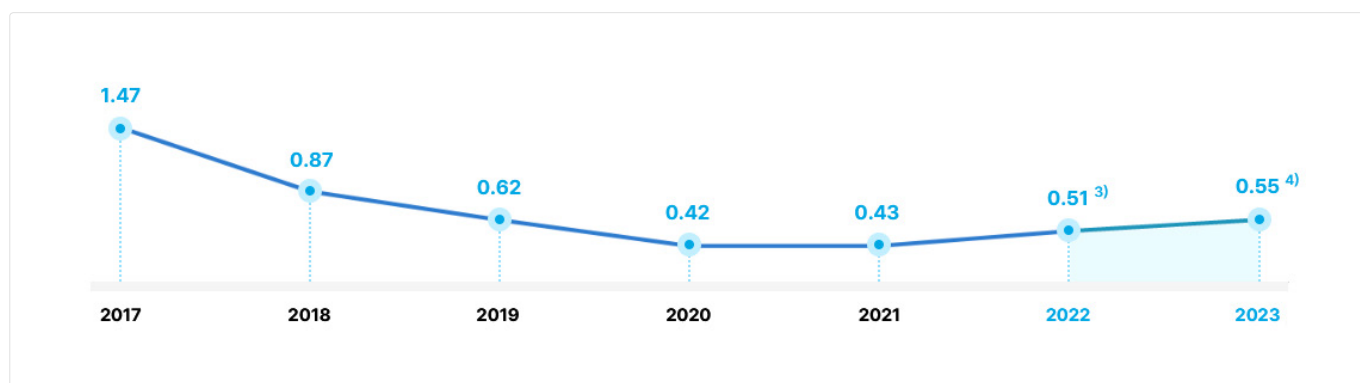
In collaboration with our supply chain, we are enhancing the handling standards for chemical substance management, emphasizing safe distribution and handling practices. We are also integrating innovative technologies and developing new approaches to ensure compliance with relevant regulations. For each production material, we issue an environmental hazardous substances test report and make it available to external stakeholders via the electronic transaction system (E-Sales).

Designated Waste

According to the Enforcement Rule of the Waste Control Act, waste containing hazardous substances are classified as 'Designated Waste.' POSCO manages designated waste, and all handling records are monitored through the Ministry of Environment's electronic information processing program (Allbaro System). Non-compliance with legal standards results in fines under the Waste Control Act. However, in 2023, POSCO processed all designated waste in full compliance with regulations, without any violations. Additionally, POSCO is continuously exploring new uses to minimize the generation of designated waste. In 2023, the proportion of designated waste to total waste remained at 0.56%.

POSCO Designated Waste by Year

(Unit: %)



³⁾ Following the amendment of the Waste control Act in 2022, some general has been reclassified as designated waste.

⁴⁾ According to the Enforcement Rule of the Waste Control Act in 2023, some general waste has been classified as designated waste.

Soil Contamination

In accordance with the Soil Environment Conservation Act, facilities involved in the manufacturing and storage of petroleum products are designated as Soil Contamination Control Facilities and are subject to regular soil contamination inspections.

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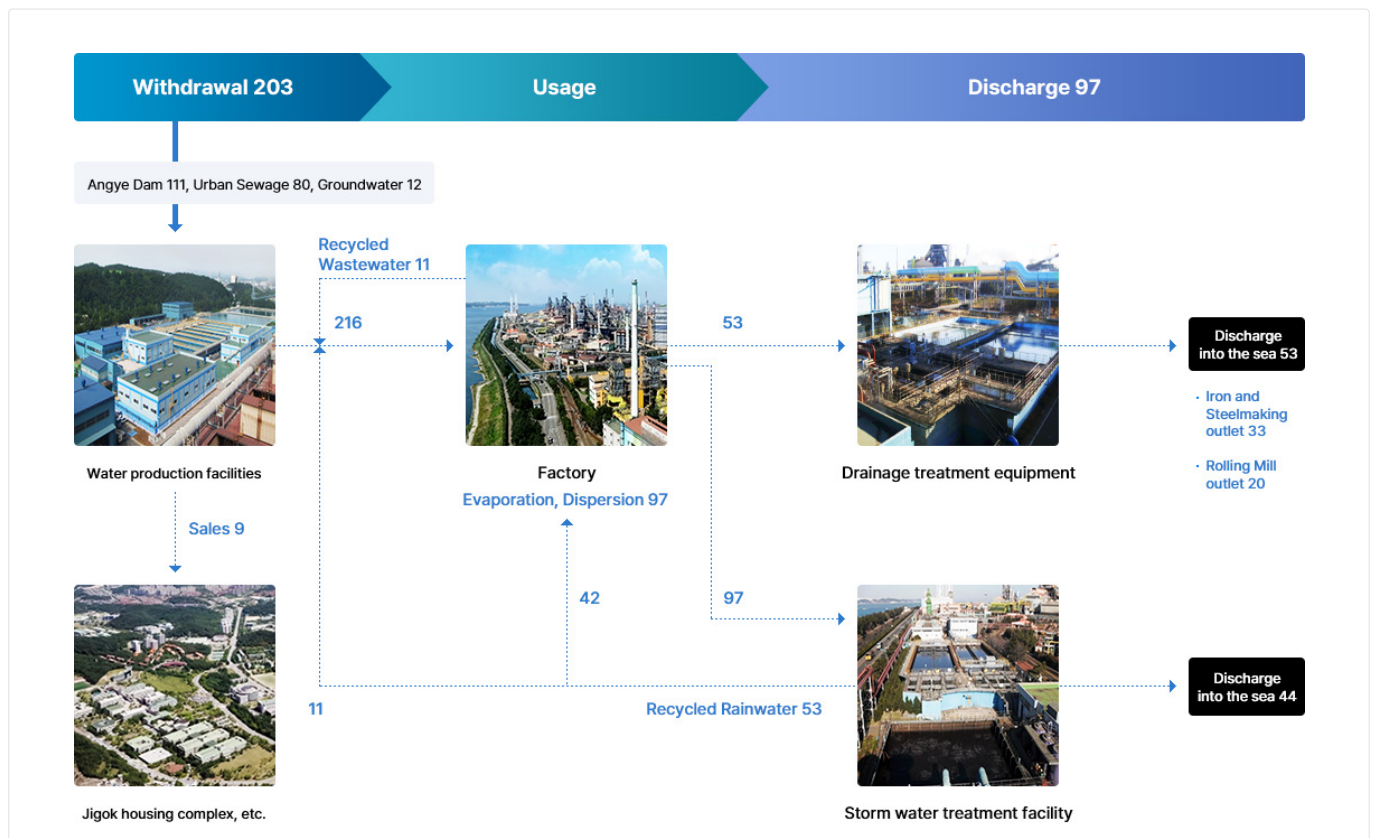
Understanding that managing water resources at our worksites is crucial for sustainable management, we are committed to minimizing water scarcity risks for both our facilities and the surrounding communities through optimized water management and expanded recycling. Additionally, we rigorously monitor and manage the quality of discharge water to reduce the environmental impact on the marine areas near our steel plants. We also participate in the water information disclosure project, CDP Water Security, and have received a leadership rating of A- in the 2023 CDP Water evaluation (global average rating: C).

Water Resource Management

We have declared our commitment to minimizing resource usage, including water, and managing environmental impact, including wastewater, through our environmental policy. While the Pohang Steelworks is located in a region with Medium High Water Stress (20-40%) according to the Water Resources Institute (WRI), the Gwangyang Steelworks was designated as a High Water Stress area (40-80%) in August 2023. Consequently, we are actively developing and implementing strategies to reduce water consumption and maximize the use of existing water resources.

Pohang Steelworks Water Usage Process

(As of 2023, Unit: thousand tons/day)



I Gwangyang Steelworks Water Usage Process

(As of 2023, Unit: thousand tons/day)



Drought Response Measures

To mitigate the risk of water resource shortages, we have established a cooperative framework with national water resource management government agencies (Ministry of Environment, Korea Water Resources Corporation, local governments, etc.). We monitor the water retention rate of dams that serve as water sources for our worksites and develop water management scenarios based on water retention rates (e.g., Pohang Steelworks Water Source Dam: critical stage below the 28% water retention rate, supply restriction stage below the 12.5% water retention rate). This allows us to manage water resources effectively in times of drought.

In the Water Stress High area of Gwangyang Steelworks, POSCO maintains ongoing communication with Jeollanam-do and collaborates closely with the government by signing a business agreement aimed at overcoming drought, organized by the Yeongsan River Basin Environmental Office. To address different stages of water shortages, POSCO implements measures such as utilizing municipal wastewater treatment water, operating seawater desalination facilities, and recycling steelworks wastewater to secure alternative water resources. During critical water shortage stages, POSCO adjusts the plant's operation rate to effectively manage the situation. POSCO is committed to continuous water resource management and recycling efforts to contribute to regional water shortage solutions and minimize the impact on steelworks operations.

Reprocessing of Urban Sewage

To decrease the amount of surface water and groundwater drawn from our withdrawal sources, we are pursuing activities to secure alternative water resources. Since 2015, Pohang Steelworks has been an end user in a project to reuse treated water from Pohang City's sewage treatment facilities. This project provides a stable supply of approximately 80,000 tons of recycled water daily, which we utilize as industrial water.

Seawater Desalination

In response to the worsening water shortage due to a prolonged drought in the Jeollanam-do region, Gwangyang Steelworks has been requested by the Yeongsan River Basin Environmental Office and local communities to reduce water usage. To address this, Gwangyang Steelworks operates a seawater desalination facility with a capacity of 30,000 tons per day, serving as an alternative to existing water sources. This facility minimizes energy consumption by utilizing warm water discharge and employs an Energy Recovery Device (ERD) to optimize energy efficiency.

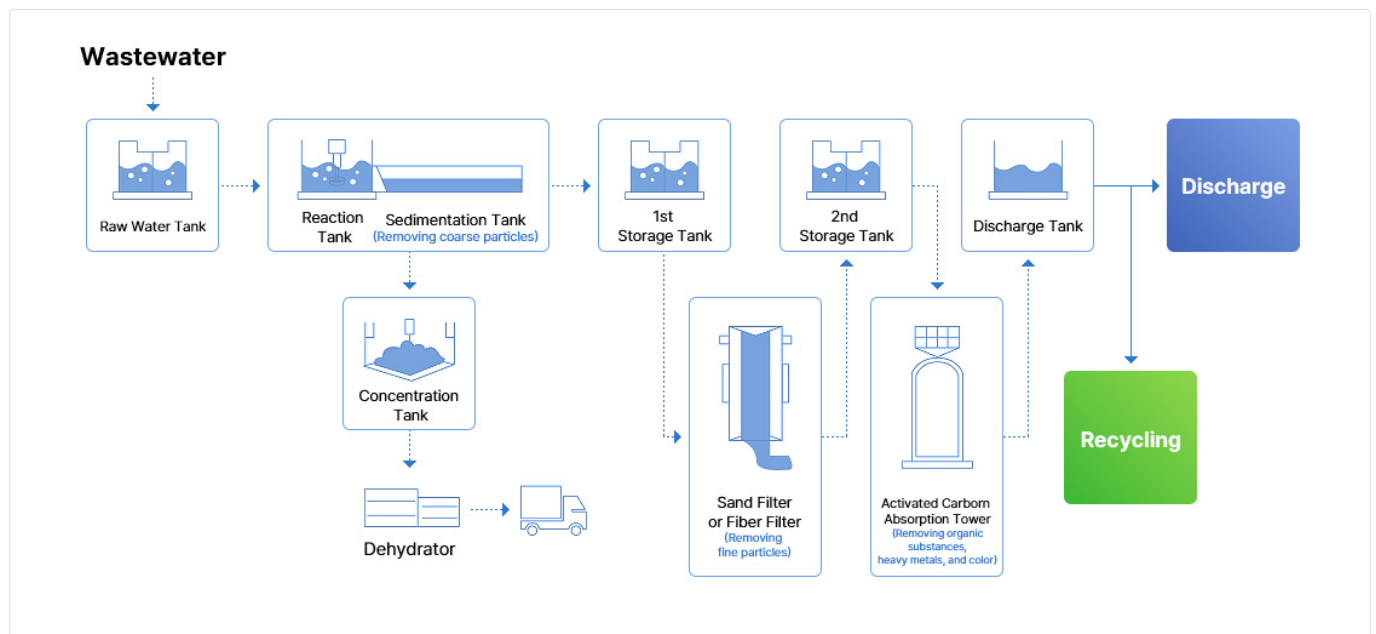
Water Recycling

Integrated steelworks inherently require significant water usage. However, to maximize water recycling, we collect and treat reusable water, such as cooling water, rainwater, and water used for yard and road spraying, through our rainwater treatment facilities. These efforts allowed the company to recycle about 26% of its total water withdrawal in 2023, helping to mitigate water shortage risks in the local community.

Wastewater Treatment

Water withdrawn by the steelworks undergoes purification at the raw water treatment facility, where it is divided into freshwater and purified water for use in necessary processes. The used water in each plant is categorized as wastewater, sewage, or cooling water, and is collected through separate drainage systems. Depending on the characteristics of the wastewater, it undergoes primary physical and chemical treatment, followed by secondary biological treatment for wastewater containing organic substances. The final treatment occurs at the final wastewater treatment facility before discharge into external marine areas. In an effort to reduce the environmental impact on the coastal areas near our facilities, we have established stringent internal management standards for the discharge concentration of key pollutants in the final discharge water, maintaining Suspended Solids (SS), Total Organic Carbon (TOC), and Total Nitrogen (T-N) levels at 80% of the legal limits. At both the Pohang Steelworks (2 outlets) and Gwangyang Steelworks (4 outlets), we manage and monitor the water quality of the final discharge outlets continuously, 24 hours a day, through real-time monitoring systems to ensure minimal environmental impact

Wastewater Treatment System



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Biodiversity

To minimize the impact on ecosystems due to business operations and fulfill responsibilities regarding restoration, POSCO conducts various activities for the conservation and restoration of marine ecosystems. These activities include water pollution surveys, marine forest creation, and marine waste collection. Additionally, POSCO has established a biodiversity policy and is implementing it across major domestic and international worksites.

Support for TNFD

POSCO acknowledges international agreements on biodiversity and land protection, including TNFD¹⁾ guidelines. To ensure biodiversity conservation and minimize operational impact, POSCO independently conducts ecological surveys in areas surrounding its worksites.

In the marine areas near Pohang and Gwangyang Steelworks, POSCO performs water and sediment pollution surveys. In addition, when required, third-party agencies carry out specialized biodiversity impact assessments. For new project developments, POSCO identifies nearby protected areas and endangered species, utilizing this data to create, implement, and monitor biodiversity management plans for each project

POSCO refrains from undertaking projects in biodiversity protection areas or wetlands. In instances where it must offset or restore nature affected by its operations, POSCO evaluates the application of Best Available Techniques (BAT) and best practices.

¹⁾ TNFD (Taskforce on Nature-related Financial Disclosures): A consortium advocating for the quantification and disclosure of the financial impact on companies from risks and opportunities related to natural capital (such as flora and fauna, air, water, and minerals).

In June 2022, POSCO became a member of the TNFD forum, publicly affirming its commitment to biodiversity management. Moving forward, we will set biodiversity management metrics, proactively manage risks, and engage in activities to prevent and enhance biodiversity loss based on the TNFD framework. By integrating these efforts into our business operations, we aim to strengthen our ability to address natural capital issues and continuously minimize our impact on biodiversity.

Biodiversity Assessment and Management

POSCO employs guidelines from international organizations for biodiversity assessment and management to establish and implement a comprehensive biodiversity risk assessment and management system. This system encompasses analyzing our dependency on and impact on natural capital, conducting status surveys of biodiversity around our worksites, evaluating biodiversity risks, implementing prevention and mitigation measures, and carrying out post-management monitoring.

Biodiversity Risk Analysis Procedure

	STEP1	STEP2	STEP3	STEP4	STEP5
	Industry-specific biodiversity dependency/impact analysis	Identification of biodiversity status near worksites	Biodiversity risk assessment near worksites	Exploration of mitigation measures for worksites	for worksites Biodiversity monitoring
Activities	The ENCORE ²⁾ tool is utilized to assess the biodiversity dependency and impact specific to the steel industry	Analyses are conducted to determine the presence of IUCN-designated endangered species, the distribution of UNESCO World Heritage Sites, and the habitat presence of threatened species near worksites.	The WWF (World Wildlife Fund for Nature) Biodiversity Risk Filter (BRF) is used to perform detailed biodiversity risk analyses for each domestic worksite.	Mitigation activities are explored and implemented at domestic and international worksites to minimize biodiversity risks	Monitoring, Reporting, and Review.
Tools	ENCORE	IUCN	WWF BRF	TNFD LEAP	TNFD LEAP

²⁾ A tool used to analyze the types of natural capital that businesses depend on for their operations, as well as the impact of industry-specific economic activities on environmental change.

Natural Capital Dependency and Impact of the Steel Industry

Following the ENCORE guidelines, a preliminary analysis was performed to evaluate the natural capital dependency and impact of the steel industry. Among the 21 metrics for analyzing ecosystem service dependency, 5 metrics, including surface water and groundwater, were identified as relevant to the steel industry. The analysis revealed that the steel industry's natural capital dependency is rated below average. However, the impact on ecosystems, particularly regarding water usage, was significant across all three evaluated areas.

I Analysis about Biodiversity dependency and impact

Category	Metric	Level
Dependency	Water flow maintenance	Medium
	Mass stabilization and erosion control	Low
	Surface water	Medium
	Ground water	Medium
	Climate regulation	Very Low
Impact	Water use	High
	GHG emission	High
	Solid waste	High

Source: ENCORE(Exploring Nature Capital Opportunities, Risks and Exposure)

Status of Endangered Species Near worksites

Utilizing the International Union for Conservation of Nature (IUCN) Red List, we have assessed the presence of ecological endangered species within a 5km radius of both the Pohang Steelworks and Gwangyang Steelworks. The IUCN Red List categories of vulnerable, endangered, and critically endangered are indicative of threatened ecosystems. Our findings highlight that fish represent a substantial proportion of threatened species in the vicinity of our Pohang and Gwangyang worksites.

I Number of Threatened Species (IUCN Red List)

Category	Vulnerable	Endangered	Critically Endangered	Total
Pohang	31	18	1	50
Gwangyang	41	25	5	71

Category	Mammals	Birds	Reptiles	Amphibians	Fish	Mollusks	Plants	Fungi	Others
Pohang	5	13	2	0	23	1	4	1	1
Gwangyang	5	17	2	1	39	1	3	1	2

Source : IUCN(International Union for Conservation of Nature).
IUCN Red List of Threatened Species: Summary and Statistics (Threatened species in each major group by country)

Using the World Wide Fund for Nature (WWF) Biodiversity Risk Filter (BRF), POSCO has identified biodiversity risks related to the steel industry and the surrounding areas of the Pohang and Gwangyang steelworks. The analysis is based on Pressures on Biodiversity³⁾ and Environmental Factors⁴⁾ to provide a comprehensive assessment of local ecosystem health and human impact.

The analysis revealed that significant pressures on biodiversity include environmental pollution, and the most critical environmental risk factor identified is the decline in rare species.

³⁾ These metrics represent the condition of the ecosystem, encompassing the overall risk to air, water, and soil ecosystems. A lower risk score signifies a healthier ecosystem with greater resilience.

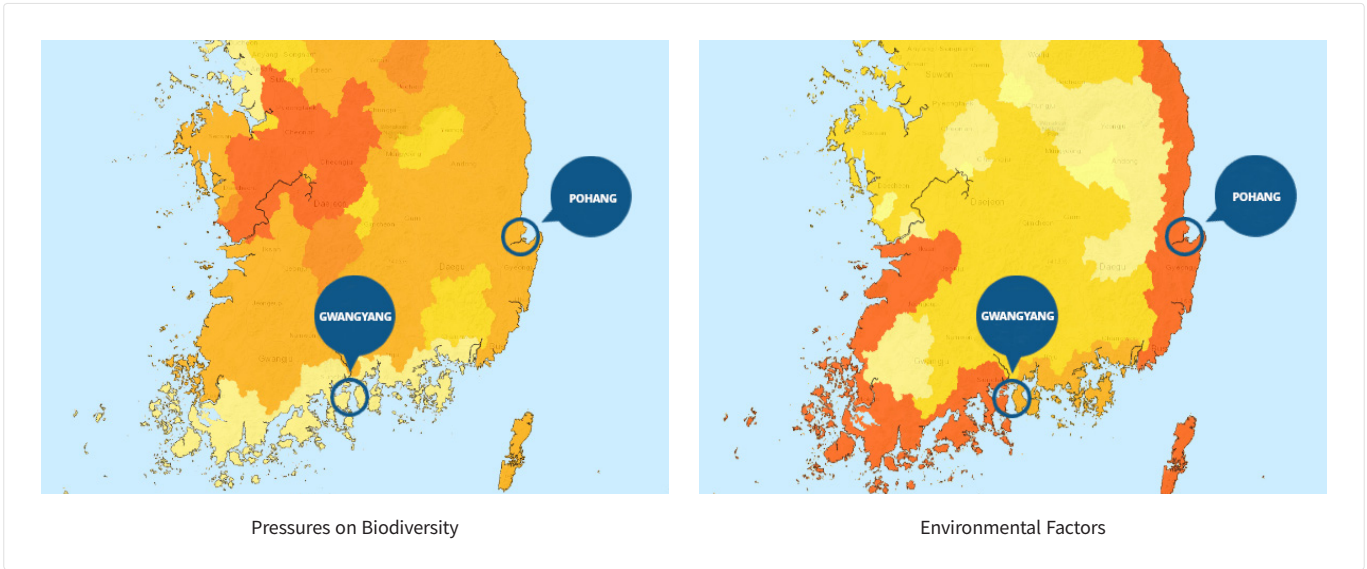
⁴⁾ Metrics measuring the negative impact on local environmental assets. A lower risk score indicates a reduced likelihood of impact on biodiversity.

I Industrial and Regional Biodiversity Risk Factors

Very Low Low Moderate High Very High

Biodiversity Risk		Risk Level (Regional Basis)			
		Pohang		Gwangyang	
Pressures on Biodiversity	Changes in land, freshwater, and marine use	Very Low	Moderate	Very Low	Low
	Deforestation	Moderate		Low	
	Invasive species	Low		Low	
	Pollution	Moderate		Moderate	
Environmental Factors	Protected/conservation areas	High	High	High	High
	Key biodiversity areas	Moderate		Moderate	
	Ecosystem health	High		Moderate	
	Rarity*	Very High		Moderate	

* Endemism of mammals, amphibians, and birds



Source : WWF(World Wild Fund For Nature) Biodiversity Risk Filte

To evaluate the impact on marine ecosystems near our worksites, we conducted a survey focusing on key lower-tier species within the ecosystem pyramid, including zooplankton and phytoplankton, attached macroalgae, and benthic animals.

The survey revealed a total of 178 species in the Pohang area and 168 species in the Gwangyang area.

I Ecological Survey of Areas Near Steelworks (2023)

Region	Phytoplankton	Zooplankton	Attached Macroalgae	Benthic Animals
Pohang	30	22	51	75
Gwangyang	36	28	55	49

Risk and Mitigation of Environmental Impact Factors

A thorough analysis of environmental impact factors (including GHG emissions, air quality, water quality, and waste) was performed to assess potential risks. The primary risks identified were the acceleration of climate change and odor generation. In response, various activities have been initiated to mitigate these risks and minimize the environmental impact, particularly focusing on elements with significant biodiversity impact.

I Analysis of Key Operations by Environmental impact factor

Worksites		Environmental Impact Risk Factors				Status Near worksites
Region	Area	GHG Emissions	Air Quality	Water Quality	Waste	Presence of UNESCO World Heritage Sites within 5 km of worksites
Pohang	9.5km ²	Acceleration of climate change, changes in species distribution and habitat	Destruction of flora and fauna ecosystems, reduction in biodiversity	Destruction of aquatic habitats, water scarcity, reduction in biodiversity	Waste recycling regulations, disposal limitations	N/A
Gwangyang	21.4km ²					N/A

I Biodiversity negative impact mitigation

Category	Impact and Risks	Key Mitigation Activities
Biodiversity Impact Mitigation	GHG Emissions	<ul style="list-style-type: none"> • Increase the use of pellets and HBI (Hot Briquetted Iron) in blast furnace raw materials to decrease fossil fuel consumption in the production of sintered ore • Harness off-gases from steel processes as fuel for both steel operations and power generation
	Air Quality	<ul style="list-style-type: none"> • Form a voluntary agreement with the Ministry of Environment to mitigate high fine dust concentration from December to March • Implement ‘dust collector breathers’ in all eight blast furnaces, reducing pollutants in residual gases by approximately 90%
	Water Quality and Scarcity	<ul style="list-style-type: none"> • Recycle rainwater, yard, and road sprinkling water through rainwater treatment facilities • Produce 30,000 tons/day of desalinated water and repurpose 80,000 tons/day of urban sewage as industrial water
	Waste	<ul style="list-style-type: none"> • Use silicate fertilizer, a steel by-product, to prevent soil acidification and lower GHG (methane) emissions by about 14% • Recycle slag obtained through the magnetic separation process as a substitute for scrap metal, and use non-magnetic slag as a substitute for natural aggregate

Risk Prevention at Business Stages

We are committed to sustainable business practices by evaluating the impact on biodiversity during all stages of business, including new investments, business expansions, and plant construction.

New Investments	Business Expansion
<p>To effectively manage investment risks, our regulations require the inclusion of an ESG checklist in all investment review reports. This ESG checklist covers various factors affecting biodiversity, including pollutant emissions and water resources.</p>	<p>For large-scale investments and new plant constructions, we are required to conduct environmental impact assessments and collect community feedback. POSCO is working towards carbon neutrality by transitioning to hydrogen reduction ironmaking and plans to establish a hydrogen reduction ironmaking plant in Pohang. We are currently performing an environmental impact assessment for the new hydrogen reduction ironmaking site within a 5 km radius before starting construction. This assessment includes nine evaluation criteria⁵⁾.</p>

⁵⁾ Marine water quality, marine sediments, marine ecosystem, meteorology, air quality, odor, noise/vibration, hygiene/public health, soil

Biodiversity Conservation and Enhancement

For the past decade, POSCO has been using slag from the steel production process to create ‘Triton artificial reefs’ as part of our efforts to restore marine ecosystems and recycle by-products. These reefs are placed in marine desertification zones to establish sea forests, significantly contributing to the restoration of marine ecosystems.

Triton artificial reefs, abundant in essential minerals like calcium and iron, are highly effective in promoting seaweed growth and preventing marine desertification. To date, we have deployed over 7,000 Triton artificial reefs along Korea’s coastal areas affected by marine desertification. In 2023, we launched a regional cooperation project to restore the marine ecosystem near our steelworks by creating a Triton sea forest in Pohang. Post-monitoring efforts in the sea forests of Ulleungdo and Pohang revealed an increase in ecological species, demonstrating significant benefits for biodiversity conservation.

POSCO's initiative to restore the marine ecosystem by creating Triton Sea Forests has gained international acclaim. In 2023, POSCO was honored as the first Asian company to win the Environmental Innovation Category at the International Corporate Citizenship Conference (ICCC).

In April 2024, POSCO will enter into an agreement with the Ministry of Oceans and Fisheries to create sea forests aimed at enhancing Blue Carbon⁶⁾ and fisheries resources, fostering a sustainable marine environment. The plan includes establishing new sea forests in Mopo-ri and Gupyeong 1-ri within the year.

⁶⁾ Carbon absorbed by coastal ecosystems (such as seagrasses, seaweeds, mangrove forests, and wetlands)



Installation of Triton artificial reefs

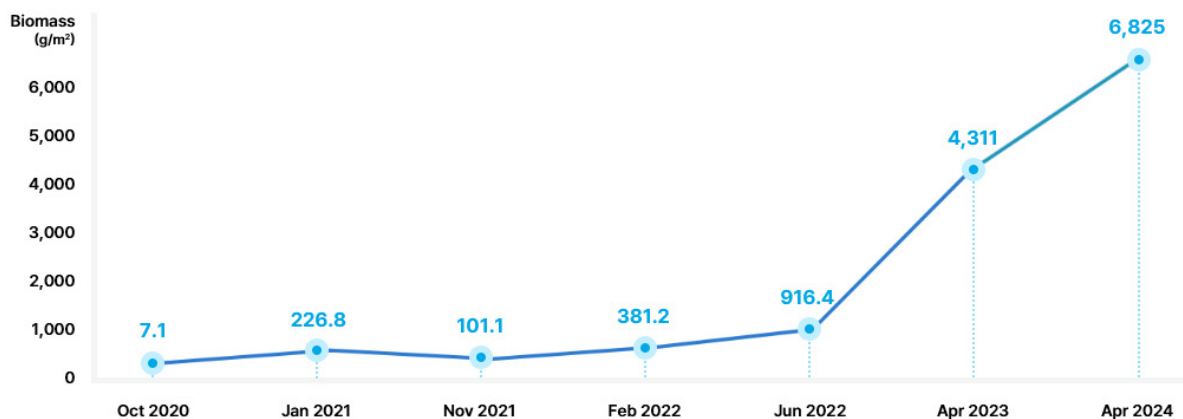


Triton artificial reefs fostering a sea forest



Signing ceremony for the public-private partnership to establish sea forests

Ulleungdo Sea Forest Seaweed Biomass Changes



Environmental Management

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Overview

Pollutants and Waste

Water

Biodiversity

Resource Circulation

Policy

Resource Circulation

We contribute to the implementation of a circular economy and society by recycling by-products generated during the production process. In 2018, we were selected as a Resource Circulation Performance Management Target Site and have since set annual resource circulation goals and managed our performance accordingly. To achieve our goal of a by-product recycling rate of over 98%, we are continuously working to find new applications for currently unused waste and to develop advanced recycling technologies.

Slag Generation

More than 75% of the by-products generated at the steelworks are blast furnace slag and steelmaking slag. Blast furnace slag is a rock-like by-product formed during the production of molten iron in a blast furnace. When high-pressure water is sprayed on the molten blast furnace slag, it rapidly cools and forms sand-like granulated slag. Over 90% of the blast furnace slag is discharged as granulated slag. The molten iron produced in the blast furnace then undergoes the steelmaking process to remove impurities, during which the by-product generated in the converter is classified as steelmaking slag.

Recycling of Granulated Slag

The primary components of granulated slag, calcium oxide and silicon dioxide, can serve as substitutes for cement clinker¹⁾. This substitution reduces the GHGs produced during the calcination of traditional cement raw materials like limestone, highlighting its role as an eco-friendly material. POSCO, in partnership with RIST and POSCO E&C, has developed and disseminated PosMent²⁾, a product that enhances the granulated slag content up to 58% compared to conventional slag cement. This innovation significantly aids in GHG reduction and by-product recycling.

Additionally, granulated slag serves as a key raw material for silicate fertilizer, which is abundant in silica, a crucial nutrient for rice plant growth. This nutrient significantly strengthens rice stalks, increasing their resilience by over threefold, thereby enhancing both yield and quality of the rice. Moreover, studies conducted in collaboration with specialized institutions have demonstrated that the trace iron ions (Fe^{3+}) present in the slag inhibit the activity of methanogenic bacteria, leading to an approximate 14% reduction in GHG (methane) emissions during rice cultivation.

1) Cement clinker is created by calcining raw materials such as limestone at high temperatures. Grinding this clinker into a fine powder results in cement.

2) PosMent is a type of slag cement developed by POSCO, which enhances product performance by incorporating an activator and increasing the granulated slag content to up to 58%.



Granulated Slag



Artificial Reefs using PosMent



Demonstration Site and Methane Capture Device

Recycling of Steelmaking Slag

Steelmaking slag, rich in iron, undergoes crushing and magnetic separation to extract iron, which is then used as a substitute for scrap metal. The residual steelmaking slag, mainly composed of lime and silicon dioxide, serves as an alternative to natural aggregate in construction materials.

Especially in projects where slag is used as aggregate for site formation, the potential generation of leachate upon contact with water necessitates adherence to the slag management guidelines set forth by the Korea Iron & Steel Association.

In partnership with specialized firms, we have developed a technology to completely substitute natural aggregate with steelmaking slag in the production of asphalt concrete (ascon) for concrete road construction. Using steelmaking slag in ascon not only prevents deforestation but also provides more than twice the strength of conventional ascon. Additionally, it is highly effective in reducing fine dust and noise, leading to plans for expanded application.

Recycling of Other By-products

Dust and sludge generated from environmental facilities like dust collectors and water treatment facilities are reused as raw materials in ironmaking and steelmaking processes, either in their original form or processed into pellets or briquettes due to their high iron content.

We are actively developing recycling technologies and identifying potential users to increase the recycling rate of unutilized by-products that would otherwise be landfilled or incinerated. For designated waste such as waste acid and waste alkali, which are challenging to recycle, we manage the entire process, from discharge to disposal, in compliance with the Waste Management Act.



Magnetic Fine Iron Ore



Asphalt Concrete Aggregate



High-Iron Briquettes

Environmental Management

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Policy

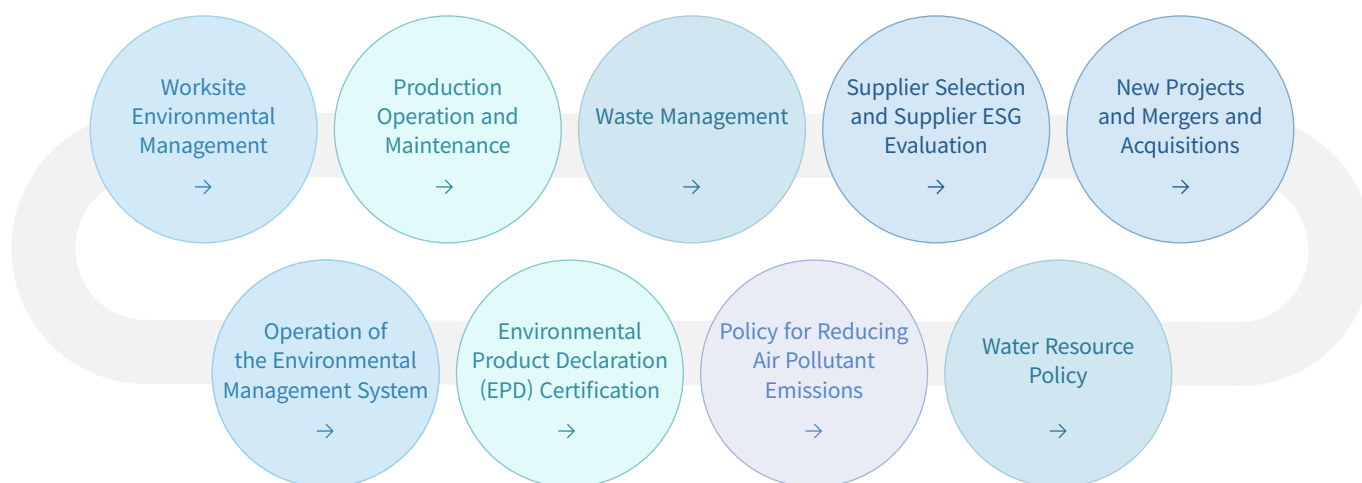
Environmental Management Guidelines

POSCO is taking proactive measures to address environmental issues such as climate change, fine dust, waste, and chemical substances. In this regard, we have developed comprehensive environmental guidelines as required by our internal regulations, internal guidelines, and environmental management policy.

To minimize the negative environmental impacts arising from our business and production processes, we are committed to actively promoting environmental management and extending these efforts to our supply chain and partner companies. We first established the 'Environmental Manual' in January 2010, and in June 2019, we updated and currently adhere to the 'POSCO Group Integrated Environmental and Energy Management Policy'.

Additionally, we have obtained ISO 14001 and 50001 certifications, the international standards for environmental management, and we undergo annual certification audits to maintain these standards.

We also adhere to environmental regulations applicable to our domestic and international worksites, striving for continuous improvement in environmental performance through systematic environmental impact monitoring and pollution prevention measures. Furthermore, we are committed to minimizing the negative environmental impact of our business and production processes, extending these efforts throughout our supply chain and partner companies.



Worksite Environmental Management

POSCO manages environmental aspects at our worksites by integrating environmental goals into the KPIs of the environmental department and its executives. We establish detailed environmental standards for specific areas such as air, waste, and water quality, and implement environmental management processes that include education/training, guideline development and management, and internal audits. Furthermore, we adopt eco-friendly production processes and best available prevention technologies to minimize pollutant emissions from our worksites.

Production Operation and Maintenance

POSCO actively monitors and manages the environmental impact resulting from the operation and maintenance of production facilities in order to drive continuous improvement. Additionally, we have developed an environmental management manual for each production process to ensure compliance with environmental regulations and promote environmental improvements, making it readily available for reference during operations.

Waste Management

POSCO oversees the entire process from waste generation to final disposal through the establishment of comprehensive waste management guidelines. These guidelines encompass the scope of work, organizations and responsibilities, waste sorting and storage facilities, and procedures to address environmental pollution incidents.

Supplier Selection and Supplier ESG Evaluation

POSCO has developed the 'POSCO Supplier Code of Conduct,' which is aligned with global ESG standards such as the UN Global Compact 10 Principles and the Responsible Business Alliance (RBA). Suppliers are mandated to adhere to this code. Moreover, POSCO integrates ESG evaluation criteria into the annual supplier performance assessments to proactively manage environmental risks throughout the supply chain.

New Projects and Mergers and Acquisitions

During the review process of new businesses and investments, POSCO evaluates the quantitative and qualitative expected effects of ESG, along with investment risks and corresponding response measures. To minimize risks associated with new ventures, POSCO develops business environmental management plans and conducts environmental impact assessments. Additionally, in the context of mergers and acquisitions, POSCO performs due diligence to identify ESG risks, including environmental risks, and implements proactive measures.

Operation of the Environmental Management System

Since obtaining ISO 14001 certification, the international standard for environmental management, in 1996, POSCO has undergone annual compliance verification by third-party verification agencies. Additionally, twice a year, internal verifications are conducted under the supervision of the Ministry of Environment. The results of these verifications are reported to top management and are incorporated into the development of environmental strategies and goals

Environmental Product Declaration (EPD) Certification

POSCO has become the first in the domestic steel industry to establish a Life Cycle Inventory Database (LCI DB) that encompasses the environmental impact of steel products throughout their entire life cycle. Utilizing this LCI information, POSCO is advancing the Environmental Product Declaration (EPD) certification for its World Premium (WP)⁴⁾ products on both domestic and international fronts

⁴⁾ World Premium (WP): Unique POSCO products that are either in development or have been developed for the first time globally

Policy for Reducing Air Pollutant Emissions

POSCO has set internal targets that exceed regulatory standards and systematically manages environmental performance to reduce air pollutants.

Water Resource Policy

POSCO is dedicated to managing water resources by optimizing water usage and expanding wastewater recycling initiatives. KPIs include reducing surface water usage and maintaining discharge water quality standards. To minimize wastewater discharge, POSCO is increasing the recycling rate of wastewater from its processes. Additionally, to pre-assess risks in the water supply chain, POSCO monitors national water resource policies, predicts regional regulatory changes, and develops response scenarios. To address water shortages in local communities and ensure a reliable supply of industrial water, POSCO operates seawater desalination facilities and reuses treated wastewater from sewage treatment facilities.

Our Position on Biodiversity

POSCO acknowledges the significance of ecosystem restoration and biodiversity preservation, and this commitment is incorporated into our Code of Ethics Practical Guidelines. We assess the potential impact of our business activities on the biodiversity of neighboring areas and implement measures to mitigate any adverse effects.

New Projects

When undertaking new projects, including facility expansion and upgrades, we aim to prevent and minimize factors that threaten biodiversity, and restore and offset any damage when necessary.

Moreover, we will make efforts to mitigate biodiversity losses and conduct assessments to monitor any potential impact. This position will apply not only to our worksites but also to our primary and secondary supply chains.

We acknowledge international conventions related to the protection of biodiversity and land (such as the Convention on Biological Diversity, the Ramsar Convention, and the Convention Concerning the Protection of the World Cultural and Natural Heritage), along with IUCN¹⁾ guidelines (including the IUCN Protected Area Categories Guidelines and the IUCN Corporate Biodiversity Performance Planning and Monitoring Guidelines). We will adhere to the national and local legal requirements at worksites within the regions covered by these conventions. Should our operations lead to damage, reduction, or degradation in protected areas governed by international conventions, we will restrict access to the worksite and reassess our actions. At worksites that include natural and critical habitats, we will work to prevent and minimize net loss to biodiversity, consider plan modifications, and explore alternative business locations.

Before launching new projects, the company performs environmental impact assessments as required by relevant regulations, identifying and mitigating threats to biodiversity, including all endangered species. The company ensures that its business activities do not adversely affect biodiversity values, such as ecosystems and critical habitats. Furthermore, land use decisions are made in consultation with local residents and communities.

¹⁾ IUCN: International Union for Conservation of Nature and Natural Resources

Worksite Management

For worksites that encompass critical habitats related to biodiversity, we are committed to preventing any net loss and striving to achieve a net positive impact on biodiversity.

At our largest worksites, Pohang Steelworks and Gwangyang Steelworks, we will assess the pollution levels of marine water quality and sediments surrounding the steelworks, alongside actively conducting monitoring activities to enhance the local environment. When necessary, we will collaborate with specialized agencies to carry out professional assessments on the impact on biodiversity.

The company identifies protected areas, regions with significant biodiversity value, and endangered species in the vicinity of business and project development sites. This information is crucial for developing, implementing, and monitoring biodiversity management plans for each project. When conservation areas or protected zones that meet international standards, such as World Heritage sites or Ramsar wetlands, are established within, around, or adjacent to the activity areas of existing worksites, we ensure that our operations do not negatively affect the value of these protected zones.

By-products Recycling

POSCO actively identifies and recycles steel and marine by-products that can substitute for natural resources. For instance, POSCO has been continuously promoting the Sea Forest Creation Project aimed at marine ecosystem restoration. Triton® artificial reefs, made from steel slag, are rich in minerals like iron and calcium, which enhance marine plankton growth and seaweed spore attachment, effectively aiding in the restoration of marine ecosystems. Since 2010, POSCO has installed over 7,000 Triton reefs in domestic waters. Furthermore, the Clean Ocean Volunteer Group, a specialized volunteer group of POSCO employees, conducts around 60 underwater cleaning activities annually to help preserve the marine ecosystem. POSCO systematically supports its employees in biodiversity-related volunteer efforts.

Protection of Endangered Species

To protect endangered species, we will consider supporting local, national, and global biodiversity protection initiatives. The company is committed to safeguarding endangered species near its worksites, such as one mammal species (otter) and 11 bird species (whooper swan, tundra swan, bean goose, brant goose, kestrel, Eurasian sparrowhawk, common buzzard, osprey, Eurasian eagle-owl, Saunders's gull, and far eastern curlew), and conserving the surrounding ecosystem. Our efforts include establishing alternative habitats, avoiding construction during the wintering period, and installing movable temporary soundproof panels. Additionally, we implement various environmental education programs to enhance the understanding of biodiversity protection among employees and relevant stakeholders.

Our Position on No Deforestation

Overview

POSCO is dedicated to preventing deforestation and will continue to implement policies aimed at protecting the planet by increasing the recycling of industrial by-products and expanding investments in reducing GHG emissions. Through sustainable environmental policies, the company aims to achieve 'Zero Net Deforestation' by 2050, including a commitment to reforestation as a means of compensation.

- The company will not establish any future worksites that destroy forests and will work to restore green spaces, including forests, upon the conclusion of existing projects.
- Within our worksites, we will increase the recycling of by-products (98.6% as of 2023) and expand investments in reducing GHG emissions.
- We will collaborate with specialized agencies to create forests and green spaces near our worksites when necessary.
- To minimize the negative environmental impact of our business and production processes, we will implement various activities and strive to extend these efforts to our supply chain and business partners.

Monitoring

To address forest risks, the company will develop and implement forest creation and greening plans within our worksites and will monitor related outcomes through environmental impact assessments. Additionally, we will regularly evaluate and improve our suppliers' forest protection activities through Supplier Relationship Management (SRM) assessments. When necessary, we will allocate budgets for collaboration with specialized agencies and enhance our internal capabilities.

Forest Restoration and Greening Results

POSCO is committed to creating a healthy natural ecosystem in the vicinity of its worksites and within local communities. Recently, POSCO invested approximately 44 billion KRW in the Pohang Steelworks and around 28 billion KRW in the Gwangyang Steelworks to enhance greening and achieve zero deforestation. Consequently, the Pohang and Gwangyang Steelworks now maintain over 6.9 million plantings, covering approximately 22% of their site areas, and plant over 30,000 trees annually. Additionally, POSCO collaborates with the Korea Forest Service to promote forest restoration and address climate change.

Our Approach to Environmental Protection and Energy Conservation

To help build a sustainable, low-carbon and eco-friendly economy, POSCO Group adopts the following practices:

- Operate an integrated system of environmental protection and energy conservation programs that meets both ISO 14001 and ISO 50001 requirements. Comply with applicable laws and regulations
- Continuously improve the system through goal-setting and resource allocation
- Reduce greenhouse gas emissions and minimize climate impact by increasing the use of clean energy and introducing low-carbon processes
- Reduce the environmental impact of products throughout their entire lifecycles by making efficient use of natural resources and by-products, and developing products with low carbon footprint
- Minimize pollutant emissions by applying eco-friendly production processes and best available techniques for pollution abatement
- Regularly review environmental protection and energy conservation activities, report outcomes to management and consult with stakeholders

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Safety and Health

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Safety

POSCO is placing the utmost importance on safety and health as its top management value. To this end, it has established a robust and sustainable safety and health management system to create a culture where safety is paramount. POSCO develops top-tier safety professionals and adheres to safety and health regulations by implementing and maintaining enhanced internal standards for the installation, operation, and maintenance of equipment, machinery, and tools.

Safety Management Organization

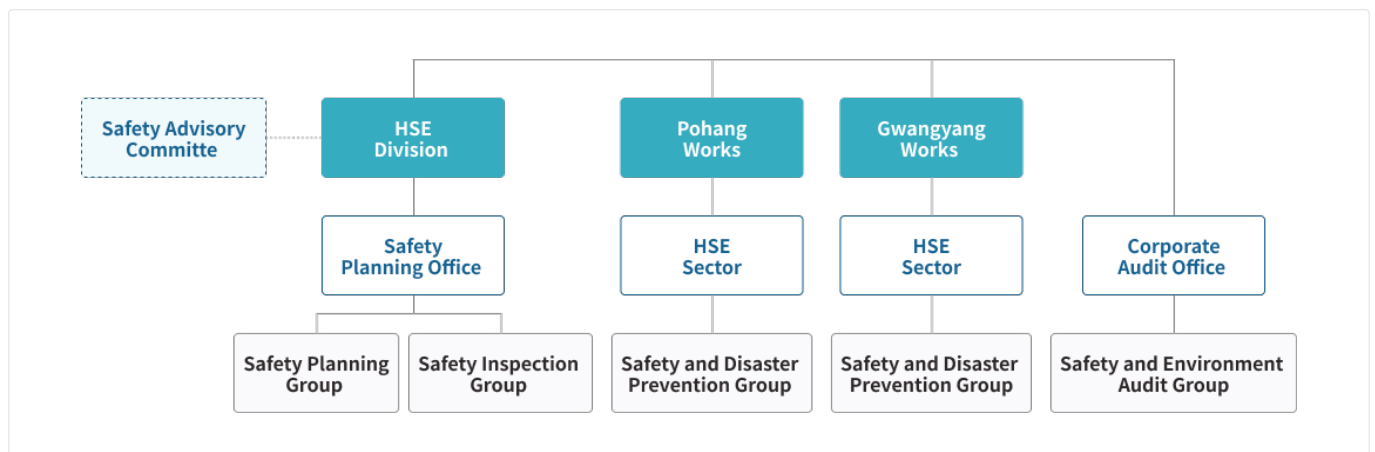
The Safety Planning Office, under the leadership of the Head of the HSE Division, serves as the central control tower for all safety matters. At both the Pohang and Gwangyang Steelworks, the Safety and Disaster Prevention Group is dedicated to business site safety. Within the Ethical Management Office, the Safety and Environmental Audit Group conducts thorough pre- and post-audits in the safety domain, focusing on risk prevention as well as implementing improvements and taking personnel actions for violations of safety protocols. Safety activity plans, performance metrics, and related issues are systematically reported to the Board of Directors and the ESG Committee.

POSCO operates the Safety Advisory Committee¹⁾ consisting of 10 members: 5 internal experts (including the Head of the HSE Division, an executive director) and 5 external experts. In 2023, the committee held four meetings to discuss POSCO's safety strategy, PSM¹⁾ management plans, and other related topics. In 2024, the committee plans to focus on enhancing the safety capabilities of small and medium-sized contractors, including service vendors and subcontractors with fewer than 50 employees, and developing plans to eliminate unauthorized work

- Role: With the participation of external safety experts, diagnose and develop improvement plans for POSCO's safety management system and safety activities from an objective perspective.
- Advisory Task: Developing plans to establish a foundation for POSCO's development into a global leader in safe steel manufacturing (October 2022 - October 2023)
 - [Task1] Developing response plans through the analysis of stakeholders' perceptions of POSCO's safety activities
 - [Task2] Application and evaluation of SIF²⁾-based accident prevention programs
 - [Task3] Development of assessment metrics for the establishment level of a safety and health management system

¹⁾ PSM : Process Safety Management

²⁾ SIF : Serious Injury & Fatality



I Safety and Health Plan Report and Performance

2023 Activity Plan

Enhancing contractors' capabilities, improving field execution effectiveness, establishing a culture of rule and process compliance, and achieving the Zero Serious Accidents Initiative by creating a comfortable working environment

2024 Activity Plan

strengthening execution-focused autonomous safety management activities, reinforcing the industrial health management system to prevent occupational diseases, conducting thematic diagnoses of safety vulnerable areas, and improving the levels of process safety management and smart safety

Nine Elements of the Safety and Health Management System

To systematically implement the requirements of the Serious Accident Punishment Act and to transition to a global advanced safety system, we have established and are implementing 9 elements of the safety and health management system.

Management Commitment and Goals



To ensure responsible safety and health management and operation, we have appointed an executive in charge as an executive director. In 2022, we revised the safety and health management policy to emphasize that safety is the top priority above all values, including production, quality, construction period, and delivery. In addition, we require the safety and health management policy to be read aloud before all safety meetings and training sessions.

[Safety and Health Management Policy →](#)

Organization, Personnel, and Budget



In addition to on-site supervisors and safety part leaders, safety management support staff are deployed at each factory. For high-risk tasks, Life Keepers³⁾ are separately hired and assigned to ensure safety. Moreover, the safety and health budget is independently allocated and managed. We also implemented a pre-execution post-settlement system to promptly address potential hazards in the field.

³⁾ Life Keeper: Deployed to six types of high-risk tasks such as entrapment and falls, monitoring the status of work safety measures and workers' unsafe behaviors

Two-Way Communication



We operate various safety communication channels for the company, its employees, direct management, and contractors. Company representatives, including steelworks managers and plant managers, actively listen to the opinions of both POSCO workers and contractors. They establish safety and health goals and policies and strive to eliminate safety risks and create a safe working environment

Category	Attendees	Frequency	Main Content
Safety Management Committee	HSE Division / Pohang and Gwangyang Steelworks Executives, Representative Body / Contractor Representatives	Semi-annually	Company-wide safety activity review and decision-making (A top management presided safety council that is a higher-level concept of the Industrial Safety and Health Committee at both steelworks)
Group Safety Council	CEO and Safety Executives of Group Companies, Heads and Safety Executives of Overseas Subsidiaries	Semi-annually	Inspection of safety risks at major domestic and international business sites and review of the implementation status of safety improvements
Safety Reporting System	Direct Management, Contractors, Partner Companies, External Visitors	As Needed	Issues requiring improvement, such as on-site unsafe conditions and unsafe behaviors

Category	Attendees	Frequency	Main Content
Industrial Safety and Health Committee	Chairperson (Head of Steelworks), Company Representatives, Worker Representatives (including Representative Body)	Quarterly	Deliberation and resolution on major safety and health issues at the steelworks, including the establishment of industrial accident prevention plans and matters related to worker safety and health education
Labor-Management Joint Committee	Presided by Plant leader (Plant Level), Contractor Personnel, and Representative Body Staff	Weekly	Share safety issues and listen and respond to Voice of Employees (VOE)
Safety Cooperation and Win-Win Team	Safety Supervising Department, Partner Company Association, Safety Personnel from Group Companies / Partner Companies	Monthly	Share and discuss safety issues and implementation status
Business Owners' Coordination Council	Presided by Deputy Manager / General Manager (Sector Level), Contractor CEOs	Monthly	Share safety performance, listen to and share improvement activities of VOE

I Case of Two-Way Communication

Improvement of Workers' Work Uniform



The existing sky blue-colored work uniform has been worn for about 30 years since 1993. However, due to employee feedback that it is not noticeable in dark places, posing an accident risk, we conducted a company-wide survey to gather employees' opinions on improving the work uniform. As a result, starting in February 2024, a new work uniform that considers workplace safety will be worn. To maximize the visibility of the work uniform according to European International Safety Standards (EN ISO 20471), we utilized orange and navy colors and applied reflective strips to the front and back, as well as the top and bottom of the uniform, enhancing safety during night work. Compared to the previous work uniform, we expanded storage options to make it more convenient to carry radios, lanterns, body cameras, and other equipment. We also used T Wave fabric with Bluesign certification to improve quality and added features like a waist E-band and underarm ventilation to enhance on-site mobility.

Establishment of Worker Rest Areas



Based on VOE responses indicating a lack of rest spaces for contractor employees within business sites, we completed the construction of the 'Modular Safety Rest Area No. 1' at the annealing and pickling plant in the Pohang Steelworks in July 2022. Subsequently, we expanded the installation of modular safety rest areas, with 25 installed at the Pohang Steelworks and 26 at the Gwangyang Steelworks by 2023. These safety rest areas also serve as educational spaces for contractors who lack safety training facilities and are used as on-site medical care spaces by medical staff to prevent heat-related illnesses during the summer.

Contractor Management



To ensure safety management for contractors, we have established a dedicated organization within business sites to monitor safety activities and manage changes. Furthermore, to support the establishment of safety and health management systems for both direct management and contractors with contractual agreements, POSCO launched an integrated safety and health platform in September 2023 to provide system-based, systematic safety management. In February 2024, POSCO was recognized by the Ministry of Employment and Labor for its achievements in supporting the establishment of safety and health management systems for three partner companies (Cheongin, FineTec, and Seyoung Enterprise), and was selected as an Outstanding Large Enterprise and SME Safety and Health Win-Win Partnership Company. Moreover, we operate the 'Mobile Safety Bus,' which provides safety training content and serves as a heat shelter for service vendors and subcontractors working in poor conditions. In 2023, a total of 4 buses were used to educate approximately 15,000 people.

Compliance with Laws and Standard Procedures



To strengthen Rule & Process compliance, we comprehensively revised 10 major safety rules in 2023 to establish a safety culture that strictly adheres to basic safety rules and standards. We conduct semi-annual compliance checks to ensure adherence to the implementation obligations of the Serious Accident Punishment Act within business sites, continuously identifying and improving deficiencies.

Absolutely Prohibited Rule 10 SAFETY RULES

All disasters are preventable!

Absolutely Prohibited Rule

10 SAFETY RULES

Absolutely prohibited rule	1 Access to inspection and repair of operating equipment is prohibited	2 Entry to fall risk areas is prohibited if the safety belt is not fastened	3 Prohibition of handling firearms around explosive or flammable substances	4 Access to heavy objects and heavy equipment within the work radius is prohibited	5 Prohibit entry into confined spaces before measuring oxygen and harmful gases	6 Do not do electrical work before turning off the power and turning off the electricity		
Absolute rules of practice	7 Check cadastral points during on-site TBM before work (use the right to stop work in case of danger)					8 Follow ILS procedures when performing repair work	9 Safety CCTV filming for all work	10 Wear safety gear that meets regulations

Education and Training



We are enhancing the safety education system of POSCO and its contractors through reform centered on training, discussion, and practical exercises. This includes expanding education for safety competence to vulnerable groups such as new employees and contractor employees, and conducting performance evaluations for all safety training sessions led by the safety department. Moreover to enhance professional competence in process safety management, we are recruiting external PSM experts and developing PSM advisors (301 as of 2023) to strengthen the Plan-Do-Check-Action (PDCA) based PSM management system.

I 2023 Major Training Achievements

Course Name	Number of Participants	Target Classification				
		Direct Management	Group Companies	Partner Companies	Vendors	Subcontractors
Executive Safety Leadership	77	●				
Risk Assessment Training for Supervisors	3,056	●				
PSM Professional Training	2,412	●				
Safety Competence Improvement by Contractor Level	14,720		●	●	●	●
Mobile Safety Bus	14,459	●	●	●	●	●
Visitor Safety Training	76,332				●	●

According to the ‘Emergency Response Procedures and Training Guidelines,’ we conduct training at the plant/section level to respond to four major emergency situations that could lead to industrial accidents: firefighting, PSM, confined spaces, and chemical accidents. We inspect the emergency response system through these trainings. When necessary, the maintenance department also participates in the training. For important training sessions, the safety supervising department observes and provides feedback on training evaluations and improvement suggestions.

I 2023 Second Half Training Performance

Entity	Firefighting			PSM			Confined Spaces			Chemical Accidents		
	Target	Performance	Rate	Target	Performance	Rate	Target	Performance	Rate	Target	Performance	Rate
Pohang Steelworks	50	50	100%	39	39	100%	63	63	100%	35	35	100%
Gwangyang Steelworks	37	37	100%	33	33	100%	61	61	100%	26	26	100%
Technical Research Laboratories	6	6	100%	(N/A)	-	-	2	2	100%	1	1	100%



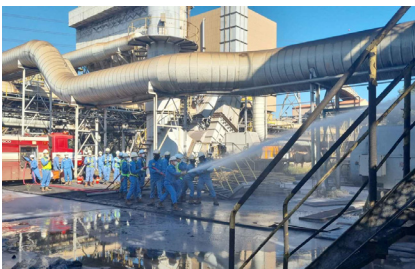
3rd Electrical Steel Plant Firefighting Training



3rd FINEX Plant Confined Space Rescue Training



Coal Preparation Plant Chemical Accident Response Training



Raw Material Plant Firefighting Training



4th Cold Rolling Plant Confined Space Emergency Rescue Training



3rd Coke Plant Chemical Accident Emergency Response Training

Management of Hazardous Risk Factors



We are proactively improving hazardous risk factors through the identification of hazardous risks and improvement feedback/performance analysis. The safety supervising department analyzes safety accidents that frequently occur at plants and provides feedback to the plants. Additionally, we conduct performance analysis meetings on the management status of hazardous risks on a company-wide basis semi-annually, at the business site level quarterly, and at the plant level monthly.

I Identifying Hazardous Risks and Major Improvements

Category	User Target	Number of Findings (2022)	Number of Findings (2023)	Major Improvements
Safety Reporting System	All steelwork entrants	1,201	1,024	Addressing and mitigating unsafe conditions of safety facilities and equipment in and around the workplace, traffic facilities, and road damage, as well as unsafe work practices (with a focus on high-risk categories)
Hazard Identification	Direct management and contractors	48,685	41,564	

Moreover, By utilizing smart technologies such as AI and IoT, we are reducing safety blind spots at the worksite and ensuring worker safety. We have introduced smart safety inspection and monitoring technology to diagnose and inspect hazardous risk factors in advance at worksites. Additionally, we are striving to completely eliminate the risk of safety accidents at business sites by deploying robots for high-risk tasks where human involvement is necessary.

I Smart Safety Technology Application

Smart Safety Technology Application



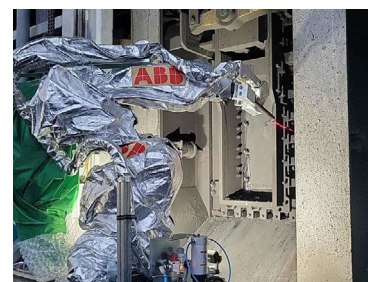
The Smart Safety Ball, which is thrown into confined spaces to measure the concentrations of three gases—oxygen, carbon monoxide, and hydrogen sulfide—and provide real-time results via a dedicated app installed on smartphones or tablet PCs, was developed in 2021. By 2023, a total of 1,742 units were distributed not only to POSCO's business sites but also to public institutions and other private worksites.

Smart Wire Ball



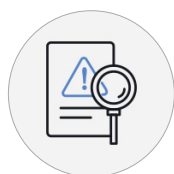
Currently, we manually inspect a raw material transport belt conveyor stretching 700km. To improve this process, we are introducing the Smart Wire Ball robot, which moves along a fixed wire above the belt conveyor, using AI for video analysis to notify of any abnormalities in real-time. It is currently under pilot operation at the Gwangyang Steelworks. Based on the results of the pilot operation, we plan to expand its application to both the Pohang Steelworks and Gwangyang Steelworks starting from October 2024.

Gas Sealing Robot Solution



In January 2024, we developed a solution technology for sealing gas leak areas in coke oven doors and applied it to ABB's multi-joint industrial robots, allowing the robots to perform gas sealing work in high-altitude and high-temperature jobs traditionally done by humans. It is currently under pilot operation at the Gwangyang Steelworks. Based on the results of the pilot operation, we plan to expand its application to both the Pohang Steelworks and Gwangyang Steelworks starting from November 2024.

Accident Investigation and Management



In case of an accident, we notify all employees of the relevant facts and conduct an accident investigation to establish and implement measures to prevent recurrence. Specifically, in the event of an emergency situation, we operate the 'Serious Accident Rapid Response Guidelines,' which include response procedures and the formation and operation procedures of a rapid response TF organization. The head of the HSE division (vice president, executive director) acts as the TF team leader, and the tasks of the TF are immediately reported to the CEO. The business helicopter has been converted for dual use for emergency patient transport to establish an emergency transport system, and we cooperate with medical institutions to provide optimal treatment.

Evaluation and Improvement



Through monthly management briefings, we measure whether the objectives according to the safety and health policy are being achieved as planned and review and analyze the causes of occurrence and the performance of safety and health activities in case of disasters, major near-miss accidents, and occupational injuries. Both the Pohang Steelworks and Gwangyang Steelworks receive regular inspections from external experts through ISO 45001 (Occupational Health and Safety Management System) certification.

In 2023, based on the diagnostic results from the external expert organization DNV in 2022, we derived and implemented improvement measures, which were reflected in our risk management practices. As a result of the thorough implementation of 9 elements of the safety and health management system, we have achieved zero serious accidents from 2023 to June 2024.

Safety Management Goals and Performance

To enhance the safety and health awareness of our employees, we operate the Total Recordable Injury Frequency Rate (TRIFR) metric in addition to the existing Lost Time Injury Frequency Rate (LTIFR) metric. This helps us establish a culture of revealing even minor accidents, thereby strengthening our preventive safety management practices.

Category	2023 Goal	2023 Performance
LTIFR	0.51	0.35
TRIFR	2.0	1.67
Number of serious accident victims	0 people *	0 people *

* Based on direct management and contractor employees

Safety and Health

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Safety

Health

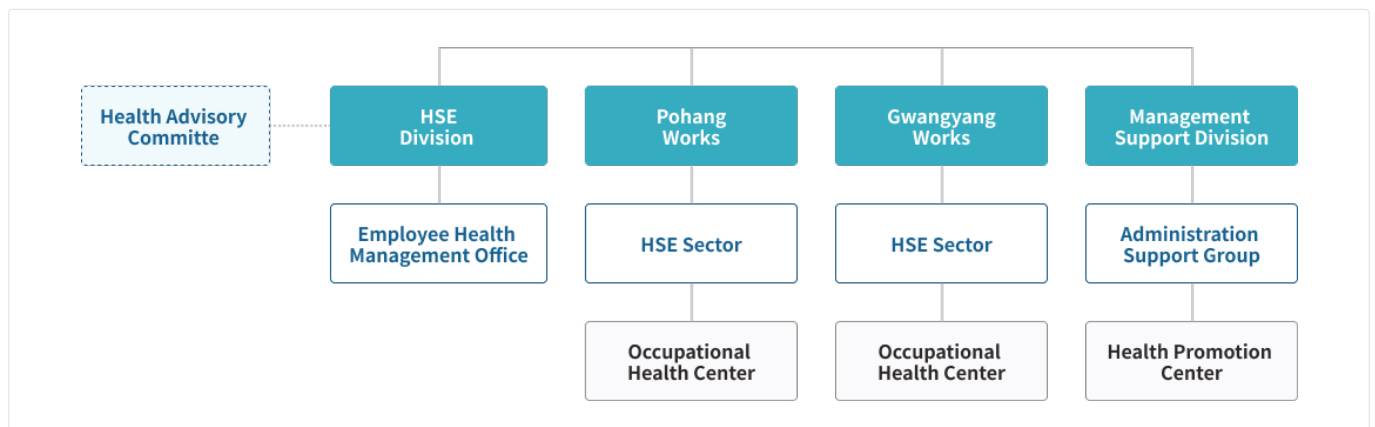
Policy

Health

We provide support to create comfortable environments at all business sites for the safety of our employees against occupational diseases by diagnosing health issues early and thus enabling them to lead a healthy and happy life. Furthermore, we strive to improve employees' lifestyle habits to enhance the quality of their personal life.

Health Management Organization

The Health Planning Office under the Head of the HSE Division functions as the overall health control tower. At the Pohang Steelworks and Gwangyang Steelworks, occupational health centers are operated to professionally manage the health of employees at business sites. Health activity plans, performance, and issues are reported to the Board of Directors and the ESG Committee.



The Health Advisory Committee, consisting of a total of 8 members, includes 2 employee representatives (the employee representative from the Labor-Management Council and the Senior Vice-Chairperson of the Labor Union), 3 executives (the Head of the HSE Division, the Head of the Labor Relations Office, and the Head of the Health Planning Office), and 3 external health experts.

- Role: Diagnosing the health management system by external experts and strengthening the external network
- Implementation of Advisory Tasks (2021-2022) and Improvements (2023-2024)
 - [Work Environment Sector] 3 items including the work environment measurement system
 - [Risk Management Sector] 4 items including the job exposure matrix
 - [Occupational Health Sector] 3 items including lifecycle health management

We are implementing three major policies to prevent diseases and enhance the quality of life for our employees.

Early Disease Detection System



We fully cover health checkup costs for all employees (including contract employees with contracts over one year). We have partnered with top-tier general hospitals to provide premium health checkups every five years, ensuring the highest standards of care. Additionally, we fully support basic comprehensive health checkups for spouses every other year and partially subsidize health checkup costs for parents and children, allowing them to receive checkups at a discounted rate. Furthermore, we operate in-house clinics and physical therapy rooms, accessible to contractor employees as well, providing appropriate treatment and medicines to visiting employees and help prevent musculoskeletal disorders.

Health Improvement Activities





In 2023, we introduced the 'Iron Health' self-directed health improvement brand to our internal employees. This initiative focuses on three main areas: healthy lifestyle practices, smoking cessation, and chronic disease improvement. Participants in the healthy lifestyle practices program achieved an average reduction of 3.5kg in body fat. Furthermore, all participants in the smoking cessation program successfully quit smoking. Participants in the chronic disease improvement program demonstrated improvements in individual health metrics, including blood pressure and fasting blood sugar levels, compared to their levels before participation. (Blood pressure 172/98 → 132/85mmHg, fasting blood sugar levels 164 → 92mg/dL)

To support the mental well-being of our employees, their families, and partner company employees, we operate the 'Mindfulness Center,' staffed by eight psychotherapists. This center provides personalized counseling services, including EEG-based assessments. In 2023, the center conducted 4,297 counseling sessions (4,075 for employees and 222 for partner company employees).

Lastly, we offer group indemnity insurance and support for personal medical indemnity insurance.

Category	Description
Iron Health	<ul style="list-style-type: none"> In the three areas of healthy lifestyle practice, smoking cessation, and chronic disease improvement, participants were invited to set personal health goals and engage in self-directed health improvement activities for a four-month period
Mindfulness Center	<ul style="list-style-type: none"> The Mindfulness Center offers counseling services aimed at helping employees resolve psychological issues and enhance their sense of mental and emotional stability. The center addresses a range of topics including job stress, interpersonal relationships, communication, marital and romantic relationships, and child rearing, thereby providing comprehensive support for both personal and family-related concerns
Visiting Health Plus	<ul style="list-style-type: none"> To empower employees to manage chronic diseases on their own, dedicated nurses visit the plant/section to deliver education on managing hypertension, diabetes, and other chronic diseases. They also provide guidance on health management for shift workers and strategies for managing musculoskeletal disorders
Post-Management Support for People with Health Issues	<ul style="list-style-type: none"> In-house nurses provide regular one-on-one post-management for employees identified as high-risk based on health checkup results to ensure they receive proper treatment and management Health Up Program to improve eating habits and exercise-related lifestyle habits for both people with health issues and general employees Health programs led by exercise therapists within the Group Exercise (GX) program at the in-house fitness center 12-week blood sugar improvement program at the Pohang Steelworks to aid in diabetes management
Eating Habit Improvement Activities	<ul style="list-style-type: none"> Education on the importance of balanced and low-sodium diets, with nutritionists curating meals for the in-house cafeteria In-house education on healthy eating habits, focusing on adequate water intake, hygiene management, weight management, and alcohol abstinence

I Iron Health Reviews (June - September 2023)

Smoking Cessation	Chronic Disease Improvement
 <p>With the company declaring a non-smoking steelworks and actively encouraging employees to quit smoking, I wanted to set a good example for my junior colleagues. I participated in a state-led smoking cessation camp and successfully quit smoking. I view smoking as a disease that needs to be cured. (Sim ○○)</p>	 <p>I neglected my health, assuming that being young meant I didn't need to pay attention to it, which led to significant deterioration. Through Iron Health, I adopted a healthy diet for the first time in my life and maintained a consistent exercise routine. Consequently, my health indicators, including blood pressure, blood sugar, and weight, improved noticeably. (Jung ○○)</p>



Mindfulness Center



Visiting Health Plus



Post-Management Support for People with Health Issues (Health Up)

Creating a Pleasant Work Environment



The Pohang Steelworks and Gwangyang Steelworks are committed to fostering a pleasant work environment. We periodically measure the exposure levels of hazardous agents in the workplace through institutions designated by the Ministry of Employment and Labor. Additionally, we establish mitigation measures and improve facilities to reduce hazardous agents.

We have conducted thorough risk assessments of chemical substances, leading to necessary facility improvements. Furthermore, we have implemented a robust management system for prohibited chemical substances, effectively blocking materials that could pose health hazards from being introduced.

In periods of extreme heat, we enforce comprehensive management rules for heatwaves and high-temperature work, which include adjusting work and break schedules based on temperature. We proactively provide shade canopies, bottled water, and other essential items to support our employees. Special alerts are operational during these periods to ensure safety. Furthermore, we carry out campaigns to raise awareness about heat-related illness prevention through the use of notices, banners, and posters.

At Last, by managing the Total Recordable Injury Frequency Rate (TRIFR), which serves as a key safety metric, we aim to transparently disclose minor occupational illnesses and work towards minimizing health incidents at our business sites.

[Current Status of TRIFR Management →](#)

Safety and Health

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Safety

Health

Policy

Policy

Safety and Health Management Policy

POSCO places safety and health at the forefront of its management priorities. By establishing a robust and sustainable safety management system, we cultivate a culture that prioritizes safety above all and develop leading safety professionals.

Additionally, grounded in the belief that 'Healthy employees make a healthy company,' we prioritize industrial health activities across three core areas: health improvement, work environment, and disease treatment.

POSCO has established an internal communication system that fosters active participation from all employees. By promoting employee-led voluntary safety and health activities, we are dedicated to cultivating a world-class safety culture. To achieve this, we are incorporating smart technology, such as the Internet of Things (IoT), to create a more scientific and effective worksite that prioritizes the safety and health of our employees. Moreover, to enhance the safety and health of our stakeholders, including contractors, we encourage these related companies to engage in safety and health activities.

POSCO formulates and executes goals and action plans to effectively implement its safety and health management policy. To ensure the efficacy of these initiatives, we operate an internal audit system that conducts regular evaluations. While compliance with safety and health regulations is our baseline, we also establish and adhere to more stringent internal standards to ensure safety in the installation, operation, and maintenance of facilities, machinery, and equipment.

Safety and Health Management Policy

POSCO is committed to creating a safe and comfortable working environment for everyone entering our facilities, with a focus on disaster prevention and enhancing health and the quality of life. To achieve these objectives, POSCO has established a safety and health management policy grounded in the following fundamental principles as it operates a comprehensive safety and health management system.

- Safety is the top priority over production, quality, timelines, delivery, and all other values, ensuring an environment where everyone entering POSCO can work safely and comfortably.
- To prevent disasters and diseases among all employees and contractor employees, POSCO proactively identifies hazardous risk factors and pursues continuous workplace improvement.

SAFETY AND HEALTH MANAGEMENT POLICY

OH & S Management Policy



As a corporate citizen that develops together, POSCO seeks to prevent disasters and improve health and quality of life **by creating a safe and pleasant working environment for everyone who enters POSCO.**

To this end, POSCO establishes a safety and health management policy based on the following **basic policies in all of its activities and operates a safety and health management system to achieve it.**

- **Safety takes top priority over all other values such as production, quality, construction period, and delivery date, and we create an environment where everyone who enters POSCO can work safely and comfortably.**
- **To prevent disasters and diseases for all employees and employees of affiliated companies, we identify harmful risk factors in advance and promote continuous improvement.**

2024. 3. 1.

Baik Hee Lee
Head of HSE Division

이백희

Safety and Health Management System Operation (ISO 45001)

POSCO has achieved an ISO 45001 certification, the international standard for safety and health management systems, ensuring that all safety and health management activities are conducted both autonomously and systematically. Leveraging this certification, POSCO establishes safety and health strategies and objectives, maintaining a systematic and continuous safety and health management system through the PDCA Cycle¹⁾

¹⁾ PDCA Cycle : A business management method that continuously improves processes by repeating the four stages of Plan-Do-Check-Action

Human Rights

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Human Rights

Policy

Human Rights

POSCO is committed to protecting and respecting human right related to employees and stakeholders. We are committed to preventing any violations of human rights across all our business operations, both at home and abroad, and we strive to mitigate and rectify any negative impact on human rights that might occur during our business activities.

Human Rights Management Organization

The Legal Affairs Office oversees the Human Rights Center, which offers human rights education for employees, manages counseling and investigations of workplace sexual harassment and bullying incidents, and conducts human rights due diligence at both domestic and international business sites. Human rights issues and improvement plans are included in the internal audit performance and planning reports, which are submitted to the Audit Committee of the Board of Directors twice a year.

Human Rights Management Policy

We have published the Human Rights Management Guidelines on our website, ensuring that all stakeholders can easily access and implement the information. Additionally, we have established the 'POSCO Human Rights Protection Guidelines' to serve as the operational standards for activities dedicated to the protection and respect of human rights.

[Human Rights Management Guidelines →](#)

All employees make an annual pledge to adhere to the code of ethics, which includes respect for human rights. The Human Rights Center promotes online and offline education programs and campaigns focused on respect for humanity and human rights for employees.



Pledge of Respect for Human Rights

An annual electronic pledge, which includes ethics and mutual respect, is conducted for all employees (including contract employees).



Respect for Human Rights Training

For all employees (including contract employees)

- Mandatory Online Training: 'Prevention of Workplace Bullying' and 'Prevention of Workplace Sexual Harassment' (annually)
- Offline Training: Special training on 'Adherence to Respect for Humanity' (April 2023)



Respect for Humanity Campaign

Issue-specific campaigns related to respect for humanity through internal system announcements (at least six times annually)

Human Rights Due Diligence

We implement a comprehensive human rights due diligence process to identify and assess both actual and potential adverse impact on human rights and labor rights for all employees at our domestic and international business sites. This proactive process includes issue response, documentation of response activities, and stakeholder communication to prevent and mitigate these impacts.

[Read more about Human Rights Due Diligence Process →](#)

Since 2023, we have implemented an online human rights impact assessment comprising 35 questions for local employees at overseas business sites. For sites with low assessment scores, we conducted direct visits to inspect the work environment and held in-depth interviews to identify root causes. We then recommended the establishment and revision of relevant regulations, conducted training and campaigns, and carried out improvement activities.

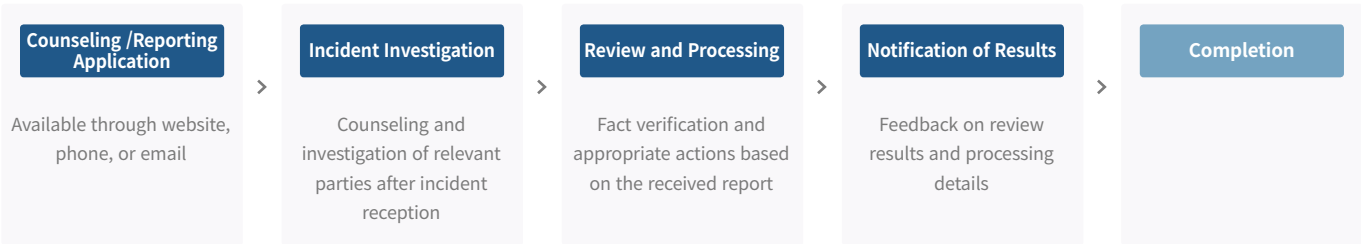
Human Rights Assessment Items for Overseas Subsidiaries (2023~)

• Management of Human Rights Management System (5 items)	• Respect for Stakeholder Human Rights (4 items)	• Prohibition of Employment and Workplace Discrimination (6 items)
• Elimination of Forced Labor (5 items)	• Abolition of Child Labor (2 items)	• Assurance of Safety and Health (8 items)
• Recognition of Freedom of Association and Right to Collective Bargaining (2 items)	• Respect for Privacy and Protection of Personal Information (2 items)	• Subjective Item (1 item)

Grievance Handling

The company operates a process for handling human dignity violations and grievances experienced by employees and stakeholders across all business activities. Reports can be made anonymously through the Unethical Conduct Reporting Center, and the Human Rights Center promptly provides responses to the received reports. Depending on the case, personnel actions may be taken through an audit

We ensure anonymity and secure procedural transparency in the grievance handling process, strictly prohibiting any disadvantage or secondary harm to the reporter and the victim. We thoroughly respect human rights in the grievance handling process by institutionalizing punitive measures for any violations



[Grievance Reporting Center →](#)

We have established a step-by-step response process for human rights violation incidents. In particular, for cases that require victim remedy and prevention of secondary harm, such as incidents of sexual harassment and sexual violence, we make victim protection and swift resolution of the incident our top priorities.

Step	Step1	Step2	Step3	Step4	Step5	Step6
Process	Incident Awareness	Report Reception	Victim Protection Measures	Incident Investigation	Personnel Action	Post-Management
Key Details	Anyone Can Report	Initial Counseling Within 24 Hours	Prompt Spatial Separation	Fact-Finding Investigation	Disciplinary Review by HR Committee	Monitoring for Secondary Harm
Responsible Department	All Employees	Human Rights Center	HR Department	Human Rights Center	HR Department	Human Rights Center, HR Department

Victim Remedy Plan

- Confidentiality Agreement: Mandatory signing by all investigation participants
- Victim Protection Measures: Legal and medical/counseling support at the request of the victim

Legal Support: An in-house dedicated lawyer is assigned, and external legal representation is available upon request
Medical Support: Coverage of medical expenses for illnesses caused by violations of sexual ethics
Counseling Support: Support for psychological counseling programs by professional counselors at the Mindfulness Center

- Codification into Company Regulations: Establishing victim remedy and prevention of secondary harm as company policies

The company strictly disciplines those who conceal workplace bullying or sexual harassment or cause secondary harm. If the position holder responsible for victim protection measures causes secondary harm, they are subject to even stricter disciplinary action. Additionally, the position holder of the perpetrator who caused secondary harm can also be held accountable for management responsibility.

- Preventive Management: Mandatory sexual harassment prevention training for all employees and the implementation of a mutual respect pledge for gender equality

We operate online and offline education programs for employees to prevent human rights violations. Specifically, all employees have completed e-learning sexual harassment prevention training in accordance with legal requirements.

Human Rights Education Completion Rate

ategory	Metric	Unit	2021	2022	2023	2023 Goal	2024 Goal
Online	Sexual Harassment Prevention Training Completion Rate	%	100	100	100	100	100
	Disability Awareness Training Completion Rate	%	99.7	99.7	98.9	100	100

Human Rights

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Human Rights

Policy

Policy

Human Rights Management Guidelines

POSCO respects and supports internationally accepted human rights standards, including the Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the UN Global Compact's Ten Principles, the OECD Guidelines for Multinational Enterprises, and the International Labour Organization (ILO) Core Conventions. Every human being has the right to be treated with dignity, which encompasses the rights to life and physical safety, freedom of thought, expression, and religion, freedom of association, work-life balance, privacy protection, food and water security, freedom from torture, slavery, or forced labor, fair and decent working conditions, and non-discrimination

Therefore, since declaring a Code of Ethics that reflects the Human Rights Management Policy in 2003, POSCO has been striving to prevent the infringement on others' human rights and to take appropriate measures to prevent and resolve negative impact on human rights in the company's business activities and business relationship processes. POSCO continues to strengthen its commitment to human rights management practices.

Basic Position on Human Rights Management



POSCO takes the following basic position on human rights management to fulfill its responsibility to respect human rights and meet the expectations of its stakeholders.

- POSCO complies with applicable laws and internationally recognized global human rights standards everywhere it operates.
- When faced with conflicting regulations in a host country, POSCO seeks ways to comply with global human rights standards.
- Risks that could lead to severe human rights violations are addressed as material management issues by the company.

Basic Position on Human Rights Management

Risk Management for Establishing a Human Rights Culture

POSCO is committed to respecting the human rights of all employees. To prevent and mitigate risks, we have established human rights management guidelines and a risk management system in line with international human rights standards and internal company policies. We transparently share the outcomes of these efforts

- The company proactively prevents the causes of negative impacts on human rights from its business activities and appropriately addresses any issues that do arise.
- Even if the company has not directly violated human rights or contributed to human rights violations, it strives to prevent and mitigate any negative human rights impact that occurs or may occur in its supply chain and business relationships.

Responsibility to Respect Human Rights

The POSCO Human Rights Policy applies to POSCO employees. The company recommends and, when necessary, supports its suppliers, partners, and others in complying with international standards and POSCO's human rights management policy. The company also respects the human rights of all stakeholders and strives to prevent any actions that constitute human rights violations.

Basic Principles

① Prohibition of Discrimination/Bullying

- POSCO does not engage in discriminatory treatment in terms of employment, promotion, education, compensation, or welfare based on race, nationality, sex, age, educational background, religion, region, disability, marital status, gender identity, etc.
- POSCO guarantees employment conditions that enable employees to lead a life with human dignity by complying with legal working hours, maintaining appropriate working hours, and providing fair compensation for overtime work.

- POSCO provides employees with opportunities for education, respects diverse cultural differences, and maintains an appropriate working environment where employees can fully immerse themselves in their work
- POSCO strictly prohibits any verbal, physical, or visual conduct that constitutes sexual harassment or causes discomfort to others. The company is committed to protecting privacy and safeguarding personal information.
- POSCO conducts disciplinary procedures based on procedural fairness, in accordance with relevant regulations such as employment rules, HR regulations, and rewards and disciplinary guidelines, in response to employees' misconduct.

② Prohibition of Forced Labor and Child/Youth Labor

- POSCO ensures that no work is performed involuntarily through mental or physical coercion.
- POSCO complies with national labor laws and international standards regarding the working conditions and minimum age for employment of minors.

③ Freedom of Association and Right to Collective Bargaining

- POSCO complies with the Constitution and Labor Relations Act, which form the basis of its human rights policy, and strives to respect and guarantee employee rights, including the freedom of association, the right to unionize, and the right to collective bargaining.

④ Assurance of Industrial Safety

- POSCO establishes a safety culture to ensure that all employees can work in a safe working environment and takes appropriate measures for identified risk factors. Additionally, POSCO supports its partners in establishing a safety management system.

⑤ Assurance of Environmental Rights

- POSCO recognizes the environment and energy as key elements of its business activities and strives to realize a sustainable low-carbon green economy as a corporate citizen that grows together with society.
- POSCO makes efforts to efficiently utilize natural resources and by-products to restore natural ecosystems and conserve biodiversity.

⑥ Protection of Local Residents' Human Rights

- POSCO manages its business activities to prevent the violation of local residents' human rights, including their environment, safety and health, and freedom of residence. Additionally, POSCO gathers opinions in accordance with relevant laws and regulations and respects the autonomy and traditional values of the local community.
- Security personnel at business sites must not engage in actions that violate human rights or cause discomfort, and they must comply with local laws and international standards.

⑦ Protection of Customer Human Rights

- POSCO provides products and services that do not harm the life, health, or safety of customers and exercises necessary caution in accordance with legal standards.

⑧ Responsible Supply Chain Management

- POSCO supports all major suppliers and partners in fulfilling their obligations to protect human rights.

Human Rights Due Diligence Process



POSCO conducts human rights due diligence when it deems necessary to identify, prevent, and mitigate negative impacts on human rights and to fulfill its

responsibilities for its activities. This process includes identifying and assessing actual and potential impact on human rights, responding to identified issues, recording response activities, and engaging with relevant stakeholders about how the impact was addressed

Human Rights Due Diligence Process

Human Rights Due Diligence Considerations

- This encompasses the potential negative impact on human rights that may arise directly or indirectly from the company's business activities and relationships.
- Consideration is given to various factors, including the location and scale of the business site, human rights-related risks, the nature and content of the business, and the political, economic conditions, and cultural context of the host country.
- We continuously employ these considerations, acknowledging that the risks to human rights evolve in tandem with changes in the company's activities and operational environment.

Implementation Method

POSCO adheres to the following process to identify and evaluate actual and potential negative impact on human rights resulting from its domestic and international business activities and relationships.

- When human rights-related risks are detected at major business sites, human rights due diligence is conducted to analyze the situation and formulate improvement measures.
- Due diligence is primarily conducted by internal experts, with the option to engage external experts for support when necessary.
- Substantial interviews are conducted with potentially affected groups and relevant stakeholders as necessary.

- During human rights due diligence, potential and actual impacts must be identified. Potential impact should be shared at a company-wide level, and relevant procedures should be followed to implement measures to prevent and mitigate these impacts. Actual impact that has already occurred should be subject to remedy and resolution.
- Human rights due diligence is conducted utilizing a checklist that diagnoses key elements related to human rights management.

Response and Follow-up Measures

Based on the findings from human rights due diligence, a response system is established to implement follow-up measures for the prevention and mitigation of potential negative impact on human rights.

① Establishment of the Internal Response System

- To resolve identified issues, the roles and responsibilities of relevant departments are clearly defined.
- Internal decision-making, budget allocation, and monitoring procedures are implemented to effectively respond to these impacts.
- Issues identified through human rights due diligence are accurately communicated to relevant departments, managed, and addressed as critical issues.

② Follow-Up Measures and Remedy

- When negative impact on human rights has been caused or is likely to occur, we take all necessary measures to prevent and mitigate it.
- Despite having the best policies and procedures, if unforeseen negative impacts arise, we strive to improve these negative impacts either individually or in collaboration with other parties.
- Even if POSCO does not directly violate human rights or contribute to human rights violations, if negative human rights impact arises from relationships with other parties (e.g., suppliers) and are related to the company's operations, production, and services, POSCO assumes a role in improving the situation, even without direct responsibility.
- If the company possesses the influence to prevent and mitigate human rights violations, it should leverage this influence. If not, it should collaborate with relevant parties to enhance this influence.
- As an effective remedy measure, the company operates a grievance handling system for stakeholders.

Stakeholder Communication

The company gathers stakeholders' opinions on whether its actions to resolve human rights violations were appropriate and provides accountable explanations to stakeholders regarding the human rights impact assessment results and response actions.

- We engage with stakeholders, including individuals and investors, grounded in accountability and transparency. To ensure stakeholders can easily access information, we employ various communication methods, such as face-to-face meetings, publishing official reports (e.g., the Corporate Citizenship Report, Audit Report), and utilizing online channels (e.g., the company's official website, Helpline).
- In our official reports, we address both actual and potential negative impacts and consider independent verification procedures to enhance the credibility of the report content.
- We strive to provide information that assists stakeholders in evaluating whether the company is responding appropriately to specific human rights impacts.

Internalization and System Improvement

We foster practical improvements in human rights management through the internalization of the organizational culture and system improvement activities based on the outcomes of human rights due diligence.

- Activities to embed human rights management into the organizational culture include providing training on the necessity of human rights management to all employees, education on relevant norms, and sharing success and failure cases.
- Continuous improvements to the human rights management system are carried out through expert consultations, stakeholder communication, and identifying enhancements through system implementation.

Human Rights Grievance Handling Process

POSCO operates a grievance handling system for stakeholders as an effective remedy measure. The grievance handling system serves the following key functions related to the company's responsibility to respect human rights.

- It facilitates the easy identification of negative human rights impact and provides a channel for directly affected stakeholders to raise issues
- It addresses grievances and provides remedies for victims early and directly to prevent the spread of human rights violations
- It identifies and improves issues in human rights policies and procedures through the analysis of operational status

We utilize channels such as the Ethics Counseling Center (Helpline) and the Unethical Conduct Reporting Center (Hotline) for individuals and communities affected by negative impact. We strive to ensure that raised issues are promptly discussed and resolved. We strictly adhere to the whistleblower protection system to safeguard members and stakeholders from reprisals when they report issues

[Contact: humanrights@posco.com]

People

Home > Social > People > Talent Management

Talent Management

Organizational Culture

Policy

Talent Management

The company recruits talented personnel with the necessary qualities and qualifications and supports individual employees to grow alongside the company by offering a variety of development programs focused on work, relationships, and learning.

Human Resources Management Organization

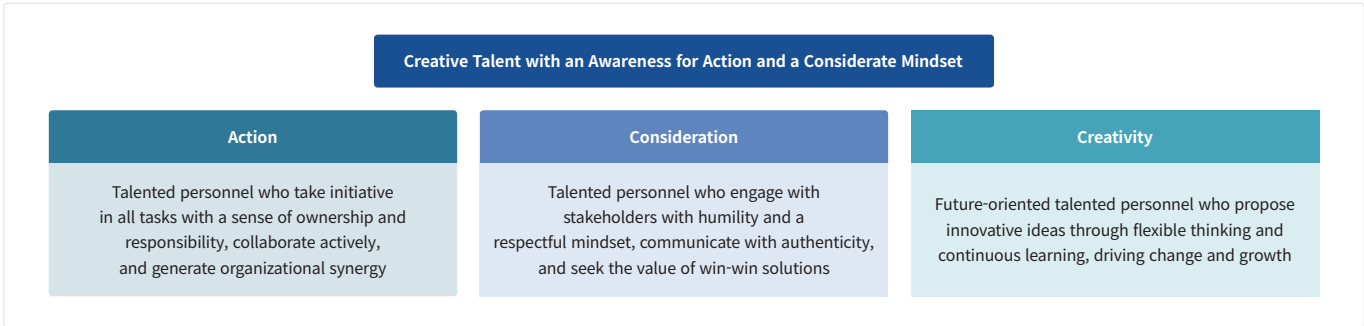
The Human Resources and Culture Office, part of the Management Support Division, oversees the organizational culture, HR and education support, programs, talent development, recruitment, and more. It works in close collaboration with the HR and Labor Group under the Pohang and Gwangyang Steelworks to effectively disseminate HR policies across both steelworks.



Talent Acquisition

We adhere to the principle of open recruitment, considering the company's strategic direction and recruitment conditions to select creative personnel with awareness for action and a considerate mindset. Applicants who pass the document screening process take the POSCO Aptitude Test (PAT) to assess their basic job competencies and personality. During the first interview, we focus on evaluating the job knowledge and expertise in the relevant field. In the second interview, we make the final hiring decision by assessing the applicant's personality and organizational fit.

I POSCO Talent



Talent Development

All employees have access to a total of 5,308 training courses provided by POSCO Group University. These include 101 regular courses, 118 on-demand courses based on occasional needs, and 5,089 e-learning courses.

Learning Platform

We operate a ‘Learning Platform’ that enables employees to learn anytime, anywhere via PC, tablet, or smartphone. The platform offers a variety of learning resources, including e-learning content, e-books, audiobooks, and immersive on-site (3D/VR) content. Additionally, it provides an AI recommendation service that analyzes employees’ job roles and interests to suggest relevant educational content.

New Collar Certification

We define employees who use new IT technologies to improve work processes and create new value as New Collar personnel and operate the ‘New Collar Level Certification System.’ This system categorizes data analysis and utilization skills into four levels, offering corresponding online and offline training courses for each level. Employees who pass the level certification exams are awarded HR benefits such as promotion points and opportunities for study abroad, encouraging them to engage in self-directed learning and skill enhancement.

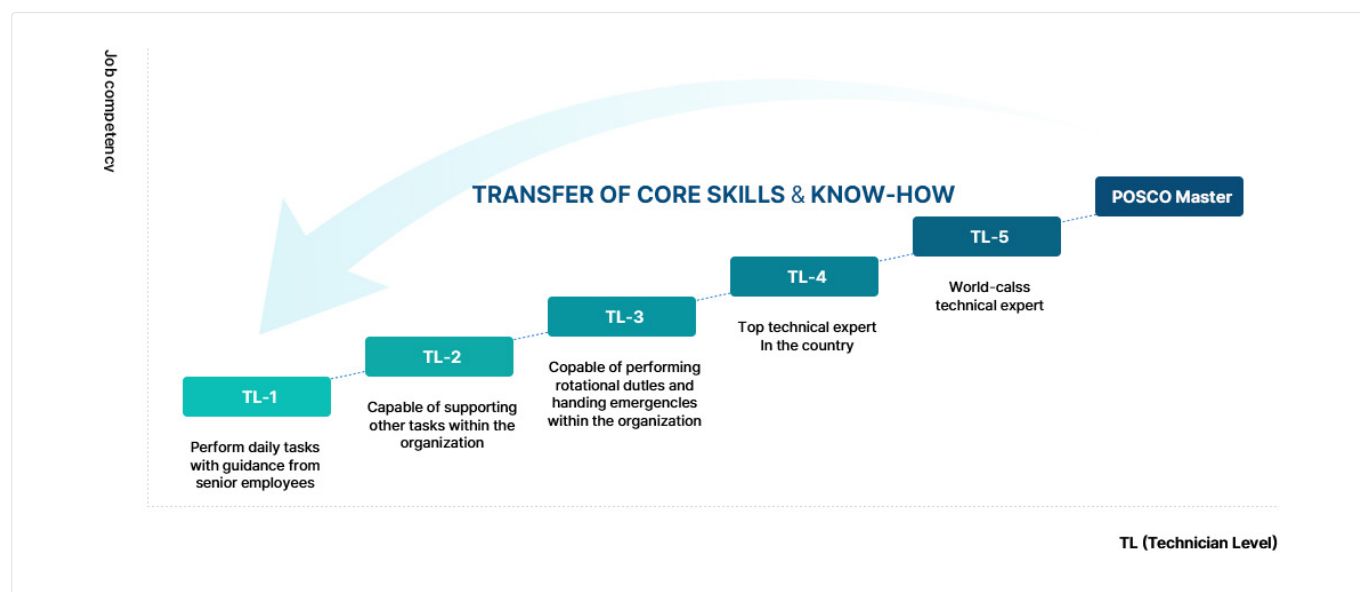
New Collar Level	Competency level	Training Programs
4 LEVEL Master	Capable of independently executing Smart projects and providing consulting in other fields	AI graduate school doctoral program
3 LEVEL Expert	Capable of executing Smart projects using AI algorithms	POSTECH AI expert or AI master’s degree program
2 LEVEL Semi-Expert	Proficient in using data analysis tools to improve work processes	40-hour online or 5-day group training course
1 LEVEL Beginner	Understands basic data collection and analysis methods	24-hour online or 3-day group training course

Since the implementation of the New Collar Certification System in October 2020, 4,296 employees have acquired the certification. Among them, 90 employees have attained Level 3 or higher, classified as ‘Expert’, and are applying IT technologies to their work.

Classification	2023 Performance (Cumulative)	2024 Goal
Level 1	4,296	-
Level 2	679	-
Level 3	64	88
Level 4	26	37

Technician Level (TL) Certification System and POSCO Master

To promote production technicians with world-class expertise, we operate the Technician Level (TL) Certification System. Employees can apply for certification assessments upon meeting the requirements for each level, from Level 1 to Level 5. As employees progress through the levels, they are awarded promotion points and job competency enhancement incentives.



Employees at TL Level 5 with world-class technical expertise are eligible to become 'POSCO Masters.' The title of 'POSCO Master' represents the highest honor in the production technician field, as it is awarded through rigorous evaluation not only of technical expertise but also of character, integrity, and reputation. 'POSCO Masters' receive special promotions along with various monetary and non-monetary rewards. Additionally, even after reaching the retirement age of 60, they are guaranteed employment until the age of 65 and are permanently inducted into the park1538 Hall of Fame. By 2023, a cumulative total of 25 POSCO Masters have been appointed, with 24 currently serving.

In 2023, 89 employees achieved the TL5 level, and other employees are also striving for promotion to higher TL levels.

TL Level	TL1	TL2	TL3	TL4	TL5
Number of Employees (2023)	1,083	3,397	3,872	908	329

Career Development

We run a variety of programs to help employees develop into experts in their respective fields through work experience and continuous learning.

Professional Degree Program

In 2014, POSCO established the POSCO Technology University to support the self-development and lifelong learning of field employees. POSCO Technology University is an officially accredited technical college that awards degrees, with tuition fully covered by the company.

- Education Recipients: Employees from POSCO, POSCO FUTURE M, POSCO STEELEON, and SNNC who aspire to become core on-site personnel (permanent employees)
- Curriculum: General education courses such as industrial mathematics, physics, and chemistry, and major required courses like material strength, machine element design, and control engineering
- Operation Method: 2 days of classes and 3 days of work per week, with 80 credits required over 2 years to graduate
- Operation Results: 362 graduates over the past 10 years

Support System for Acquiring Professional Certifications

We operate various support programs, including e-learning courses, practical training facilities, and incentives, to assist employees in acquiring professional certifications.

- Educational Support: E-learning courses (safety, master craftsman/technician/industrial engineer, etc.), training at the POSCO GROUP UNIVERSITY, and support for establishing practical training facilities
 - * In the second half of 2023, five employees acquired the Electrical Master Craftsman certification
- Incentive Payment: Tiered incentives based on the difficulty of the certification (253 types across 10 fields such as metallurgy, mechanics, electrical/electronics, safety/firefighting, and environment)
 - * Payment Details: Approximately 3.6 billion KRW was paid to 2,724 employees in 2023 (limited to permanent employees)

Global Regional Specialist Program

To enhance the operational efficiency of global business hubs, employees have the opportunity to engage in local language learning and cultural experiences, and work as interns at overseas subsidiaries to experience the local business culture.

- Selected Regions: Countries with overseas subsidiaries such as China, Mexico, India, Indonesia, and Thailand
- Program Duration: Within a year (6 months of local language learning, 6 months of working at overseas subsidiaries)

Global Mobility Program(GMP)

This program allows overseas local employees to visit Korea for about five months to acquire POSCO's working methods and learn about Korean culture, thereby establishing a network between headquarters and overseas local employees.

- Participation Progress: By 2023, 123 employees from 10 countries have participated in the GMP.

GMP Participant Review

"Thanks to the support of my local colleagues, I was able to participate in the GMP program as a corporate representative. Upon returning home, I will apply the work know-how I gained in Korea to accelerate technology development, enhance my colleagues' safety awareness, and improve our corporate competitiveness."

- Hoang Sy Phuong, POSCO YAMATO VINA



2023 GMP employees visiting Gyeongbokgung Palace



2023 GMP employees playing a board game related to POSCO's management philosophy

Evaluation and Compensation

To ensure fair evaluations, both evaluators and those evaluated take a 'Pledge for Fair Evaluation' before the evaluation. Evaluators receive periodic training on evaluation criteria and methods, while appraisees can appeal the evaluation results through a separate procedure. After the evaluation concludes, monitoring is conducted to ensure the process was fair. Performance evaluation results are linked to compensation for the following year, and compensation is differentiated based on individual performance without any bias related to gender, age, or nationality.

Performance Evaluation

We operate an absolute evaluation system to objectively assess employees based on their individual performance and promote collaboration. Each year, performance evaluations are conducted in three stages, using self-reported work performance and self-evaluation results to systematically measure individual work achievements. Managers can continuously provide coaching and feedback. Performance evaluation results are linked to compensation for the following year.

Competency Evaluation

To foster proactive competency development, departments and individuals can select required competencies and configure them as evaluation items. This allows them to receive feedback on their strengths and weaknesses in each competency. Although it is not directly linked to compensation, the evaluation results are used for internal recruitment selection, position assignments, and training.

360-Degree Evaluation

To provide managers with the opportunity to review their working methods and leadership, department members and collaborating colleagues evaluate them anonymously. While not directly linked to compensation, the evaluation results are utilized for promotions and position assignments. Some feedback is provided anonymously, offering an opportunity for leadership reflection.

People

Home > Social > People > Organizational Culture

Talent Management

Organizational Culture

Policy

Organizational Culture

We strive for a flexible and horizontal organizational culture where diverse groups can practice mutual consideration and express their opinions freely. We prohibit discrimination based on gender, nationality, race, or disability status, acknowledge differences, and create a happy workplace where everyone can grow together.

Open Communication

We operate various communication channels to foster a horizontal and creative organizational culture, where executives and employees, as well as different levels, communicate and harmonize based on trust to create greater value.

Young Board

The Young Board enhances communication between top management and employees selected through internal recruitment, focusing on organizational culture, improvement of work methods, and on-site sentiment. It provides opportunities for capable junior employees to develop their leadership skills and management mindset. In 2024, a total of 24 Young Board members were selected to convey the real voices of the field to top management and to generate ideas for improving the organizational culture.

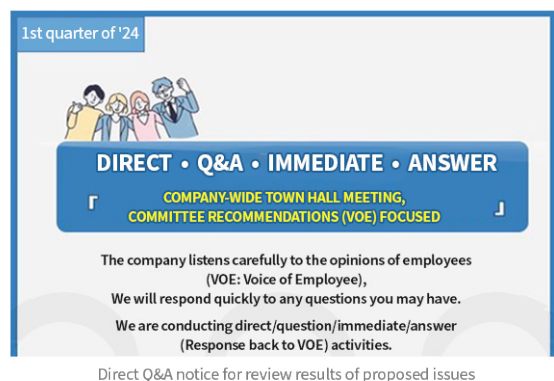
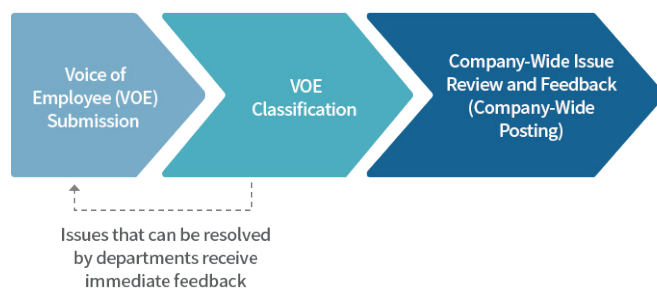
- In 2024, a total of 24 Young Board members were selected to convey the real voices of the field to top management and to generate ideas for improving the organizational culture.

Direct Q&A (Prompt responses to employee inquiries)

In 2023, we regularly gather and swiftly respond to employee feedback, fostering two-way communication. Issues that can be resolved at the departmental level receive immediate feedback. For concerns affecting all employees, the relevant department reviews and provides feedback via company-wide postings.

- Implementation Cycle: Once every two weeks
- In 2023: Out of 1,862 submitted issues, 78 were addressed and posted company-wide, and 1,784 were addressed individually

Direct Q&A Process



Town Hall Meetings

Executives and affiliated employees engage in direct dialogue and communication to discuss organizational culture and current issues. To freely listen to employees’ opinions, anonymity-ensured systems such as Teams Chat and Metaverse are also used. In 2023, a total of 138 town hall meetings were held, with one meeting per quarter.

TongTong Committee, Millennial Committee

Considering conditions for generational change, direct communication is facilitated between management and the young generation (employees in their 20s and 30s). While Town hall meetings involve communication with a large number of employees, the TongTong and Millennial Committees focus on more in-depth discussions on organizational culture and issues with a smaller group (6-10 people). To foster a free communication atmosphere with a smaller group, environments such as workshop experiences are created to enable open dialogue with management.



Young Board members having a first half meeting in 2024 with the CEO of POSCO



Town hall meeting of the Health Planning Office

Work-Life Balance

Flexible Working System

With diverse working options, employees can balance self-development, rest, work, and family life. The ‘Bi-Weekly Four-Day Workweek’ system, introduced in 2024, allows employees to focus more intensively on work during working days and dedicate their alternate Fridays off to self-development, childcare, and family time.

[POSCO Bi-Weekly Four-Day Workweek Implementation Review →](#)

I System Utilization

As of June 1, 2024






Category		System Details	Number of Employees Using
On-site Workers	Selective Working Hours System	Employees can freely adjust their working hours within a four-week settlement period, averaging 52 hours per week (40 standard hours + 12 overtime hours)	1,072
	Bi-Weekly Four-Day Workweek	Employees work an additional hour from Monday to Thursday over two weeks to maintain an average of 40 hours per week, allowing alternate Fridays off	7,789
	8-5 workday	Employees work from 8 AM to 5 PM daily, allowing for an earlier departure compared to the usual 6 PM, ensuring an evening off	1,725
	Others	Flexible work, etc	848
Shift Workers		-	6,549

Family-Friendly and Childbirth & Childcare Promotion Programs

To address South Korea's population decline crisis and fulfill our corporate responsibility, we seriously listened to employees' VOE and implemented programs to support childbirth and childcare. In 2023, we were selected as the Best Company for Childbirth and Childcare Promotion by the Ministry of Employment and Labor. Additionally, we operate family and childbirth-friendly programs, supporting employees to manage pregnancy, childbirth, and childcare without career interruption, from marriage to child education.

Personalized Support Programs for Different Life Stages

(* : According to the Labor Standards Act)

 <p>Marriage</p>	<ul style="list-style-type: none"> • Wedding congratulations bonus (2 million KRW), leave (7 days), flower wreath • Free use of the company wedding hall • Honeymoon allowance (2 million KRW)
 <p>Pregnancy</p>	<ul style="list-style-type: none"> • Infertility leave: 10 days per year (6 days paid, can be used in parts) • Infertility treatment costs: 1 million KRW per session (up to 10 million KRW) • Work from home or leave for infertility treatment • Shortened working hours program during pregnancy*: 6 hours of work per day • Work from home program during pregnancy: 4 to 8 hours of work per day (full basic salary paid)
 <p>Childbirth</p>	<ul style="list-style-type: none"> • Childbirth incentive: 3 million KRW for the first child, 5 million KRW for the second child and beyond • First meeting gift for the baby: Gift certificate worth 500,000 KRW • Maternity leave*: 90 days (120 days for multiple births) • Paternity leave: 10 days for one child, 15 days for twin births, 20 days for triplet births (paid, can be used in parts) • Work from home to support spouse's childbirth
 <p>Childcare</p>	<ul style="list-style-type: none"> • Parental leave: Up to 2 years (full period counted as service) • Operate 6 win-win joint workplace daycare centers in Pohang, Gwangyang, and Seoul • Reduced working hours during childcare period*, work from home
 <p>Education</p>	<ul style="list-style-type: none"> • Child scholarship program • Gift for child entering elementary school



Employee balancing work and childcare using work from home during the childcare period



POSCO's Family and Childbirth-Friendly Programs

Cooperative and Win-Win Labor-Management Relations

Under the philosophy of being ‘partners in creating a better tomorrow together,’ the company maintains a tradition of cooperative and win-win labor-management relations. The company guarantees the constitutional rights of freedom of association and collective bargaining, with two labor unions actively operating, affiliated with the Federation of Korean Trade Unions (FKTU) and the Korean Confederation of Trade Unions (KCTU). Through the unified bargaining channel procedure, the POSCO Labor Union, affiliated with the FKTU, exercises collective bargaining rights. In accordance with the Labor Union and Labor Relations Adjustment Act, annual wage negotiations are conducted to establish wage agreements, and biennial collective bargaining is held to establish collective agreements.

Additionally, following the Act on the Promotion of Workers’ Participation and Cooperation, the company operates a Labor-Management Council elected directly by employees. Regular quarterly meetings are held to address employee grievances and suggestions, and to discuss and implement improvements for current issues such as welfare program enhancements.

People

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Talent Management

Organizational Culture

Policy

Policy

Position on HR/Labor Affairs



Recruitment, Evaluation, and Compensation >



Employee Working Environment >



Employee Welfare >



Healthy Labor-Management Culture >

Recruitment, Evaluation, and Compensation

Talent Recruitment

POSCO upholds the principle of open recruitment, aligning with the company's strategic direction and hiring conditions to select creative individuals who embody a mindset of execution and consideration. Applicants are objectively evaluated and fairly selected based on their competence and qualifications, following systematic and specialized screening procedures and standards. After document screening, the 'POSCO Aptitude Test (PAT)' is used to objectively verify applicants' basic job competence and personality. The first interview focuses on evaluating job knowledge and expertise in the applied field, while the second interview assesses personality and organizational fit to hire competent personnel that aligns with our talent profile.

Evaluation and Compensation

- POSCO operates a fair and objective evaluation system to provide compensation based on work performance. Before evaluations, both evaluators and those evaluated take a 'Fair Evaluation Pledge,' and those evaluated can appeal the evaluation results through a separate procedure. For managers, 360-degree evaluations from collaborating colleagues and department members help them continuously reflect on and improve their leadership, including their adherence to management philosophy, communication skills, and working methods. Additionally, managers receive regular training on evaluation criteria and methods to ensure they objectively and fairly evaluate employees.
- Salaries are set at an appropriate level, equally for men and women, considering internal and external conditions, and differentiated salary increases are applied based on individual evaluations. Through the 'Variable Performance Bonus System,' the company's collective management performance is shared with employees, and awards are given to those who achieve outstanding performance based on merit.

Evaluation Process

- POSCO conducts a regular evaluation (once a year) for all permanent employees based on fair and systematic standards. Performance evaluations are carried out multiple times, measuring individual job performance systematically, based on self-reported work performance and self-evaluation results. The regular evaluation assesses employees' job performance, competence, qualifications, and ethical awareness. The results of these evaluations are used for promotions, development, and compensation, applying a performance-based differential compensation system.
- Additionally, an evaluation system is in place where employees can input their work performance and managers can provide coaching, ensuring continuous coaching and feedback.

Position on Wages

- POSCO pays wages composed of job-based pay, allowances, and performance-based pay. Job-based pay is determined based on each employee's job performance ability and work performance. Additionally, employee wages are thoroughly managed to ensure compliance with the labor-related laws and regulations of each country or region. The company conducts wage negotiations with the labor union annually.

- Wages are paid entirely in cash, and employees who work beyond statutory working hours receive overtime pay according to the standards set by the labor-related laws and regulations of the respective country or region.

Position on Working Hours

- POSCO adheres to all laws and written agreements with employee representatives regarding standard working hours, the annual paid leave system, and overtime hours included in employment conditions. All overtime work must be voluntary and conducted according to the standards set by the labor-related regulations of the respective country or region.
- To effectively manage fatigue, working hours, shift patterns, and rest periods are determined in accordance with relevant laws, and all employees are provided with adequate breaks for meals and rest. To create an autonomous and flexible working environment, certain roles operate under a bi-weekly four-day workweek or a selective working hours system. Additionally, a work-from-home system is available for employees requiring care, such as those with childbirth or caregiving responsibilities.

Employee Working Environment

Enhancing Employee Satisfaction

POSCO conducts the 'Great Work Place (P-GWP)' survey annually to assess and improve organizational culture among employees worldwide. The results of the P-GWP survey are shared with each department, enabling all members within the organization to contribute to creating a great workplace themselves.

Young Board Operations

POSCO operates the Young Board to build an organizational culture of trust and creativity and to implement the CEO's management philosophy emphasizing communication. The Young Board, selected from various departments such as production, technology development, marketing, and management support, proposes improvement ideas related to organizational culture to management. These include creating a safe working environment, innovating work methods, and promoting communication across generations and hierarchies, driving substantial change in the organizational culture.

Employee Welfare

Support for Clubs

POSCO supports employee hobby activities and self-development through the club program 'Dongho Dongrak.' Various clubs are organized in fields ranging from sports like tennis and soccer to cultural and learning activities like movie watching and language studies. Through club activities, employees enhance their individual skills and creativity while actively engaging in contribution activities through skill donation. POSCO plans to continue actively supporting club activities to establish a culture where employees can enjoy their work and pursue diversity.

Healthy Labor-Management Culture

Win-Win Labor-Management Relations

POSCO adheres to the Constitution and Labor Relations Act, foundational to our Human Rights Policy, ensuring the respect and protection of the rights of our employees. Since our founding, we have embraced the philosophy of being 'partners in creating a better tomorrow together,' maintaining a tradition of win-win in our labor-management relations. Presently, two labor unions are active, with the POSCO Labor Union serving as the representative bargaining union. Our stable labor-management relations foster a culture of trust and harmony within the organization.

In addition to the labor unions, POSCO has established and operates a Labor-Management Council in accordance with the Act on the Promotion of Workers' Participation and Cooperation. The Labor-Management Council works towards the joint development and improvement of welfare benefits for employees and the company, swiftly resolving employee difficulties or inconveniences, and explaining the company's management status and policies to build consensus among employees regarding overall company operations.

Talent Development Management System

POSCO operates a variety of development programs to strengthen job expertise. Through work, relationships, and learning, we support individual employees in their growth as experts.

Field-Oriented Technical Expertise and Talent Development

We operate the 'POSCO Master' and 'TL (Technician Level)' systems to develop world-class field technicians. Field technicians steadily improve their TL levels through long-term, continuous job competence improvement and are appointed as 'POSCO Masters' through evaluations based on their highest technical skills.

Career Development

POSCO actively supports the career development of its employees to cultivate insightful next-generation business leaders and enhance technical expertise in the field. Office staff and engineers develop their own career plans based on job-specific CDP (Career Development Plan) models. After joining the company, they gain experience in the same job field for a certain period before expanding their careers to other job fields. To promote self-directed career development, the company supports annual meetings with department heads and implements a quarterly internal recruitment system. Field technicians rotate tasks within their department/job on a regular basis to strengthen their technical expertise and ability to handle emergencies. Outstanding employees are developed into on-site supervisors by enhancing their production process management capabilities.

Competency Enhancement Program & Customized Education Support

POSCO focuses on developing professionals for the transfer of core technologies in response to changes in the work environment. The company also operates customized leadership education programs to strengthen the leadership competencies of managers. Additionally, POSCO runs job-specific customized education programs, including group training and e-learning courses, to nurture future skilled personnel.

New Collar Level Certification System

In response to the Digital Transformation (DT) era, POSCO defines ‘employees who improve work processes using new IT technologies and contribute to society by creating new value’ as New Collar personnel and plans to focus on developing them. To this end, POSCO has newly implemented the ‘New Collar Level Certification System,’ in which all employees participate, since 2020.

The New Collar Level Certification System categorizes data analysis and utilization skills into four levels, offering tailored online and offline training courses for each level. Certified individuals at each level receive HR benefits such as promotion points and opportunities for overseas study, thereby encouraging active and voluntary participation in education. POSCO is committed to actively supporting New Collar talent in leading change in the new era.

Enhancing Competitiveness of Overseas Local Employees

POSCO has business sites in over 20 countries. Our overseas subsidiaries pursue local management led by a local workforce and aim to elevate the growth vision of local employees by promoting the localization of personnel at the manager level and above. We operate various programs to develop excellent overseas local talent, including the Global Mobility Program (GMP) with rotational assignments at headquarters, as well as leadership programs for new employees, managers, and executives.

Position on Diversity, Equity, and Inclusion (DE&I)

POSCO believes that diversity, equity, and inclusion are essential elements of its culture and strives to enhance these values across all business sites. We provide opportunities for diverse employees to freely express their opinions, continually identify and address issues, and build an agile and flexible organizational structure.

Additionally, we prohibit discrimination based on gender, nationality, race, or disability status, and create a respectful workplace by recognizing and respecting diversity and cultural differences.

Employment of Persons with Disabilities

POSCO and its group companies grant preference points to applicants with disabilities during employee recruitment and employ athletes with disabilities to support their independence and training, among other efforts to expand employment for persons with disabilities. POSCO’s employment rate for persons with disabilities is 3.3% (based on 2021 data from the Korea Employment Agency for the Disabled). Additionally, through the operation of the subsidiary-type standard workplace for persons with disabilities, ‘POSCO HUMANS,’ we provide cleaning services, call center operations, and office support for group companies, and are exploring various new businesses where persons with disabilities can fully utilize their abilities. The POSCO Group continually strives to create a respectful employment and working environment where all persons with disabilities can work without discrimination.

Family-Friendly Company

POSCO makes various efforts to create a workplace where women can thrive. In 2020 we were the first company in Korea to introduce a ‘Work-From-Home System for Childcare Without Career Interruption,’ allowing employees with children aged 8 or younger, or in 2nd grade or below, to work from home while caring for their children. Additionally, we implemented a ‘Work-From-Home System During Pregnancy’ in 2020 to support healthy childbirth and expanded this support in 2021 to female employees undergoing infertility treatment. In 2020, we established two win-win daycare centers in the Pohang and Gwangyang areas for the children of employees from both our group and partner companies. Additionally, we operate six workplace daycare centers, including one in Seoul, to provide high-quality childcare services. We also offer parental leave for up to two years, surpassing the requirements of the Labor Standards Act. In addition, our ‘Family Care Leave’ system allows employees to take time off to care for family members dealing with illness, accidents, or aging. This ensures that our employees can maintain a healthy work-life balance.

Prohibition of Discrimination/Bullying

POSCO does not engage in discriminatory treatment regarding employment, promotion, education, compensation, or welfare benefits based on race, nationality, sex, age, educational background, religion, region, disability, marital status, or gender identity. Additionally, we strive to eradicate discrimination and promote a culture of respect for diversity.

POSCO ensures employment conditions, including appropriate working hours, that allow employees to lead lives with dignity. We offer fair compensation, educational opportunities, and a work environment that respects cultural differences.

POSCO prohibits all acts that cause sexual humiliation, including workplace sexual harassment and sexual violence. Additionally, all acts of bullying that cause physical or mental distress by exploiting superiority in position or relationships within the workplace are prohibited.

POSCO has established a reporting system for workplace bullying and sexual harassment, addressing acts where an employer or employee uses their position or relationship to exceed the appropriate bounds of work, causing physical or mental distress to another employee or deteriorating the working environment through actions such as violence or verbal abuse.

Diversity and Expertise of the Board

POSCO's non-executive directors are composed of individuals with rich experience and expertise from various fields, including industry, finance, academia, law, accounting, and the public sector, to support rational decision-making by management without bias toward any specific field.

Supply Chain

Home > Social > Supply Chain > Supply Chain Management

Supply Chain Management

Responsible Minerals

Shared Growth

Supply Chain Management

POSCO strives to manage ESG risks related to the environment and human rights across the entire supply chain and to minimize negative impacts in order to create an eco-friendly steel ecosystem and ensure sustainability.

Supply Chain Management Council

POSCO operates the POSCO Group Supply Chain Management Council to establish a sustainable supply chain at the POSCO group level. The council is chaired by the POSCO, Head of Purchasing and Investment Division (Senior Executive Vice President), with purchasing executives from each business unit within the group participating. They discuss strategies, issues, and risk management plans related to the supply chain, and coordinate joint responses as needed, leading the way in supply chain innovation.

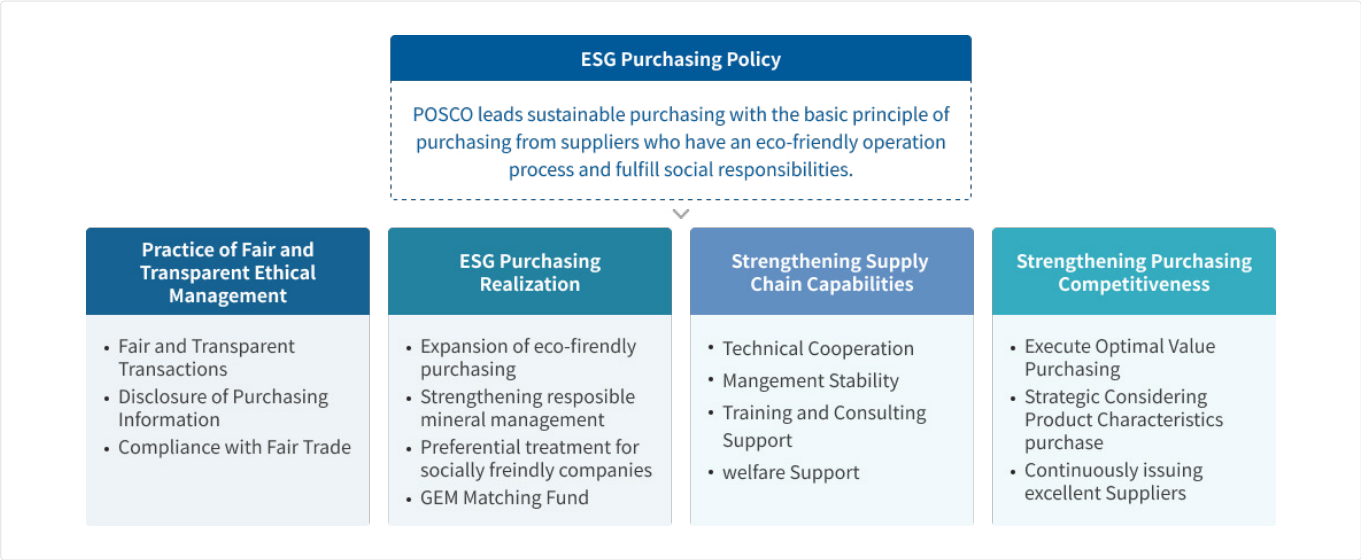


- Participating Companies : POSCO, POSCO INTERNATIONAL, POSCO E&C, POSCO FUTURE M, etc.
 - Attendees : Executives responsible for the Purchasing Departments of each Business Site
 - Agenda Items : Examination of sustainability-related issues including the supply chain environment, human rights, and carbon neutrality, along with training on supply chain risk management processes
 - Meeting Frequency : Once in a every half year
 - * 2023 Meeting Dates : (First Half) July 5 / (Second Half) November 16
 - Group Supply Chain Management Council : Establishment of Group-level Supply Chain ESG Management Strategies and Joint Responses
- ① Establishment of Supply Chain Management Strategies : The council coordinates and integrates supply chain management strategies among various group companies to enhance the overall efficiency and sustainability of the supply chain.
 - ② Supply Chain ESG Risk Management : Identifies and evaluates potential ESG risks within the supply chain and develops and implements strategies to mitigate these risks.
 - ③ Sharing of Supply Chain ESG Trends : Recognizes innovative supply chain management techniques and shares the latest trends to improve the efficiency of POSCO Group's supply chain management.
 - ④ Setting Sustainability Goals : Set objectives to develop a sustainable supply chain that aligns with global environmental, social, and governance (ESG) standards, and formulate plans to achieve these objectives.
 - ⑤ Training and Competency Building : Offer educational opportunities to organization members to strengthen their ESG management skills, facilitating their contribution to building a sustainable supply chain.
 - ⑥ Cooperation Among Group Companies : Build partnerships to improve the sustainable competitiveness of the supply chain across group companies.
 - ⑦ Monitoring and Reporting Supply Chain ESG Performance : Consistently monitor the ESG performance of the supply chain and share the progress towards achieving sustainability goals.

ESG Purchasing Policy

In response to evolving external conditions, including the final approval of the European Union (EU)’s Corporate Sustainability Due Diligence Directive (CSDDD)¹⁾ by the EU Parliament in April 2024, POSCO is enhancing its supply chain management strategy by implementing a new ESG purchasing policy

1) CSDDD : Corporate Sustainability Due Diligence Directive



Practice of Fair, Transparent, and Ethical Management

Suppliers interested in trading can apply for registration at any time, and in line with our fair purchasing policy, information on sourcing groups (purchasing item groups) is fully disclosed. Additionally, we operate an internal transaction review committee to prevent unfair internal transactions and ensure fair purchasing practices.

Strengthening Supply Chain Capabilities

To build a stable supply chain procurement system, we foster technical cooperation with small and medium-sized suppliers and operate support programs such as education and consulting.

Realization of ESG Purchasing

POSCO is actively implementing ESG purchasing by setting up a responsible minerals management system, managing ESG risks, enhancing communication with internal and external stakeholders, and creating social value through initiatives like the 1:1 matching Go Extra Mile (GEM) Fund with raw material suppliers.

Strengthening Purchasing Competitiveness

We enhance our purchasing competitiveness by adopting Total Cost of Ownership (TCO) purchasing, which takes into account comprehensive costs such as environmental impact, quality, and logistics. Additionally, we implement purchasing strategies based on the characteristics of each item, such as selecting excellent suppliers and granting priority negotiation rights.

3R Purchasing

In our commitment to achieving carbon neutrality, POSCO defines environmentally friendly purchasing items based on the 3R (Recycle, Reduce, Reuse) perspective and initiatives by increasing the use of steel scrap, recycling by-products and waste and securing eco-friendly alternative raw materials to reduce carbon emissions.

Category	Definition	Key Items
Recycle	Collection and utilization of discarded resources	Steel/STS scrap, waste shells, copper from waste cables
Reduce	Carbon and hazardous substance reduction items	Eco-refractories
Reuse	Reduction of new purchases through recycling	External repairs, recycling of used materials

Supplier Code of Conduct

The Supplier Code of Conduct consists of a total of five areas: labor, safety and health, environment, ethics, and management systems, and includes the basic code of the Responsible Business Alliance (RBA) and items specified by POSCO. All suppliers and partners seeking to conduct business with POSCO must agree to this code and they must first submit a 'Compliance Agreement' affirming their adherence to the Supplier Code of Conduct.

[Supplier Code of Conduct \(KOR\) →](#)

[Supplier Code of Conduct \(ENG\) →](#)

[Supplier Code of Conduct Guideline \(KOR\) →](#)

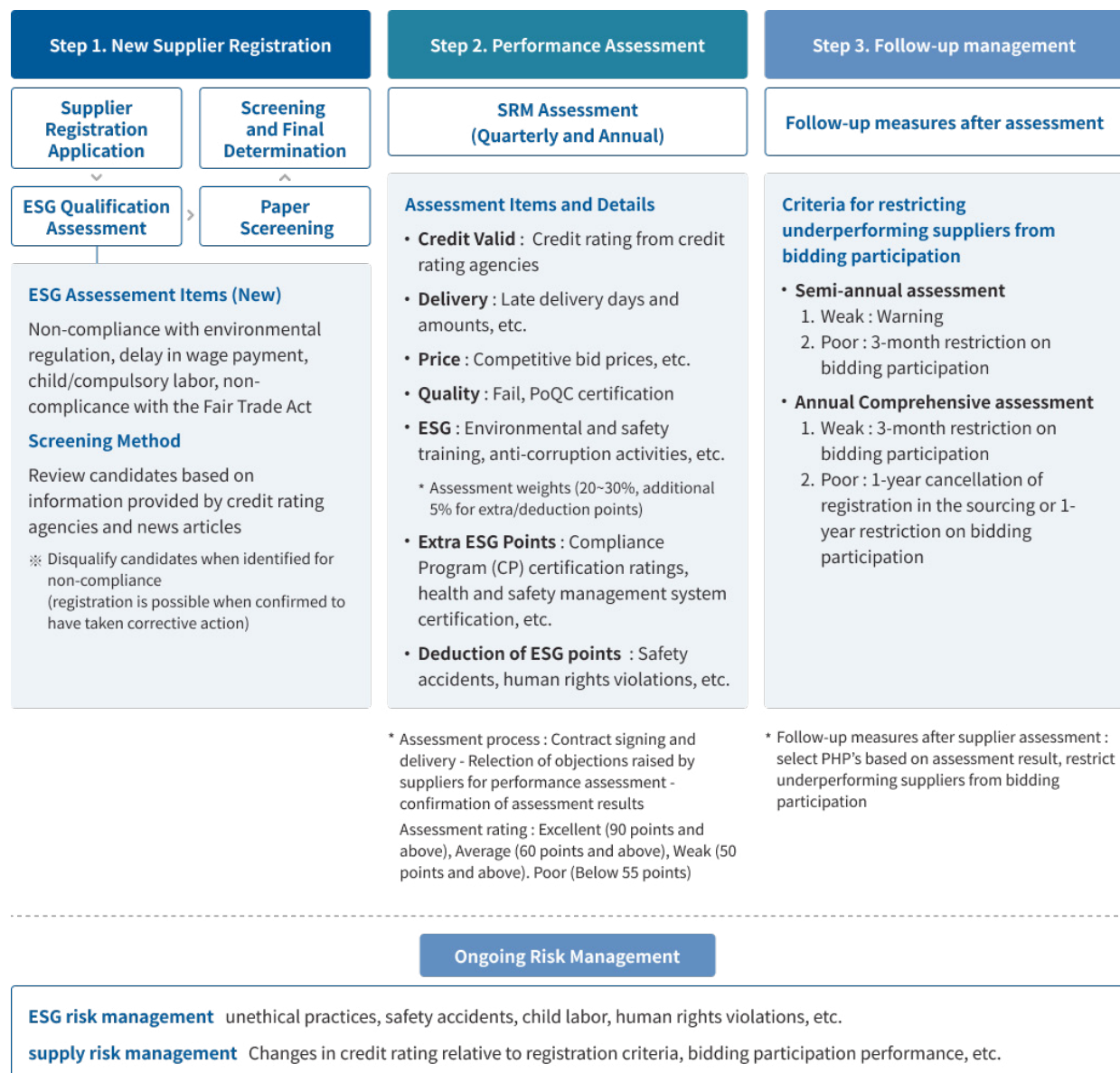
[Supplier Code of Conduct Guideline \(ENG\) →](#)

Supply Chain ESG Management

POSCO operates a systematic ESG management process from the stage of registering new suppliers to performance evaluation and post-management according to contract fulfillment, in order to build a sustainable supply chain and prevent ESG risks related to the environment, human rights, etc. within the supply chain.

[Supply Chain ESG Management Guideline \(KOR\) →](#)

Supplier Management Process



Step 1. New Supplier Registration

POSCO manages purchased items by 'Sourcing Group.' The registration criteria for suppliers by sourcing group are always disclosed through SteelN.com, and suppliers wishing to register must agree to the 'Supplier Code of Conduct' and 'Special Ethics Terms.' For new supplier registration applicants, it is checked whether there are any violations in environmental regulations, serious accidents, wage arrears, tax payments, etc., and basic qualifications such as credit rating, financial capability, and supply capability are reviewed. Afterward, the supplier's site is visited to investigate the actual conditions, and if necessary, quality stability is confirmed through quality tests.

[SteelN.com](#) →

Step 2. Performance Evaluation

POSCO conducts SRM assessments, which are supplier performance assessments, on a quarterly or annual basis for all suppliers with transaction records. The evaluation results are classified into five grades (Excellent, Good, Average, Weak, Poor), and differentiated supply chain management is implemented according to the evaluation grade.

Starting in 2023, POSCO is conducting supply chain ESG due diligence to identify and improve supply chain ESG risks, including environmental and human rights issues.

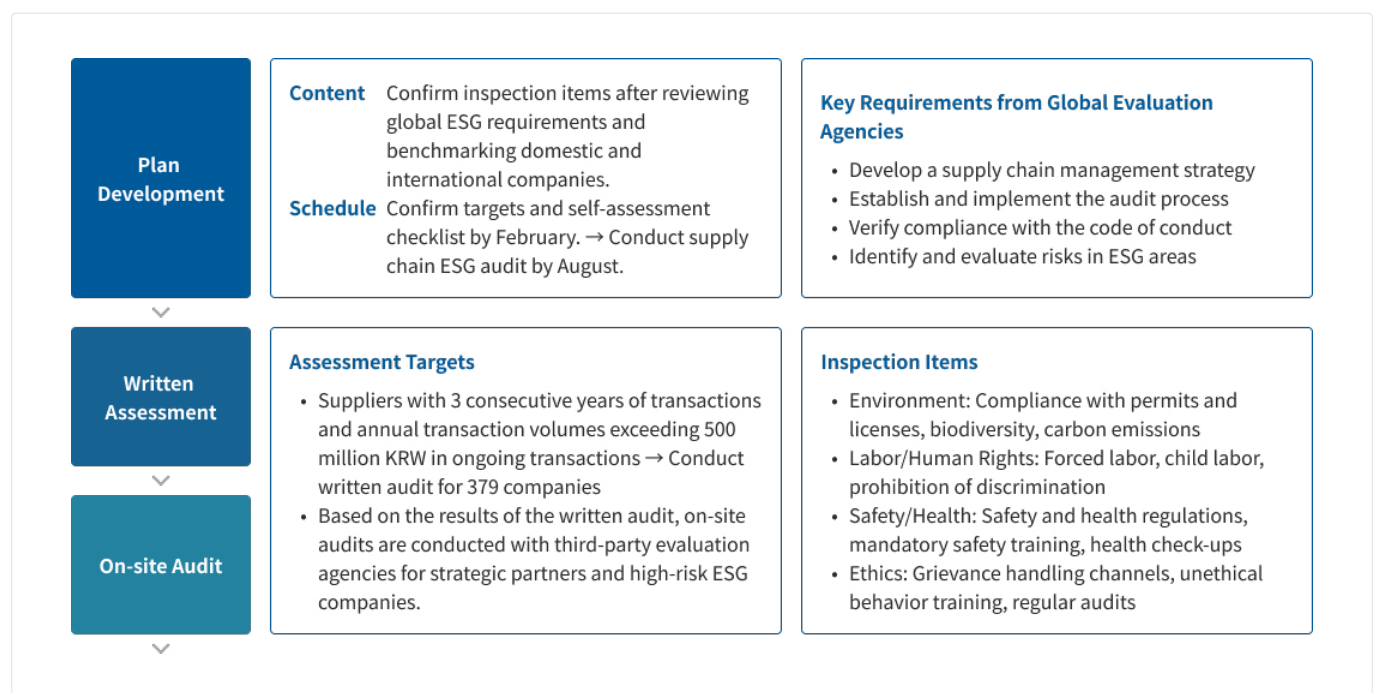
Step 3. Post-management

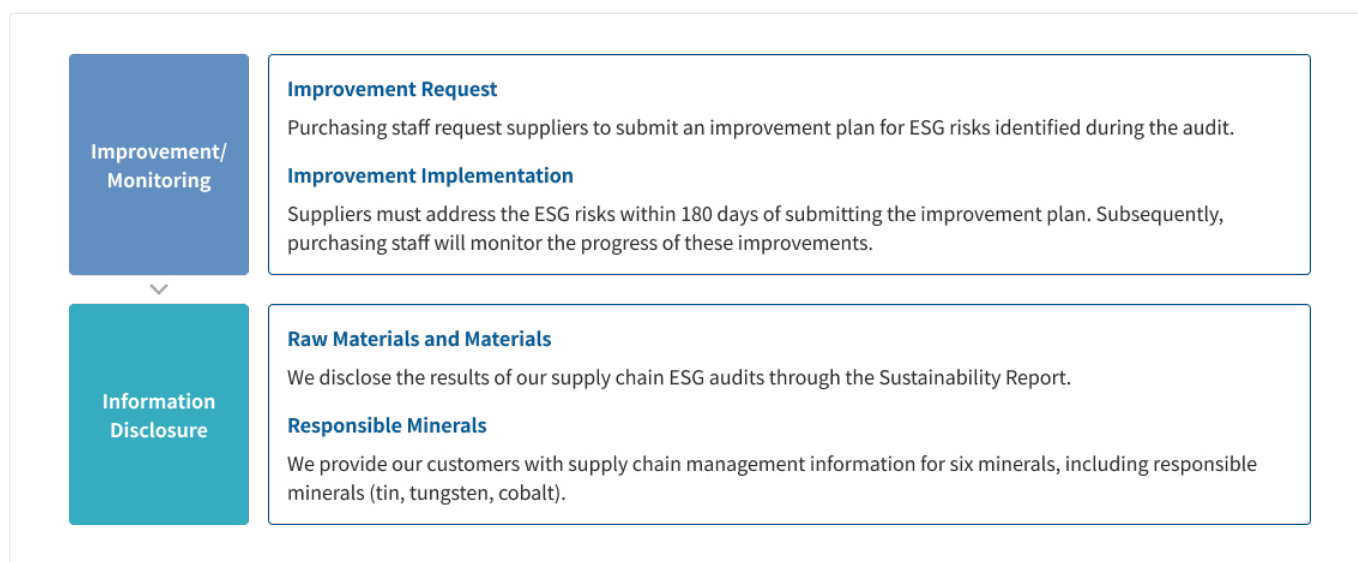
POSCO issues performance evaluation reports on a quarterly or annual basis and provides them to suppliers, offering feedback on the strengths and weaknesses of the suppliers based on the evaluation results and providing opportunities for improvement. Suppliers who receive an Excellent rating are given various preferential benefits such as priority negotiation rights and exemption from deposit payments, while suppliers who receive a Poor rating are encouraged to voluntarily improve. If the improvement is insufficient, participation in bidding is restricted for a minimum of 3 months to a maximum of 1 year.

Supply Chain ESG Audit Results

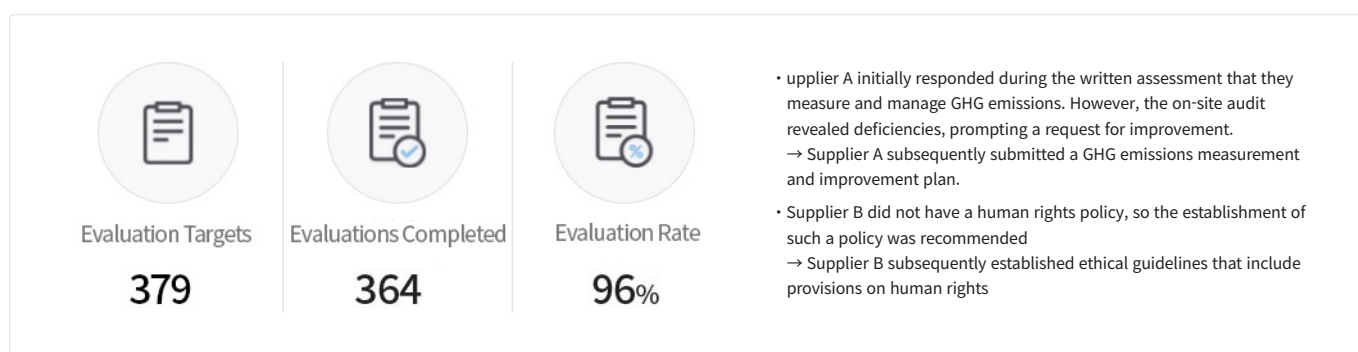
POSCO has established the 'Supply Chain ESG Due Diligence Process' in 2023, reflecting the EU's Supply Chain Due Diligence Directive and the requirements of global ESG rating agencies, and conducts supply chain ESG due diligence annually.

I Results of the 2023 Supply Chain Due Diligence Process Establishment





I On-site Audit Results - Key Improvement Cases



Supply Chain Performance Management

In 2023, POSCO conducted on-site audits for 50 suppliers, achieving our 100% target. By 2030, we aim to conduct on-site audits for a cumulative total of 500 suppliers.

POSCO continuously monitors and evaluates registered suppliers to establish a robust supply chain. Through this process, it takes punitive measures such as suspending transactions with suppliers that have ESG issues related to the environment and safety. Additionally, suppliers with no bidding performance in the past year or no transaction performance in the past two years are being deregistered.

I Results of the 2023 Supplier Performance Assessment

Category	Metric	Unit	2020	2021	2022	2023
Evaluation Results	Total number of suppliers*	Count	1,398	1,704	1,729	1,700
	Excellent	Count	275	216	237	261
	Poor	Count	60	15	3	
Post-management Measures	Percentage of improvement plans established for poor-rated suppliers	%	100	100	100	100
	Percentage of improved suppliers	%	50	70	77	86

* Based on equipment/material suppliers, including overlaps in sourcing groups

Supply Chain

Home > Social > Supply Chain > Responsible Minerals

Supply Chain Management

Responsible Minerals

Shared Growth

Responsible Minerals

Responsible Minerals Management

POSCO has developed a Responsible Minerals¹⁾ policy and, in conjunction with its with group companies, including POSCO International and POSCO Future M, has established the Group Supply Chain Management Council. This council aims to collectively address and manage risks across the supply chain.

¹⁾ Responsible Minerals: Minerals mined in a socially responsible manner, respecting human rights and the environment, and not financing conflicts.

POSCO, alongside its supply chain, is implementing a '5-Step Supply Chain Responsible Minerals Management' process based on the OECD Due Diligence Guidance to enforce the responsible minerals policy. In March 2024, for raw materials sourced from 28 countries designated by the Responsible Minerals Initiative (RMI) as 263 Conflict Affected and High-Risk Areas (CAHRA), we assess risks from the supplier registration stage to identify high-risk suppliers (Red Flag) and prevent ethical issues. For high-risk suppliers, we conduct audits through independent third-party agencies to identify and verify potential risks. Additionally, we develop responsible minerals education content to promote the dissemination and implementation of POSCO's Responsible Minerals Policy across the entire supply chain.

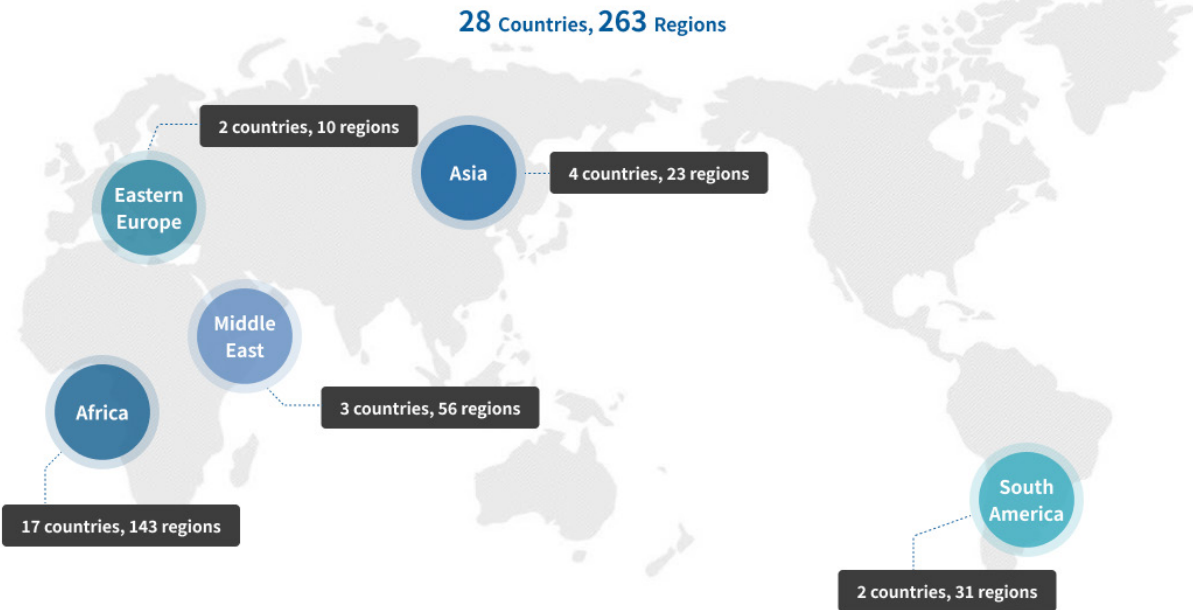
I 5-Step Supply Chain Management

Step 1	Step 2												
Establish a Robust Responsible Minerals Policy and Implement the System	Collection and Evaluation of Qualitative Supply Chain Information												
<div>Organizational Structure<ul style="list-style-type: none">• Since 2020, POSCO's Purchasing and Investment Division(Raw Materials Office) has coordinated responsible minerals management, operating the 'Responsible Minerals Council' with group companies such as POSCO INTERNATIONAL and POSCO FUTURE M.• In 2023, this was restructured and is now operated as the 'Group Supply Chain Management Council.'</div> <div>Employee Training<ul style="list-style-type: none">• To enhance awareness among employees in relevant departments, including purchasing and usage departments, we provide e-cards and e-learning education.</div> <div><table><tr><th colspan="3">Training Completed</th><th>(Unit: persons)</th></tr><tr><th>2021</th><th>2022</th><th>2023</th><th></th></tr><tr><td>15,402</td><td>16,464</td><td>17,713</td><td></td></tr></table></div> <div>Strengthening New Supplier Registration Criteria<ul style="list-style-type: none">• New suppliers must submit a signed declaration of compliance with our responsible minerals policy.• If the origin of supplied materials is confirmed to be a high-risk country, we include a clause in supply and contract agreements requiring a third-party audit and trading with RMAP-certified smelters.</div> <div>Responsible Minerals Policy<ul style="list-style-type: none">• Establishment of a group-wide responsible minerals policy</div>	Training Completed			(Unit: persons)	2021	2022	2023		15,402	16,464	17,713		<div>Identify Supply Chain Information<ul style="list-style-type: none">• POSCO devised own survey template for suppliers and smelters to collect information on country of origin, mine/ smelter location, transportation routes, etc.• Suppliers are required to complete the CMRT and EMRT provided by the RMI<ul style="list-style-type: none">* Refer to the next page for transactional supply chain information</div> <div>Grievance and Appeal Procedure<p>Establishment of a grievance and appeal procedure to hear diverse opinions from all supply chain stakeholders. Stakeholders can submit grievances by filling out a form directly, using SNS to submit opinions, or raising grievances during audits.</p></div> <div>Risk Assessment<p>Based on identified information and Conflict Affected and High-Risk Area (CAHRA) criteria, potential supplier risks are identified. This includes a comprehensive evaluation of CAHRA association, supplier survey response rate, intentional submission of false information, and lack of supplier awareness of responsible minerals. → Classify and select Red Flag management targets.</p></div>
Training Completed			(Unit: persons)										
2021	2022	2023											
15,402	16,464	17,713											

Step 3	Step 4	Step 5
Identify Risks and Develop Mitigation Plans	Audit	Reinforce communication through the transparent disclosure of activities undertaken
<div>Response Mechanism<ul style="list-style-type: none">For Red Flag suppliers, establish a response mechanism based on the assessed risk level. This includes revising the supplier code of conduct, providing educational support, conducting buyer audits, and facilitating independent third-party audits.Raw material suppliers from origin areas classified as CAHRA are restricted to contracting exclusively with RMAP-certified smelters.POSCO Group CAHRA: POSCO Group designates and manages 28 countries and 263 regions as high-risk areas due to frequent occurrences of social and ethical risks, including conflict, child labor, and human rights violations.List of CAHRAs (as of March 2024 Update)<ul style="list-style-type: none">Africa: 17 countries and 143 regions, including DR Congo, Central Africa, and Burkina FasoAsia: 4 countries and 23 regions, including Myanmar, India, and PakistanMiddle East: 3 countries and 56 regions, including Afghanistan and YemenSouth America: 2 countries and 31 regions, including Colombia and VenezuelaOthers: 2 countries and 10 regions, including Ukraine and TürkiyeRegulations have been strengthened to postpone contract conclusion if identified issues are not improved through education, internal audits, and third-party audits, or if there is no willingness to address responsible minerals issues.</div>		<div>Disclosure of Responsible Minerals Implementation Progress<ul style="list-style-type: none">To promote transparent information disclosure, we have been publishing the Responsible Minerals Report since 2021.Each year, related information is disclosed through our website, US SEC filings, and the Sustainability Report.</div>

Conflict Affected and High Risk Areas under Management

(as of March 2024)



Status of Responsible Minerals Usage

Since 2020, in addition to managing responsible minerals (3TGs) such as tin and tungsten, we have expanded our scope to include cobalt, due to human rights concerns such as child labor employed for mining. As of 2023, all 3TG minerals purchased from CAHRA regions are sourced exclusively from smelters certified by the Responsible Minerals Assurance Program (RMAP).



Tin



Cobalt



Tungsten

For more detailed information on responsible minerals, please refer to the annual POSCO Responsible Minerals Report.

- 2023 POSCO Responsible Minerals Report(KOR) →
- 2023 POSCO Responsible Minerals Report(ENG) →

Supply Chain

Home > Social > Supply Chain > Shared Growth

Supply Chain Management

Responsible Minerals

Shared Growth

Shared Growth

Eight Major Shared Growth Programs









To build a robust steel supply chain, POSCO and its suppliers operate the ‘Eight Major Shared Growth Programs.’ By fostering a culture of fair trade within the supply chain and pursuing win-win partnerships with business partners, POSCO has received the highest rating in the Shared Growth Index from the Korea Commission for Corporate Partnership¹⁾ for four consecutive years.

We operate an ‘Open Purchasing Consultation Office’ within the e-Procurement System to address inquiries and grievances from partner companies. Additionally, external stakeholders can express their opinions, either named or anonymously, through various channels such as the company website (Ethical Misconduct Reporting Center), and receive a formal response from the company. Submitters are assured that they will not face any disadvantages, such as identity disclosure or retaliation. If the facts are verified, we actively address the issue through monitoring and audits.

¹⁾ Korea Commission for Corporate Partnership: A private organization established to foster and promote a culture of shared growth between large enterprises and SMEs.

[Direct Link to POSCO Shared Growth \(only in Korean\) →](#)

Program Achievements

 Benefit Sharing 70.5 billion KRW	 Smart Capability Enhancement Supported 193 companies	 Direct Payment System for 1st and 2nd Tier Suppliers 68.8 billion KRW settled	 Steel ESG Win-win Fund 92.8 billion KRW
 POSCO PHP Volunteer Group 211 companies participated	 POSCO Youth Dream Job Matching 191 people employed	 Direct Payment System for 1st and 2nd Tier Suppliers Supported 155 project	 Startup Incubation 30 business matched

Benefit Sharing

In 2004, POSCO became the first in the country to introduce the Benefit Sharing system, collaborating with partner companies on improvement activities and sharing the resulting benefits. Participating companies receive cash compensation for 50% of the financial gains from their projects and are offered various incentives, including long-term supply contracts for up to 5 years, to encourage technology development and sales growth.

Smart Capability Enhancement

POSCO operates the ‘QSS Manufacturing Innovation’ program, which transfers its unique innovation methodology, ‘Quick Six Sigma’ (QSS), to SMEs. This program aims to improve work environments and production processes and establish a foundation for process smartification, aligning with the Fourth Industrial Revolution. Leveraging this innovation capability, POSCO is jointly operating the ‘Win-Win Smart Factory Support Program for Large Enterprises and SMEs’ with the Ministry of SMEs and Startups. This initiative applies advanced IT technology throughout the entire production process, from design and manufacturing to distribution, to support the establishment of smart factories.

Direct Payment System for 1st and 2nd Tier Suppliers

POSCO was the first among domestic private companies to introduce the ‘Subcontracting Win-Win Payment System,’ which guarantees payment recovery by directly paying subcontracting payments to 2nd tier partner companies. Additionally, since 2022, we have implemented the ‘nomubi.com system,’ which directly deposits labor costs into workers’ accounts in cash, effectively eliminating potential risks related to wage arrears.

Steel ESG Win-Win Fund

In 2022, POSCO, Hyundai Steel, and IBK Industrial Bank of Korea jointly established a 200 billion KRW fund to provide SMEs in the steel industry with low-interest loans for ESG management. Any steel company interested in enhancing its ESG management capabilities can apply, regardless of whether they have transactions with POSCO or Hyundai Steel. They can receive loans of up to 2 billion KRW for up to 3 years at an interest rate reduced by 1.45%p.

POSCO PHP(POSCO Honored Partner) Volunteer Group

POSCO PHP Volunteer Group is a participatory program where partner companies and POSCO collaborate to engage in diverse contribution activities within local communities, both materially and non-materially. The program avoids superficial volunteer activities, instead focusing on addressing the pressing issues of vulnerable groups and local communities. This approach aims to achieve greater satisfaction for both participants and beneficiaries.

POSCO Youth Dream Job Matching

Leveraging POSCO’s education and training infrastructure, we offer practical education and training essential for job performance to young job seekers. Additionally, we operate an employment support program that connects these individuals with partner SMEs that have immediate recruitment needs, facilitating prompt employment opportunities. This includes the ‘Large Enterprise and SME Win-Win Job Program’ and the ‘POSCO Employment Academy,’ aimed at young job seekers who wish to work at partner companies and SMEs. Additionally, POSCO addresses youth employment issues and the recruitment challenges of local SMEs by offering financial incentives for hiring qualified talent, thus strengthening corporate capabilities.

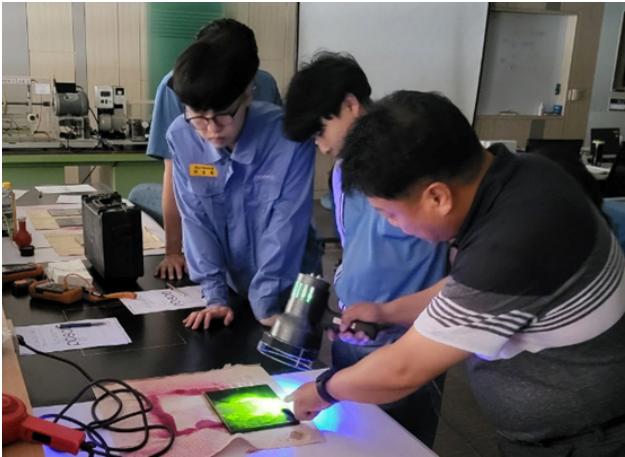
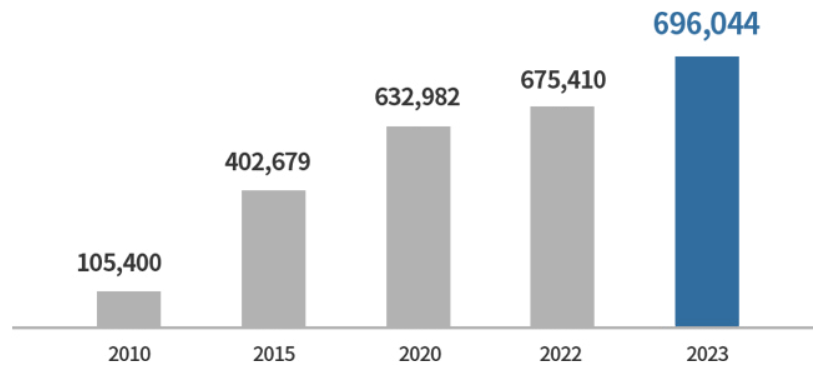
I Partner Company Training Details

- Training Content: Basic job competencies for employees of partner companies, SMEs, and youth
 - Training Targets: Agreement signing and training for a total of 491 companies, including partner companies and subcontractors
 - Training Performance: Trained 20,634 people in 2023 (20,220 through group training, 414 through e-learning online training)
- *POSCO Group partner companies/suppliers account for 482 companies (98% of training targets)

Category	Consortium Training (since 2005)	Customized Corporate Demand Training (since 2020)	Work-Learning Dual Training (since 2015)	Pre-Employment Training (since 2014)
Concept	Establishing an industry-led regional job training foundation to improve basic job competencies	Design and operate training programs through job analysis of agreement companies	OJT based on fieldwork, combined with Off-JT *Consortium Off-JT training	Basic job competency program for young job seekers *Consortium Off-JT training
Target	All employees of agreement companies	All employees of agreement companies	New employees within 1 year of service	Young job seekers
내용	<ul style="list-style-type: none"> • On-site technical skills acquisition/cultivation - Includes training in machinery, electrical, welding, crane operations, etc. • Covers organizational management, leadership, safety, ESG, innovation, character development, etc 	<ul style="list-style-type: none"> • Analysis of core tasks and support for designing and building training roadmaps • Provides career development pathway design 	<ul style="list-style-type: none"> • 16 job categories related to duties within the National Competency Standards (NCS), including mechanical elements, power machinery, forklifts, cranes, etc 	<ul style="list-style-type: none"> • Competencies required for employees, including character, communication, and vision planning • Understanding field steelmaking processes/equipment, mechanical/electrical theory and practice
Duration	Minimum 4 hours per person In-person/e-learning	Minimum 4 hours per person, in-person	200 hours per person (1 year training), in-person	350 hours (2 months), residential training

I partner training performance(cumulative)

(Unit : people)



Trainees practicing ultrasonic testing for equipment diagnosis at the Employment Academy



Trainees attending an electric welding practice lecture for equipment diagnosis at the Employment Academy

Shared Growth Support Team

Launched in 2021, the Shared Growth Support Team is a dedicated consulting organization for SMEs, comprising experts with an average of over 25 years of experience in various fields at POSCO. These experts act as consultants, offering tailored consulting services that leverage their expertise and know-how to address the challenges faced by SMEs, such as securing new workforce and enhancing technology development capabilities. The team also supports company-specific areas of interest, including smart factories, safety and energy savings, ESG management support, equipment and process optimization, and technology sharing and innovation support.

Startup Support

POSCO is the first major domestic company to initiate the discovery and incubation of startups, operating support and incubation programs for outstanding startups. The CHANGeUP GROUND and Manufacturing Incubating Center have become premier incubation spaces, leveraging the best industry-academia-research infrastructure in the country. Through comprehensive support throughout the startup lifecycle, POSCO fosters the growth of outstanding startups. Additionally, POSCO solicits ideas from startups less than 3 years old, supports networking with investors, and directly invests up to 500 million KRW through the Idea Market Place (IMP) in-house startup incubation program 'POVENTURES.' POSCO also operates the nation's first private autonomous 'Pohang Center for Creative Economy and Innovation,' positioning itself as a hub for startup incubation.

Community

Home > Social > Community > Local Community Communication

Local Community Communication

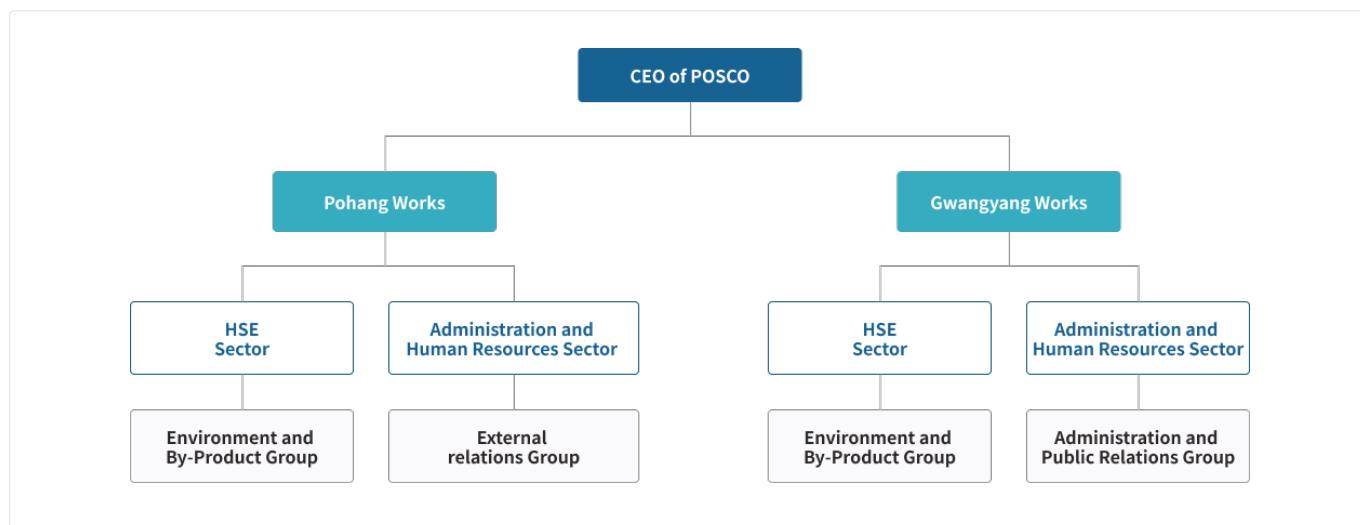
Social Contribution

Local Community Communication

From the beginning of the foundation, POSCO has considered growing alongside local communities as a key responsibility. Guided by principles and trust, we engage in sincere communication with communities, collaboratively addressing issues and striving to create a better society.

Local Community Communication Organization

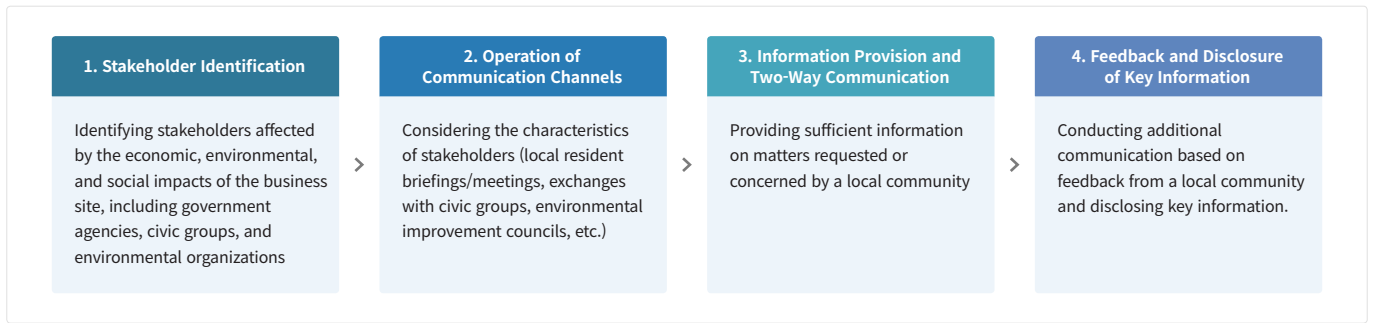
To address issues that negatively impact local communities during the operation of existing business sites and the implementation of new projects, we have established dedicated local cooperation, communication, and environmental teams at the Pohang and Gwangyang Steelworks. When necessary, we collaborate seamlessly with relevant departments at our headquarters to resolve issues.



Establishing Local Community Protection Policy and Communication Process

Our policy to guarantee a local community's basic rights, including environmental rights, safety and health, and human rights, is integrated into the company's human rights management guidelines. To uphold these rights, we have developed a stakeholder communication process, engaging in regular and irregular meetings to discuss and implement solutions for various issues and to explore directions for future development.

I Local Community Communication Process



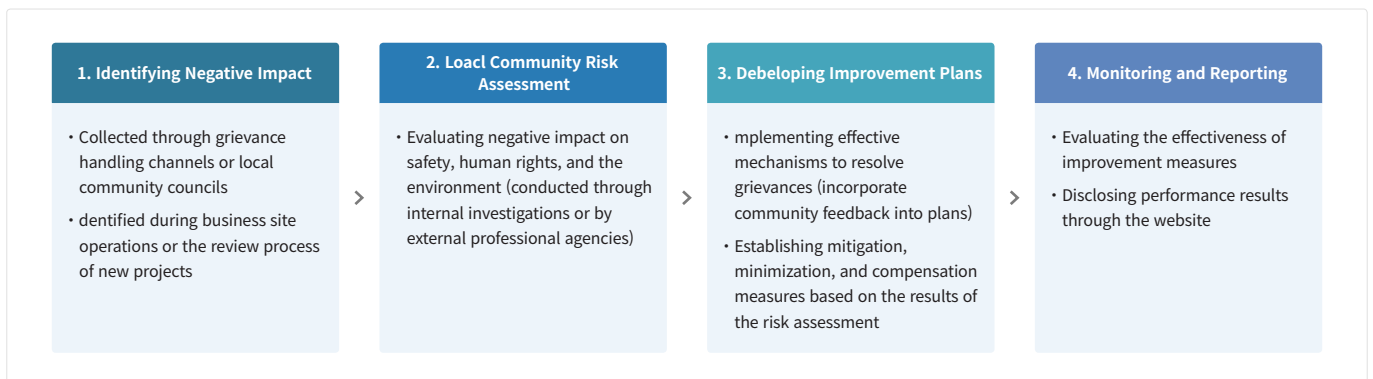
Regular Council

company actively participates in the 'Sustainable Development Council,' which comprises various stakeholders, including local governments, environmental organizations, and academia. Within this council, we analyze key local issues, develop improvement plans, and monitor progress, ensuring that stakeholder opinions are collected and incorporated throughout the entire process. (Communication frequency: once per quarter)

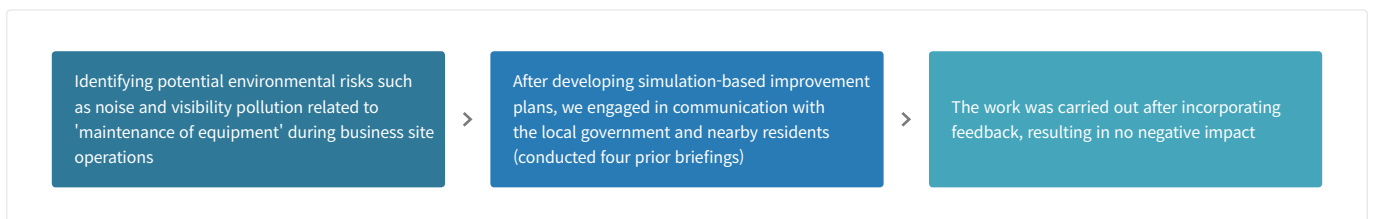
Minimizing Negative Impact on Local Communities

The company is committed to identifying, mitigating, and resolving any negative impact that business activities may have on local communities. For new investment projects, we consider potential risks and response measures for a local community using an ESG checklist from the investment review stage. Despite preemptive risk management efforts, should issues arise, we thoroughly incorporate the local community's feedback to develop and implement solutions, and we conduct post-implementation monitoring to assess the effectiveness of these measures.

I Risk Management Process



I Operational Case



Community

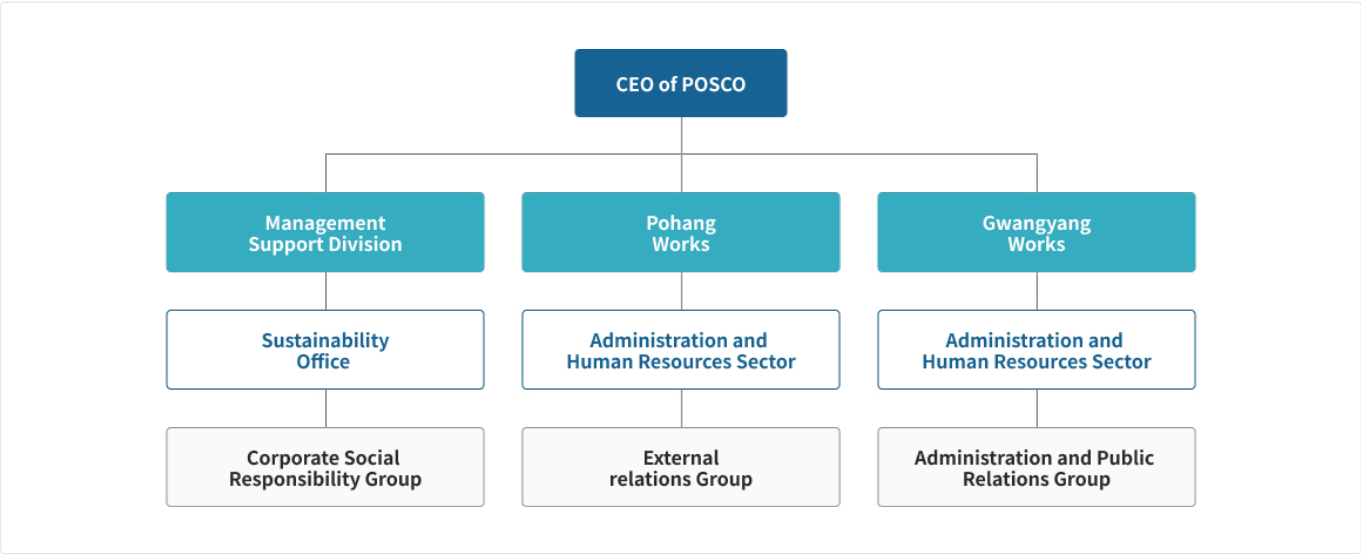
Home > Social > Community > Social Contribution

- Local Community Communication
- Social Contribution

Social Contribution

Dedicated Social Contribution Organization

POSCO systematically identifies community needs and social issues annually to formulate and implement social contribution strategies. The Corporate Social Responsibility Group serves as the control tower, overseeing these initiatives. Dedicated teams at the Pohang and Gwangyang Steelworks carry out social contribution activities to effectively execute our strategies. Additionally, POSCO rigorously manages the purpose, use, recipients, and timing of major donations through the Board of Directors and the ESG Committee, which is a subsidiary body of the Board. Specifically, donations exceed 1 billion KRW are reviewed and approved by the Board of Directors, while donations exceed 100 million and less than 1 billion KRW are reviewed and approved by the ESG Committee, a specialized organization under the board of directors.



Strategic Direction and Focus Areas

POSCO carries out a wide range of social contribution activities focused on local communities where our business sites are located. We support the economic and cultural development of these communities, provide quality educational opportunities to future generations and vulnerable groups, and make active investments in workforce development. Furthermore, we cultivate a culture where all employees are encouraged to voluntarily participate in volunteering and helping others.



Local Community Activities

POSCO leverages its unique capabilities and resources to support the creation of sustainable local communities through various contribution projects, including the development of infrastructure for local residents.

Sister Villages

Beginning with our first sisterhood agreement with the Hagwang Village in Gwangyang in 1988, we have established relationships with 211 villages and organizations around our business sites. Our regular volunteer activities include providing help during the farming season, repairing farming equipment, maintaining village facilities, selling local specialties, supporting vulnerable groups, and offering medical support to remote villages.

Free Meal Centers

Since opening in May 2004, the free meal centers in Pohang and Gwangyang have expanded to five locations (three in Pohang and two in Gwangyang). We support the operating costs, including expenses for food and facilities, and our employees actively participate in providing meal services to local elderly residents and vulnerable groups.

Culture and Arts

Since the opening of Hyoja Art Hall in Pohang in 1980, we have hosted various high-quality performances and educational events in Pohang and Gwangyang, contributing to the cultural refinement of these local communities. In 2023, we organized 10 performances, including a K-POP Festival and magic show, attracting approximately 40,000 attendees. Additionally, we held the Civilized Lecture Series 16 times, featuring lectures by experts and opinion leaders from various fields, with around 4,000 participants. Additionally, the company operates various culture and art facilities for local residents free of charge, including the Space Walk at Hwanho Park in Pohang, the multi-functional cultural space Park 1538, the POSCO Art Museum, and a dedicated soccer field and soccer team. In 2025, the Gubongsan sculpture and Park 1538 will be opened to the public in Gwangyang.

Domestic and International Disaster Relief

In 2023, we contributed 1 billion KRW each for the recovery of wildfire damage in Gangneung and flood damage across the country. Additionally, we provided 700,000 USD to support the recovery efforts for the Turkey earthquake. Furthermore, we took a leading role in supporting disaster victims by distributing relief kits.

Future Generations & Vulnerable Groups

We offer a wide range of educational opportunities to ensure that children and adolescents receive quality education, supporting their stable path to financial independence. Additionally, we provide stable jobs to vulnerable groups, ultimately helping them achieve financial independence and play roles as contributing members in our society.

Beyond, a College Student Volunteer Group

Founded in 2007, the college student volunteer group Beyond has been practicing sharing across various parts of society with passionate and talented young individuals. In 2023, Beyond reached a cumulative membership of 1,502 members domestically and internationally. Continuing from the previous year, the group contributed to biodiversity conservation by planting 120 Goldenrain trees at the Baekdudaegan National Arboretum. Additionally, we created companion plants and established a public garden to aid the psychological therapy of residents at welfare facilities for the disabled in Pohang. We also conducted environmental camps for future generations in the local communities of Pohang and Gwangyang. Notably, Beyond members developed excellent environmental board games for children and youth environmental education, distributing them to 47 local children's centers nationwide.

[Beyond Activity Report / only in Korean →](#)



Beyond Volunteer Group Planting Goldenrain Trees



Beyond Volunteer Group Hosting an Activity Presentation

POSCO Educational Foundation

Established in 1971, the POSCO Educational Foundation has founded 12 kindergartens and elementary, middle, and high schools in Seoul, Pohang, Gwangyang, and Songdo, providing educational opportunities for children and adolescents to receive quality education. The foundation contributes to nurturing a future talented workforce equipped with a global perspective and prepared to fulfill their responsibilities and roles as members of society in the era of globalization. In 2023, the number of graduates was 2,210, bringing the cumulative number of graduates to 133,642.

[POSCO Educational Foundation →](#)



Pohang Jecheol Kindergarten



Gwangyang Jecheol High School



Incheon POSCO High School

POSCO TJ Park Foundation

The POSCO TJ Park Foundation, which originated as the Steel Scholarship Association in 1971, operates various scholarship programs both domestically and internationally to foster talented personnel in local communities and across Asia. These programs include the POSCO TJ Park Prize, POSCO Asia Fellowship, POSCO Science Fellowship, and POSCO Youth Fellowship.

[POSCO TJ Park Foundation →](#)

Category	Key Achievements
POSCO TJ Park Award	60 awardees in 4 areas (Science Award, Service Award, Education Award, Technology Award)
POSCO Asia Fellowship	Scholarships for Asian Studying in Korea: 535 persons from 33 countries Scholarships for Asian Universities: 5,438 persons from 16 countries Scholarships for Africa Universities: 180 persons from 4 countries Asia Opinion Leader Fellowship: 40 persons in 10 countries
POSCO Science Fellowship	483 persons
POSCO Youth Fellowship	Vision Scholarship: 586 undergraduates in local communities Heroes Fellowship: 85 upstanding citizens and their children Lighthouse Scholarship: 678 high school students in local communities

POSCO HUMANS, a Social Enterprise

In December 2007, POSCO established POSWITH, Korea's first subsidiary-type standard workplace for the disabled. In January 2013, it was rebranded as POSCO HUMANS. We have created a barrier-free working environment for disabled employees and promoted employment stability through the support of professional rehabilitation counselors and financial assistance for the purchase of assistive devices. We also engage in social contribution activities aimed at improving the welfare of the disabled in our community. Since 2021, POSCO HUMANS has been recognized as a 'Certified Community Contributor' by the Ministry of Health and Welfare for three consecutive years. Furthermore, we are committed to improving awareness of disabilities through various educational programs.

[Introduction to POSCO HUMANS / only in Korean →](#)



Employee Participation

In 2023, the average volunteer hours per POSCO employee amounted to 21.8 hours. Furthermore, 97% of employees contributed 1% of their salary through the POSCO 1% Foundation, exemplifying our unique culture of 'volunteering and sharing.' Recently, the recipient of the POSCO Grand Prize, one of the most prestigious awards presented annually by the group CEO, donated the entire 20 million KRW prize money to the local community. Additionally, employees have been involved in exemplary voluntary sharing activities, such as donating hair grown over three years for pediatric cancer patients, which have been highlighted as outstanding cases both internally and externally.

[View Article on Prize Money Donation Sharing Activity / only in Korean →](#)

[View Article on Hair Donation Sharing Activity / only in Korean →](#)

Skillbased volunteer Group

In 2003, POSCO established the POSCO Volunteer Group at a company-wide level to promote organized volunteer activities, encouraging volunteerism through sisterhood agreements at the department level. In 2014, we introduced the skillbased volunteer group, which leverages employees' skills, talents, and expertise, expanding our volunteer efforts beyond general activities. These groups volunteered for over 8.6 million hours for the past 21 years, and received the Presidential Citation at the Korean Volunteer Awards in 2023.

Seoul Good Voice Volunteer Group

Established on April 1, 2021, the Good Voice Volunteer Group is dedicated to supporting the improvement of reading and learning abilities for visually impaired children and children from multicultural families who face communication challenges with their parents. Employees divide their roles to record fairy tales and convert them into audiobooks, aiding those who struggle with reading, language development, and knowledge acquisition. The Good Voice Volunteer Group, a smart initiative that combines the innate human ability of 'voice' with advanced technology, is currently one of the most enthusiastic and popular volunteer groups among employees in Seoul.

Pohang Clean Ocean Volunteer Group

Based on the deep concern about the severity of marine ecosystem due to marine litter, POSCO launched the Clean Ocean Volunteer Group in 2009. The group is primarily made up of employees with professional diving certifications, and the group has been volunteering for 15 years. Since its inception, over 19,000 volunteers have participated in underwater clean-up activities in places like Pohang and Gwangyang, dedicating a total of 77,472 volunteer hours. The amount of marine litter collected to date is a staggering 2,060 tons. The Clean Ocean Volunteer Group has become a flagship volunteer group for POSCO. Recently, the group has also led efforts to eradicate harmful organisms such as starfish and sea urchins, substantially aiding in boosting the income of local fishermen

Gwangyang Friends Volunteer Group

The Gwangyang Friends Volunteer Group is a volunteer group founded to help multicultural families in Gwangyang integrate into local communities. Since 2007, the Friends Volunteer Group has been organizing joint weddings for multicultural couples in the community who, due to difficult circumstances, couldn't afford them on their own. To date, the group has provided support to a total of 68 multicultural couples in holding wedding ceremonies. In addition to arranging joint weddings, the Friends Volunteer Group regularly conducts a variety of social programs, such as invitation events for the parents of marriage migrant women, the Eoulim Hanmadang cultural event for multicultural families, and Korean traditional culture experience activities, all of which help immigrant women who have married into a community settle in more comfortably.



POSCO Clean Ocean Volunteer Group Performing Underwater Clean-up



Friends Volunteer Group Supporting Joint Wedding Ceremonies for Multicultural Couples

Global Volunteer Week

Global Volunteer Week is a special volunteer activity week that POSCO Group employees have been conducting since 2010. In 2023, under the concept 'For a Better World 2.0,' marking the 20th anniversary of the founding of the POSCO Volunteer Group, we honored the volunteer spirit cultivated by our predecessors and demonstrated our commitment to continuing and enhancing these efforts to envision a better future together. Across 53 countries where the POSCO Group operates, we carried out over 1,000 diverse volunteer activities, including caring for vulnerable groups, conserving biodiversity, and supporting local welfare institutions.



POSCO Employees Engaged in Woodworking Volunteer Activities (Global Volunteer Week)



OSCO-MPPC Employees Donating Walkers and Canes to Government Agencies for Vulnerable Groups (Mexico, Global Volunteer Week)

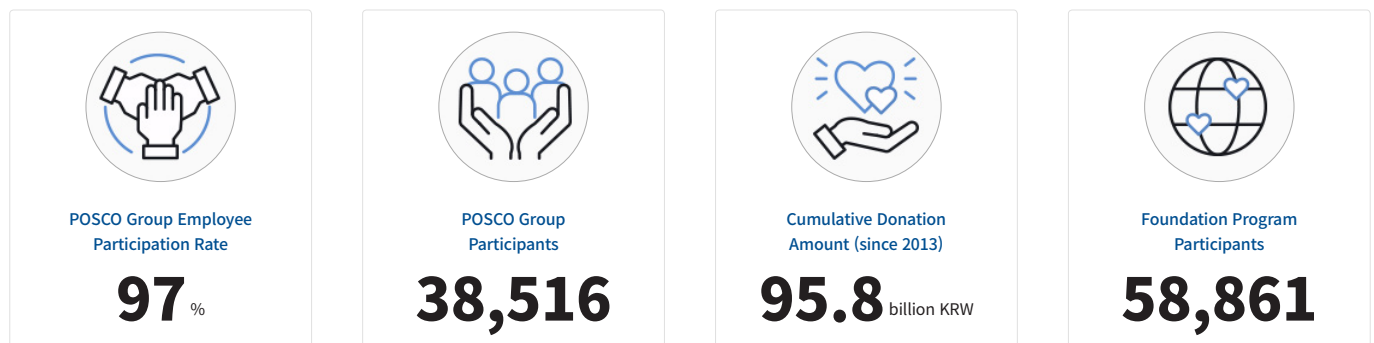
POSCO 1% Foundation

The POSCO 1% Foundation, established in 2013, is a nonprofit organization where POSCO Group and partner company employees donate 1% of their salaries, and the company matches the amount through a matching grant program. The foundation also operates various donor participation programs, such as '1% My Little Charity'¹⁾ and 'Change My Town,'²⁾ where donors can directly identify and request support for institutions and organizations in need. In recognition of these activities, the foundation received several awards in 2023, including the Minister of Health and Welfare Citation for supporting young adults preparing for self-sufficient life, the Minister of Education Award at the Korea Education Donation Awards for supporting the education of future generations in Pohang and Gwangyang, and the Minister of Employment and Labor Award at the CSR Film Festival for the digital academy project video that linked IT job training and employment for the disabled.

[POSCO 1% Foundation / only in Korean →](#)

- 1) 1% My Little Charity: This is POSCO's unique year-end sharing program, where donors can identify institutions and organizations in need, recommend them as donation recipients, and directly donate to their chosen causes via an online platform.
- 2) Change My Town: This program allows donors to directly propose ideas for improving the living environment of vulnerable groups and addressing community issues. It supports not only enhancing the living conditions of vulnerable groups but also provides assistance to areas affected by natural disasters such as wildfires and floods, based on donor suggestions. The foundation facilitates these initiatives by integrating them with talent volunteer activities.

As of 2023



Social Contribution Performance

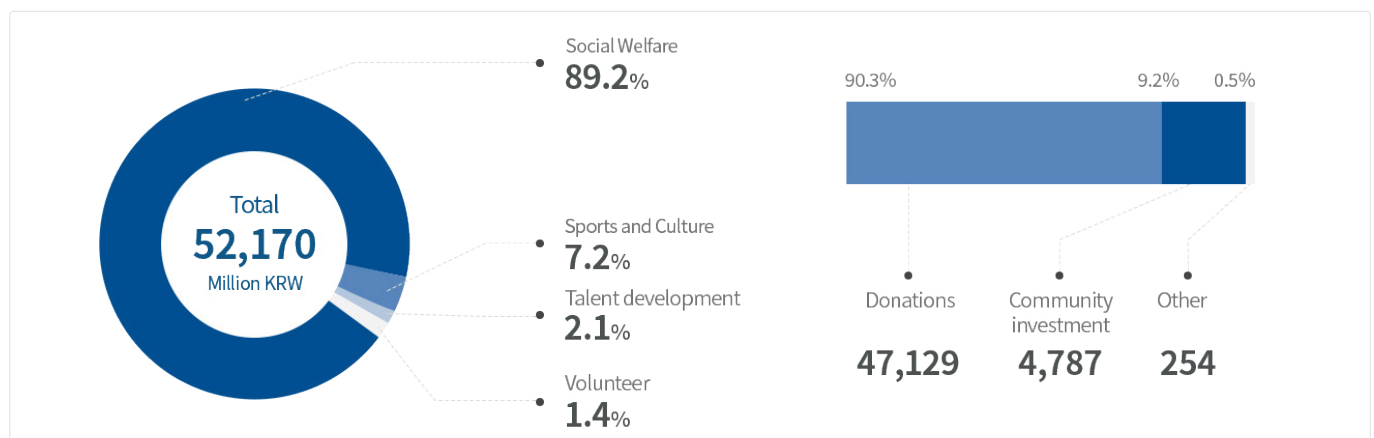
We will expand the number of volunteer groups, which utilize the skills, talents, and expertise accumulated by employees through their job performance, from 113 in 2023 to 120 by 2026. This expansion will enable us to carry out social contribution activities that effectively meet the needs of the community.

Category	2021	2022	2023
Total volunteer hours of employees	292,870	346,855	402,945
Average volunteer hours per employee	16.2	19.3	21.8
Employee volunteer activity participation rate	66.6	73	73.6
Number of talent volunteer groups	104	111	113

POSCO's 2023 Social Contribution Expenses

POSCO's social contribution expenses are managed according to the standards of the Federation of Korean Industries, covering social welfare, sports and culture, talent development, and volunteer expenses. Since 2013, we have additionally disclosed fund details categorized as donations, community investment, and other (classified for 'commercial initiative').

(Unit : Million KRW)





Governance

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Transparency

Home > Governance > Transparency > Board of Directors

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- Risk Management
- Policy

Board of Directors

Although POSCO is an unlisted company, it strives to establish an advanced governance structure by appointing outside directors as stipulated in Article 26 (Number of Directors) of the POSCO Articles of Incorporation. The Board of Directors manages two specialized committees, each chaired by an outside director: the ESG Committee and the Audit Committee.

Composition of the Board of Directors

As of the August 2024, the Board of Directors is comprised of four inside directors, two outside directors. Directors are elected in compliance with the procedures outlined by legal regulations and the company’s Articles of Incorporation during the General Meeting of Shareholders. The appointment of directors with expertise and experience has bolstered the transparency and independence of the Board’s decision-making process.

Corporate Governance Charter →

Category	Name	Specialty	Major Career	Term
Inside Directors	Si-woo Lee	Overall Management (Technology, Production)	Current) CEO and President of POSCO Former) Head of Steel Production & Technology Division, MBA from POSTECH	Mar 2022 - Mar 2025 (Reappointed Mar 2024)
	Baik-hee Lee	Safety, Environment	Current) Head, HSE Division (Senior Executive Vice President) Former) Head, Pohang Works (Senior Executive Vice President), Master’s in Steel from POSTECH	Mar 2024 - Mar 2025
	Young-joong Kim	Marketing, Trade	Current) Head, Marketing Division (Senior Executive Vice President) Former) Head, Steel Team at POSCO HOLDINGS (Executive Vice President) Bachelor’s in Metallurgical Engineering from Pusan National University	Mar 2023 - Mar 2025 (Reappointed Mar 2024)
	Hyeong-soo Lee	Finance, Strategy	Current) Head, Corporate Planning and Finance Division (Executive Vice President) Former) Head, Corporate Planning and Coordination Office at POSCO FUTURE M (Executive Vice President) MBA from POSTECH	Apr 2024 - Mar 2025
Outside Directors	Jae-hwan Park	Finance, Accounting	Current) Professor at Chung-Ang University School of Business Administration Current) Vice President of the Korean Accounting Association PhD in Business Administration from Korea University	Mar 2022 - Mar 2025
	Min-ho Lee	Environment	Current) Head of ESG Research Center at Yulchon LLC, PhD in Civil and Environmental Engineering from the University of Delaware, USA	Mar 2022 - Mar 2025

Operation of the Board of Directors

The Board of Directors has implemented operating regulations to delineate its authority, responsibilities, and procedures. Regular board meetings are scheduled to be held seven times annually. However, if urgent matters arise, extraordinary meetings can be convened. Meetings are called, conducted, and chaired by the chairperson and require the attendance of a majority of the directors to be constituted. Matters discussed by the Board of Directors are resolved with the approval of the majority of the attending directors and are meticulously recorded and managed in the minutes. In 2023, the Board held a total of seven regular meetings, achieving a 100% attendance rate for outside directors.

Board of Directors Meeting Details

Meeting No.	Category	Agenda	Approval Status	Regular /Extraordinary	Date	Attendance/ Total
2023-1st	Resolution	Approval of 1st term business report and financial statements, and convening of annual general meeting	Approved	Regular	2023.01.26	8/8
		Contribution to in-house employee welfare fund	Approved	Regular	2023.01.26	8/8
		Contribution to partner joint employee welfare fund	Approved	Regular	2023.01.26	8/8
		Establishment of compliance control standards	Approved	Regular	2023.01.26	8/8
		Appointment of a compliance officer	Approved	Regular	2023.01.26	8/8
	Report	Implementation status of Board resolutions for H2 2022	Reported	Regular	2023.01.26	8/8
		2022 business performance	Reported	Regular	2023.01.26	8/8
		Operation status of the internal accounting management system for 2022	Reported	Regular	2023.01.26	8/8
		Evaluation of the internal accounting management system operation for 2022	Reported	Regular	2023.01.26	8/8
2023-2nd	Resolution	Agenda for the 1st annual general meeting	Approved	Regular	2023.2.20	8/8
		Installation of the Gwangyang #1 EAF	Approved	Regular	2023.2.20	8/8
		Ratification of donation for Türkiye earthquake recovery support	Approved	Regular	2023.2.20	8/8
23-3회	Report	Appointment of the CEO and assignment of the Executive Director position	Approved	Regular	2023.03.20	7/7
		Appointment of committee members within the Board	Approved	Regular	2023.03.20	7/7
		Promotion of the establishment of a POSCO maintenance subsidiary	Approved	Regular	2023.03.20	7/7
		Ratification of remaining pledged amount to the Foundation for Korean Victims of Forced Mobilization by Imperial Japan	Approved	Regular	2023.03.20	7/7
2023-4th	Resolution	2023 Safety and Health Plan	Approved	Regular	2022.05.18	7/7
		Payment guarantee plan for overseas production subsidiaries	Approved	Regular	2022.05.18	7/7
		Donation of land for Gwangyang CHANGEUP GROUND and community convenience facilities	Approved	Regular	2022.05.18	7/7
		Construction and donation of the Gwangyang Taein pedestrian bridge	Approved	Regular	2022.05.18	7/7
		Ratification of donation for the Gangneung wildfire recovery	Approved	Regular	2022.05.18	7/7
	Report	Q1 2023 business performance	Approved	Regular	2022.05.18	7/7
23-5th	Resolution	Indonesia STS upstream joint venture project	Approved	Extraordinary	2023.06.23	7/7
23-6th	Resolution	Acquisition of steel-related shares held by POSCO HOLDINGS and sale of eco-friendly pilot housing	Approved	Regular	2023.08.18	7/7
		Donation for the construction of a public-private partnership advanced manufacturing incubating center	Approved	Regular	2023.08.18	7/7
		Amendment of the lease agreement for the POSCO Center in 2023	Approved	Regular	2023.08.18	7/7
		Sale of Green Plaza in the Pohang residential complex	Approved	Regular	2023.08.18	7/7
		Ratification of donation for heavy rain damage recovery	Approved	Regular	2023.08.18	7/7
	Report	Implementation status of Board resolutions for H1 2023	Reported	Regular	2023.08.18	7/7
		Q2 2023 business performance	Reported	Regular	2023.08.18	7/7
23-7th	Resolution	Contribution to the Win-Win Partnership Fund for operating the Benefit Sharing System	Approved	Regular	2023.11.17	7/7
		Termination of the sales contract for eco-friendly pilot housing	Approved	Regular	2023.11.17	7/7
	Report	Q3 2023 business performance	Reported	Regular	2023.11.17	7/7

Meeting No.	Category	Agenda	Approval Status	Regular /Extraordinary	Date	Attendance/ Total
23-8th	Resolution	Promotion of the lease contract for the POSCO Center in 2024	Approved	Regular	2023.12.19	7/7
		Conclusion of the lease contract for lime calcination equipment	Approved	Regular	2023.12.19	7/7
		Payment of brand (POSCO) usage fees	Approved	Regular	2023.12.19	7/7
		Acquisition of Woori Financial Group shares	Approved	Regular	2023.12.19	7/7
		Contribution to the RIST development fund	Approved	Regular	2023.12.19	7/7
		Contribution to the POSCO 1% Foundation matching grant fund	Approved	Regular	2023.12.19	7/7
		Contribution to the year-end charity donation	Approved	Regular	2023.12.19	7/7
		Increase in investment in high-purity nickel refining business for batteries	Approved	Regular	2023.12.19	7/7
		Mid-term business strategy and 2024 business plan	Approved	Regular	2023.12.19	7/7
		Setting the funding limit for 2024	Approved	Regular	2023.12.19	7/7
		Setting the short-term borrowing limit for 2024	Approved	Regular	2023.12.19	7/7
	Report	Results of compliance control standards review	Reported	Regular	2023.12.19	7/7

Independence and Expertise of the Board of Directors

Although POSCO is an unlisted company, it has appointed outside directors to ensure a transparent and advanced governance structure. The outside directors are chosen from a broad range of sectors, including industry, finance, academia, law, and the public sector. They are selected based on their extensive experience and expertise, contributing to balanced and rational decision-making by the management, without bias towards any specific field.

To enhance the expertise in decision-making, POSCO has conducted comprehensive briefings for the appointed outside directors. These briefings cover an overall company overview, steelworks inspections, and important strategies and issues related to carbon, safety, and the environment.

Furthermore, POSCO operates the ESG Committee and the Audit Committee under the Board of Directors, each chaired by an outside director. These specialized committees enable the Board to independently review and make decisions on critical company matters. The ESG Committee includes an environmental expert, while the Audit Committee features experts proficient in the industrial and financial sectors, thereby enhancing their expertise. In 2023, the ESG Committee convened five times, and the Audit Committee convened seven times.

ESG Committee Meeting Details

Meeting No.	Category	Agenda	Approval Status	Date	Attendance/ Total
23-1st	Resolution	Contribution to the in-house employee welfare fund	Pre-deliberation	2023.01.19	3/4
		Contribution to the partner joint employee welfare fund	Pre-deliberation	2023.01.19	3/4
	Report	Operation status of the Fair Trade Compliance Program for 2022	Reported	2023.01.19	3/4
		Recent trends and response plan for EU CBAM	Reported	2023.01.19	3/4
23-2nd	Resolution	Plan for the publication of the 2022 Sustainability Report	Approved	2023.05.15	4/4
		Donation to the KIST Future Foundation	Approved	2023.05.15	4/4
		2023 Safety and Health Plan	Pre-deliberation	2023.05.15	4/4
		Donation of land for the Gwangyang CHANGeUP GROUND and community convenience facilities	Pre-deliberation	2023.05.15	4/4
		Construction and donation of the Gwangyang Taein pedestrian bridge	Pre-deliberation	2023.05.15	4/4
	Report	Rolling of the 2050 Carbon Neutrality Basic Roadmap	Reported	2023.05.15	4/4
23-3rd	Resolution	Acquisition of steel-related shares held by POSCO HOLDINGS and sale of eco-friendly pilot housing	Pre-deliberation	2023.08.11	4/4
		Donation for the construction of a public-private partnership advanced manufacturing incubating center	Pre-deliberation	2023.08.11	4/4
		Amendment of the lease agreement for the POSCO Center in 2023	Pre-deliberation	2023.08.11	4/4
		Sale of Green Plaza in the Pohang residential complex	Pre-deliberation	2023.08.11	4/4
	Report	Operation status of the Fair Trade Compliance Program (CP) for H1 2023	Reported	2023.08.11	4/4

Meeting No.	Category	Agenda	Approval Status	Date	Attendance/ Total
23-4th	Resolution	Contribution to the POSCO-Ministry of Oceans and Fisheries Sea Forest Creation Project Cooperation Fund	Approved	2023.11.13	4/4
		Contribution to the Win-Win Partnership Fund for operating the Benefit Sharing System	Pre-deliberation	2023.11.13	4/4
		Termination of the sales contract for eco-friendly pilot housing by mutual agreement	Pre-deliberation	2023.11.13	4/4
	Report	Supply chain ESG due diligence results and plans	Reported	2023.11.13	4/4
23-5th	Resolution	Promotion of the lease contract for the POSCO Center in 2024	Pre-deliberation	2023.12.15	4/4
		Conclusion of the lease contract for lime calcination equipment	Pre-deliberation	2023.12.15	4/4
		Payment of brand (POSCO) usage fees	Pre-deliberation	2023.12.15	4/4
		Acquisition of Woori Financial Group shares	Pre-deliberation	2023.12.15	4/4
		Contribution to the RIST development fund	Pre-deliberation	2023.12.15	4/4
		Contribution to the POSCO 1% Foundation matching grant fund	Pre-deliberation	2023.12.15	4/4
		Contribution to the year-end charity donation	Pre-deliberation	2023.12.15	4/4
	Report	Rolling of the 2050 Carbon Neutrality Basic Roadmap	Reported	2023.12.15	4/4

Audit Committee Meeting Details

Meeting No.	Category	Agenda	Approval Status	Date	Attendance/ Total
23-1st	Resolution	Evaluation of the internal accounting management system operation for 2022	Approved	2023.01.19	3/3
		Selection of external auditors and approval of audit and non-audit service contracts	Approved	2023.01.19	3/3
		Internal audit performance for 2022 and plan for 2023	Approved	2023.01.19	3/3
	Report	Operation status of the internal accounting management system for 2022	Reported	2023.01.19	3/3
		Report on the approval of non-audit service contracts	Reported	2023.01.19	3/3
23-2nd	Resolution	Internal year-end audit results for 2022	Approved	2023.02.13	3/3
	Report	External year-end audit results for 2022	Reported	2023.02.13	3/3
23-3rd	Resolution	Review of agenda items for the annual general meeting	Approved	2023.02.20	3/3
23-4th	Resolution	Appointment of the audit committee chairperson	Approved	2023.03.20	3/3
23-5th	Resolution	Internal audit results for Q1 2023	Approved	2023.05.15	3/3
	Report	External financial review results for Q1 2023	Reported	2023.05.15	3/3
23-6th	Resolution	Internal audit performance for H1 2023	Approved	2023.08.11	3/3
		Internal financial audit results for Q2 2023	Approved	2023.08.11	3/3
		Evaluation of external auditors' activities for 2022	Approved	2023.08.11	3/3
	Report	External financial review results for Q2 2023	Reported	2023.08.11	3/3
23-7th	Resolution	Internal financial audit results for Q3 2023	Approved	2023.11.13	3/3
	Report	External financial review results for Q3 2023	Reported	2023.11.13	3/3

Category	ESG Committee	Audit Committee
Composition	Chair: Min-ho Lee Outside Director: Jae-hwan Park Inside Director: Baik-hee Lee Inside Director: Hyeong-soo Lee	Chair: Jae-hwan Park outside Director: Min-ho Lee Inside Director: Young-joong Kim
Main Roles	<ul style="list-style-type: none"> • Reviewing environmental and low carbon policies • Preliminary review of safety and health plans • Monitoring ESG-related implementation 	<ul style="list-style-type: none"> • Auditing directors' execution of duties • Appointing external auditors • Checking internal accounting

Board Compensation Policy

In line with the Board's operating regulations, all outside directors are authorized to evaluate the activities of the Board and its specialized committees. Compensation for the Board is determined within the limits approved by the General Meeting of Shareholders, in accordance with Article 388 of the Commercial Act and the company's Articles of Incorporation.

The CEO of POSCO's compensation is determined based on the criteria established by the Board of Directors. The base salary is disbursed monthly, calculated as one-twelfth of the annual total base amount, taking into account the position, delegated duties, and role responsibilities. The performance bonus is paid in two installments annually (in July and February of the following year) and is derived from a comprehensive evaluation. This evaluation includes a quantitative assessment of financial performance for the fiscal year and a qualitative assessment of key management activities, such as ESG performance.

Transparency

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Board of Directors

Risk Management

Policy

Risk Management

To effectively respond to the rapidly changing business environment, we make comprehensive, company-wide efforts to proactively detect and manage risks. The outcomes of risk monitoring and the corresponding response strategies are regularly reported to the Board of Directors. Risks are categorized into investment and financial risks, alongside non-financial risks such as safety, environment, human rights, and supply chain. Each responsible department prioritizes risk mitigation activities tailored to their specific areas.

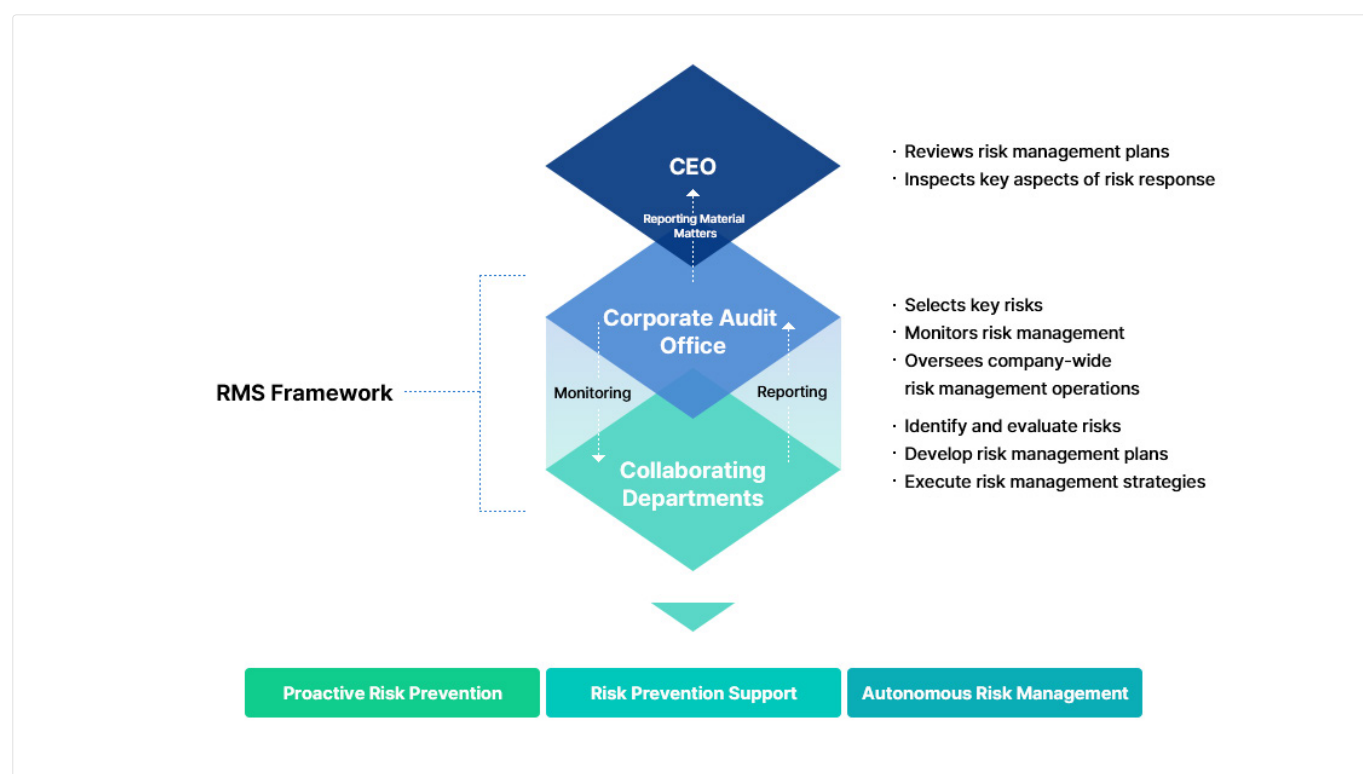
Company-Wide Risk Management

Risk Management System (RMS)¹⁾

POSCO has been operating its RMS, a company-wide process risk management system, since 2004 to systematically manage risks. The system is continuously improved by incorporating feedback from operational departments. Recently, we have integrated big data analysis with the RMS, allowing operational departments to autonomously inspect and address anomalies as soon as they are detected. When necessary, these inspections can be linked to internal audit activities.

¹⁾ Risk Management System (RMS): A system designed to manage risk levels by selecting and evaluating individual risks within various business processes, including finance, purchasing, marketing, investment, production, and facility management.

I Risk Management System



Continuous Monitoring of the Global Business Environment

POSCO conducts meticulous quarterly analyses and forecasts of external economic trends and fluctuations in the steel and raw material markets, which are essential for shaping its medium- and short-term management plans. To minimize risks, POSCO places particular emphasis on predicting key volatile factors such as exchange rates in major countries, Chinese steel prices, and prices for raw materials like iron ore, coking coal, and nickel, on twice a month basis. Through its business information system, the Global Information Hub (GIH), POSCO ensures continuous risk monitoring by providing daily updates on the steel business, new growth sectors, global economic trends, and competitor technology trends to all employees.

Sensitivity Analysis and Scenario Management

POSCO regularly monitors the potential impact on revenue and profit at least once a month, taking into account fluctuations in economic and industrial market indicators such as exchange rates, oil prices, iron ore and coking coal prices, and global steel prices. When significant changes in business performance are anticipated due to these fluctuations, we swiftly establish and implement appropriate response plans. Especially during investment decision-making, we integrate the results of scenario-based sensitivity analysis for key risk factors, including sales volume, sales prices, and raw material prices, to ensure informed and strategic decisions.

Management plans are formulated based on three scenarios: ‘base,’ ‘optimistic,’ and ‘pessimistic.’ Each month, performance is analyzed against these plans and reported during operational meetings chaired by top management. In these meetings, the root causes of any arising issues and corresponding improvement measures are discussed and implemented.

Internal Accounting Management System

POSCO operates an internal accounting management system annually. This system comprises two main evaluations: design assessment, which examines the appropriateness and completeness of control activities designed to prevent and detect errors and fraud in financial statements, and operational assessment, which verifies that these control activities function as intended. POSCO has established a dedicated organization that takes the lead in inspecting and managing the internal accounting management system. Each business year, design and operational assessments are conducted for POSCO and its major steel affiliates. The results of these assessments are reported to the Board of Directors, the Audit Committee, and the General Meeting of Shareholders. Any deficiencies identified during the evaluation process are addressed through mutual consultation between the dedicated internal accounting management organization and the departments responsible for performing the control activities.

<div>Operational Failures</div> <div>Establishing Inspection Plans</div>	<ul style="list-style-type: none">Identify control activities that include improvement measures for deficiencies identified in the previous year and communicate the inspection direction and key schedule.
<div>Control Activities</div> <div>Design Assessment</div>	<ul style="list-style-type: none">Select a specific transaction as a sample and trace the entire process from initiation to completion using the transaction documentation. Identify associated risks and review and evaluate whether the control activities are appropriately designed.Inspect whether organizational and process changes have been adequately incorporated.
<div>Control Activities</div> <div>Operational Assessment</div>	<ul style="list-style-type: none">Verify the documentation and approval documents reviewed by both the control personnel and the control manager for key control activities.Confirm the evidence related to the process and outcomes of the control execution.
<div>Internal Accounting Management System</div> <div>Review, Audit, and Reporting</div>	<ul style="list-style-type: none">The auditing firm conducts a review and audit of the design and operational assessments carried out by the company.The CEO reports the results of the operational status review of the internal accounting management system to the General Meeting of Shareholders, the Board of Directors, and the Audit Committee

ESG Risk Management for Investment Projects

Before proposing an investment, we perform a preliminary analysis of potential ESG risks associated with the project’s execution and mandate that the proposal includes strategies to minimize these risks. During the investment review stage, in-house ESG experts serve as review committee members, assessing the adequacy of established risk prevention measures. Post-approval, we incorporate ESG metrics into the investment performance evaluation criteria, ensuring that business execution considers ESG impact.

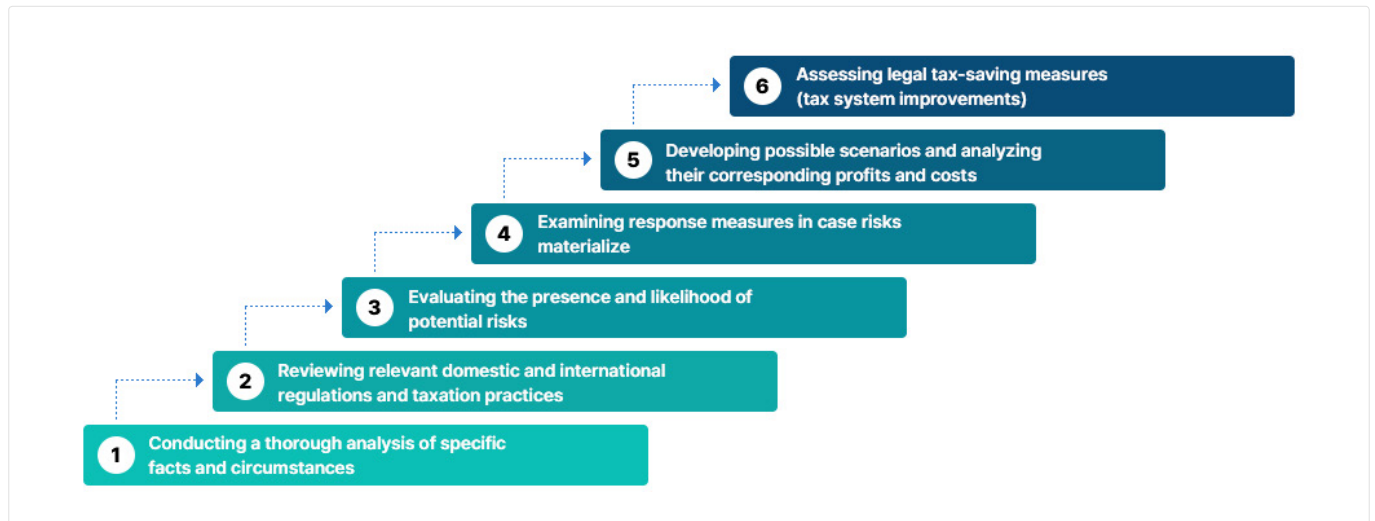
I Key ESG Evaluation Metrics

Category	Item	Metric	Unit	Definition
Environment (E)	GHG	GHG emissions	tCO ₂ e	Total GHG emissions from business sites
	Energy	Energy consumption	GJ	Total consumption of direct, indirect, and renewable energy
		Renewable energy usage percentage	%	Percentage of energy consumption from renewable sources
	Pollutants	Air pollutant emissions	tons	Total air pollutants emitted from business sites
		Water pollutant emissions	tons	Total water pollutants emitted from business sites
	Water Resources	Total water withdrawal	million m ³	Total volume of water withdrawn from water sources
	Waste	Waste generation	tons	Total weight of all solid and liquid waste, excluding wastewater, generated at business sites
Social (S)	Safety	Environmental law violations	cases	Number of disclosed violations of environmental laws
		Accident rate	%	Number of accidents ÷ Total number of employees × 100
Governance (G)	Board of Directors	Number of accidents	person	Total number of general, serious, and occupational accidents
		ESG agenda items submitted to the board	cases	Number of ESG-related reports
	Ethical Management	Ratio of non-executive directors	%	Number of non-executive directors ÷ Total number of directors × 100
		Code of ethics violations	cases	Number of code of ethics violations

Tax Risk Management

POSCO diligently works to prevent all potential tax risks associated with transactions of goods and services, mergers and acquisitions, corporate restructuring, international transactions, new business initiatives, and changes in transaction structures at all domestic and international business sites. When necessary, we collaborate with external tax experts and seek advice from tax authorities, ensuring a thorough review before making decisions.

I Tax Risk Evaluation Process



Transparent Tax Payment

In 2023, POSCO's profit before tax on a consolidated basis amounted to 1.9267 trillion KRW, with a nominal tax amount of 504.4 billion KRW, indicating a nominal tax rate of 26.2%. Conversely, the effective tax amount was 256.1 billion KRW, resulting in an effective tax rate of 13.3%.

POSCO's average nominal tax rate for the past two years stands at 30.1%, while the average effective tax rate is 15.2%. Notably, the average effective tax rate for the past two years is 14.8 percentage points lower than the nominal tax rate. This discrepancy is due to several factors, including changes in deferred corporate tax resulting from temporary differences, the impact of non-taxable income, non-deductible expenses, tax credits and reductions, and unrealized gains and losses.

Transparency

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Corporate Governance Charter

POSCO aspires to be a strong and reputable global company, embodying its management philosophy of contributing to customers and human society by providing valuable products and services that underpin the social foundation. Establishing sound corporate governance is the cornerstone for earning the trust of all stakeholders and ensuring diligent management activities. With a firm belief that this is the path to realizing the ideal of a leading global company, we hereby establish this Corporate Governance Charter.

POSCO is committed to enhancing the balanced rights and interests of shareholders, customers, employees, and other stakeholders by fostering **transparent, ethical, and responsible management** under the supervision of an independent board of directors, in accordance with this Charter.

Corporate Governance Charter

Preamble

POSCO aspires to be a strong and reputable global company, embodying its management philosophy of providing valuable products to customers and services to the society that underpin the social foundation through these contributions. Establishing sound corporate governance is the cornerstone for earning the trust of all stakeholders and ensuring diligent management activities. With a firm belief that this is the path to realizing the ideal of a leading global company, we have hereby established this Corporate Governance Charter. POSCO is committed to enhancing the balanced rights and interests of shareholders, customers, employees, and other stakeholders by fostering transparent, ethical, and responsible management under the supervision of an independent Board of Directors, in accordance with this Charter.

General Provisions

- POSCO's business operations, driven by the Chief Executive Officer (CEO) and carried out by all executives and employees, are focused on the long-term enhancement of shareholder value. The Board of Directors is responsible for setting the company's strategic direction and for verifying and overseeing the management's efforts to increase shareholder value.
- POSCO is committed to establishing and advancing a global professional management system that harmonizes checks and balances between the Board of Directors, which includes independent Outside directors, and the professional management team, with the dual objectives of enhancing shareholder value and protecting stakeholder rights and interests.
- POSCO ensures the prompt and accurate disclosure of major business matters and financial statements to shareholders and stakeholders, and verifies the accuracy of financial information through an audit body that is both independent and highly specialized.

Shareholders

Shareholder Rights

As owners of POSCO, shareholders are entitled to the following fundamental rights, as guaranteed by the Commercial Act and other relevant laws and regulations:

- The right to participate in profit distribution
- The right to attend and exercise voting rights at the general meeting of shareholders
- The right to propose agenda items, including the nomination of director candidates, for the general meeting of shareholders
- Matters that bring significant changes to the company's existence and shareholder rights—such as mergers, amendments to the articles of incorporation, and capital reductions—are determined at the general meeting of shareholders under the principle of maximally protecting shareholder rights, including the right to receive timely information through easily accessible means.
- The exercise of shareholder rights should be convenient and reflect the free will of the shareholders. To facilitate this, the company provides sufficient information for the agenda items to be discussed at the general meeting of shareholders and allows voting rights to be exercised in writing.

Fair Treatment of Shareholders

In business transactions, the company does not provide special treatment to individuals because they are shareholders, nor does it impose unfavorable conditions on those who are not shareholders.

Responsibility of Shareholders

Shareholders should recognize the significance of their voting rights and actively exercise them in a way that contributes to the company's growth and aligns with its best interests.

Board of Directors

Functions of the Board of Directors

- ① The Board of Directors, within the bounds of relevant laws and regulations, holds comprehensive authority over management. It is responsible for determining key management objectives and basic strategies to benefit the company and its shareholders, and for overseeing the activities of the management team.
- ② The Board of Directors is responsible for the following functions:
 - Establishing management objectives and key strategies
 - Deciding on the appointment, dismissal, oversight, evaluation, and compensation policies for management
 - Periodically monitoring management performance
 - Approving significant investment projects, large-scale financing, and the annual business plan and budget
 - Addressing other matters as stipulated by laws, the articles of incorporation, and Board regulations

Composition and Appointment of the Board of Directors

- ① The company shall have at least three directors, including a specified number of Outside Directors.
- ② The chairperson of the Board of Directors shall be the CEO.
- ③ The Board of Directors may, by resolution, appoint one or more executive directors as CEO.
Additionally, upon the recommendation of the CEO, the Board may resolve to confer the titles of President, Vice President, Senior Executive Director, or Executive Director to executive directors.

Qualifications of Directors

- ① Directors must demonstrate exemplary ethical awareness, professionalism, and integrity. They should be able to represent the long-term value enhancement of all shareholders and the rights and interests of stakeholders in a balanced manner.
- ② As senior management responsible for the company's operations, executive directors must build extensive experience and expertise relevant to the company's business activities. They should also possess sound judgment and strong drive and determination.
- ③ Outside directors should possess extensive expertise or experience in fields such as industry, finance, academia, law, accounting, or the public sector. They must not have any significant conflicts of interest with the company and should be capable of making independent decisions, free from the influence of management or specific shareholders.

Role of Outside Directors

- ① Outside directors participate in major decision-making through their involvement in Board activities. As Board members, they oversee management while also supporting it by offering constructive advice.
- ② Outside directors have the right to request any information necessary for the performance of their duties. If required, they may also consult external experts following the appropriate procedures, with the company covering any associated costs./li>
- ③ Outside directors should dedicate sufficient time to their duties and ensure that they review all relevant materials in advance before attending Board meetings.

Responsibility of Directors

- ① Directors are required to fulfill their duties with the care and loyalty expected of a prudent manager, always acting in the best interests of the company and its shareholders. They must not disclose information obtained in the course of their duties to outside parties or use it for personal gain.
- ② As members of the company, directors are required to comply with the POSCO Code of Ethics and the Code of Conduct for Outside Directors. The Board of Directors is responsible for overseeing adherence to the code of conduct outlined in these ethics guidelines.
- ③ If a director violates laws, regulations, or the articles of incorporation, or neglects their duties, they are liable for damages to the company. In cases of malice or gross negligence, they may also be held liable for damages to third parties. However, the business judgment of directors, when made following appropriate procedures and based on sincere and reasonable judgment, should be respected.
- ④ To ensure the effectiveness of holding directors accountable and to attract competent individuals to serve as directors, the company obtains liability insurance for directors at the company's expense.
- ⑤ If a conflict of interest between the company and a director cannot be resolved, the director must resign. Additionally, directors should abstain from participating in any discussions or decisions that could be influenced by their personal or professional interests.

Operation of the Board of Directors

- ① The Board of Directors should be operated efficiently and rationally to ensure the best management decisions are made in the interests of the company and its shareholders.
- ② To enhance the efficient operation of the Board of Directors and to ensure the professional execution of specific functions, the Board has established an ESG Committee and an Audit Committee, both of which are composed of Outside directors./li>
- ③ The Board of Directors is scheduled to hold regular meetings seven times a year, in principle, and may convene extraordinary meetings as needed for urgent matters. To facilitate the smooth operation of the Board, regulations outlining the Board's authority, responsibilities, and operating procedures are established and implemented.

Audit Body

Audit Committee

- ① The Audit Committee is composed of at least three directors, with at least two-thirds of the members being Outside directors.

② The Audit Committee is responsible for the following functions:

- Auditing the legality of the management's execution of duties
- Reviewing the soundness, validity, and appropriateness of corporate financial activities and financial reporting
- Evaluating the appropriateness of significant accounting standards and changes in accounting estimates
- Handling other matters as stipulated by laws, the articles of incorporation, and Audit Committee regulations

③ The Audit Committee convenes at least once per quarter and, when necessary, may require the attendance of directors, non-registered executives, or relevant employees.

External Auditor

- ① The external auditor must carry out their audit duties fairly and independently, without influence from the company, management, or specific shareholders.
- ② The external auditor is appointed by the Audit Committee and is required to report any significant matters identified during the audit process to the Audit Committee.
- ③ The external auditor is required to attend the general meeting of shareholders and provide sincere responses to any questions from shareholders regarding the audit report.

Stakeholders

- ① The company is dedicated to fulfilling its corporate social responsibility, believing that sincerely addressing the concerns of all stakeholders—including employees, customers, creditors, suppliers, and local communities—contributes to the enhancement of long-term shareholder value.
- ② The company diligently protects stakeholder rights as stipulated by laws, regulations, or contracts. It faithfully complies with labor-related laws, including the Labor Standards Act, and actively works to maintain and improve working conditions.
- ③ The company provides the necessary information to protect stakeholder rights within the limits allowed by law and supports stakeholders in accessing relevant information.

Disclosure

- ① The company regularly prepares and discloses business reports, quarterly reports, and semi-annual reports. Beyond the disclosures required by law, the company ensures that any matters that could significantly impact the decision-making of shareholders and stakeholders are promptly and accurately disclosed.
- ② The company does not favor or discriminate against any individuals in the scope or timing of disclosing important corporate information. It ensures that all stakeholders have simultaneous access to the disclosed information.

Tax Management Policy

- POSCO faithfully complies with tax reporting and payment obligations not only under domestic regulations but also under the regulations of each country where we conduct business activities. We maintain transparent relationships with tax authorities in each country and diligently fulfill our taxpayer obligations, including the submission of documents as required by relevant laws.
- POSCO adheres to the principle of conducting arm's length transactions in accordance with the OECD Transfer Pricing Guidelines and the regulations of each country when dealing with related parties. For transfer pricing transactions with overseas related parties, we prepare BEPS¹⁾ reports and transfer pricing reports in collaboration with external tax experts to ensure compliance.
- POSCO adheres to the regulations of each country where it operates, faithfully fulfilling its tax obligations. We do not engage in transactions or contracts that shift income between countries to exploit differences in tax laws or loopholes in international tax systems. We ensure that taxable income is allocated consistently with the value generated in each country where business activities occur. POSCO does not use tax havens to unfairly reduce tax burdens and faithfully meets its tax obligations for international transactions through standard tax structures.
- All tax employees of POSCO's subsidiaries adhere to the tax regulations of each country in accordance with POSCO's tax policy and perform their duties under the principle of maintaining a transparent relationship with tax authorities.
- POSCO pays taxes fairly and uses legal procedures, such as appeals and administrative litigation, to contest unreasonable taxation. We share the growth benefits obtained through legal tax-saving measures with society.
- At POSCO's global business sites, we proactively review potential tax risks that may arise during business activities, including new business investments, strengthening the competitiveness of existing businesses, and restructuring, to ensure compliance with domestic and international regulations. During the risk review process, decisions are made based on the advice of external tax experts and tax authorities.

¹⁾ BEPS : Base Erosion and Profit Shifting. This involves the erosion of the tax base through income shifting. It refers to the practice where multinational corporations create paper companies in countries with favorable tax rates under tax treaties to avoid paying taxes.

Ethical Management

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- Ethics/Compliance
- Fair Trade
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Ethics/Compliance

POSCO has ingrained an ethical corporate culture rooted in the ethical management philosophy of “Doing the right thing in the right way.” We strive to not only comply with laws and ethical standards but also adhere strictly to the basics and uphold principles through our business activities. Reflecting evolving social expectations, we have established a new ethical management system at the level of a leading global company. Moving forward, we will continue to act based on the core values of ethical management: Integrity, Respect, and Mutual Empathy in all our endeavors.

Integrity: Our decisions and actions are transparent and honest.

Respect: We treat everyone with dignity and fairness, grounded in mutual respect and consideration.

Mutual Empathy: Through interactions with stakeholders, we consider and understand others’ perspectives, fostering a more cooperative and inclusive culture.

Ethical Management System

Since establishing and announcing the ‘Code of Ethics’ for corporate ethics practice in 2003, POSCO has made ethics the highest priority in its management and has operated a systematic ethical management compliance system for over 20 years.

The company executes its ethical management tasks through the Corporate Audit Office, which operates directly under the CEO. The Corporate Audit Office is involved in various ethical practice activities, such as establishing and supporting the operation of ethical management policies for domestic subsidiaries, overseas subsidiaries, and partners; providing customized ethics training and conducting campaigns by rank and job category; and auditing violations of human dignity and unethical conduct.

Key issues and performance in ethical management are reported to top management and, to ensure independence, are also regularly reported twice a year to the Audit Committee under the Board of Directors.

[View Code of Ethics in Detail →](#)



Ethical Management Process

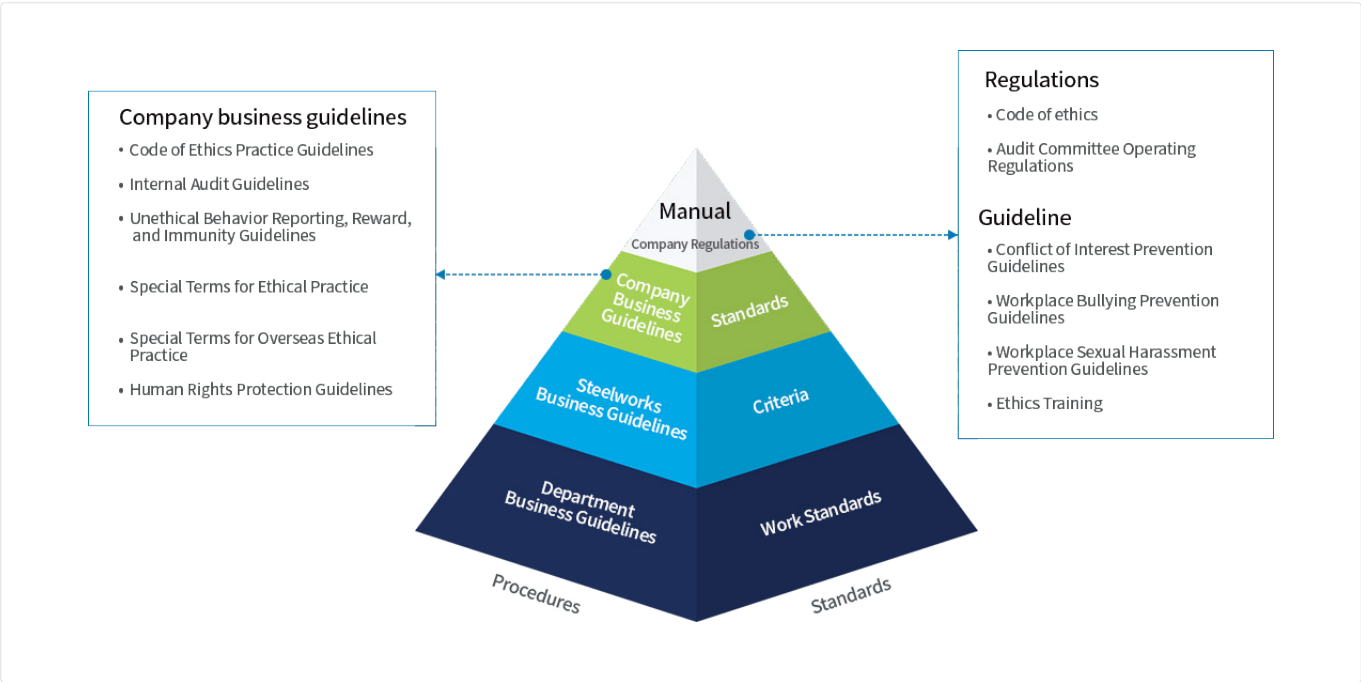
POSCO operates the following process to ensure that ethical management is embedded in the daily activities and work of all employees. Through the detection and prevention of unethical behavior in everyday life, we strive to make ethical practices an integral part of our daily routine.

Ethical Policies and Process Operation	<ul style="list-style-type: none">Establish and revise the code of ethics and practice guidelines, develop governance structures, and formulate strategies.
Unethical Risk Prevention Activities	<ul style="list-style-type: none">Conduct ethics pledges for all employees, provide customized on/offline training, and run ethical management campaigns.
Unethical Behavior Diagnosis and Action	<ul style="list-style-type: none">Manage risks of unethical behavior and human dignity violations detected through executive and managerial ethics sessions and ongoing surveys. Handle reports of unethical behavior through audits and implement follow-up measures.
Change Management	<ul style="list-style-type: none">Improve unethical practices and reduce waste through audits. Support ethical management activities for subsidiaries and partners.

Standardization of Ethical Standards and Policies

Ethical management standards and policies include a total of 11 items, comprising the code of ethics, Audit Committee operating regulations, and internal audit guidelines (5 company regulations and 6 business guidelines). The Corporate Audit Office, as the department responsible for these regulations and guidelines, periodically conducts adequacy reviews.

Ethical Management Standards Operating Framework



Ethics Training

We develop and operate online and offline training programs, providing training for all domestic and international employees. Our mandatory e-learning course, “Understanding POSCO’s Ethical Management,” centers on ethical management consultations and audit cases, allowing all employees to complete it online. Moreover, we run monthly ethical management campaigns to ensure that all employees can easily understand how to handle ethical dilemmas and prevent and address bullying, sharing the materials across group companies.

We provide advanced training focused on unethical case studies at the request of customer-facing and purchasing departments, aiming to prevent unethical risks that may arise in field operations. Additionally, we prepare English campaign materials and distribute them to overseas subsidiaries, contributing to the education of locally hired employees (Global Staff).

Online

- Mandatory e-learning training (Understanding POSCO’s Ethical Management / Workplace Sexual Harassment Prevention Training)
- Company-wide posting of ethical management campaigns (focusing on unethical behavior, bullying, sexual harassment, and prevention of abuse of power)
- Sharing ethical management campaigns through the GIH (Global Information Hub) system

Offline

- Training programs by hierarchy/position : Training for newly appointed executives/managerial position holders/resident reps, training for new/experienced/intern employees, training for overseas employees, etc.
- Department-specific specialized training : Advanced training focused on case studies for external-facing departments including the Raw Materials Office, the Investment Engineering Office, the Marketing Division, etc.
- Special training on sexual ethics : Focused on long-tenured employees, this training covers compliance with sexual ethics (31 sessions with external experts invited)

* Executives and managers receive annual training through the PIUM program

Ethical Diagnosis and Actions

Surveys

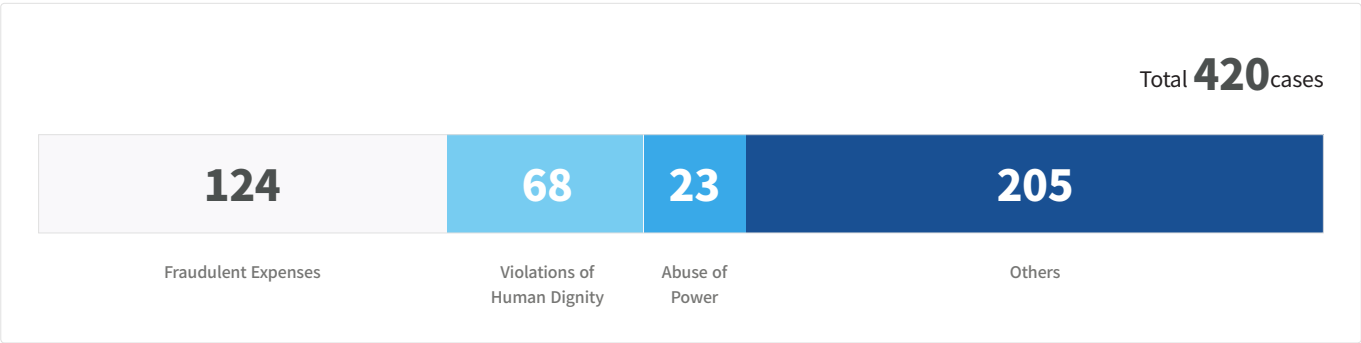
To assess the level of ethical practice among employees and to detect unethical behavior early, we regularly conduct ethics sessions and surveys for all employees.

Ethics Sessions for Executives	Assess the ethical management mindset of executives (annually)
Ethics Sessions for Managers	Enhance the ethical leadership of managers (annually)
Ethical Risk Detection Survey	Monitor the status of unethical business practices and violations of human dignity (such as sexual harassment and bullying) (monthly)

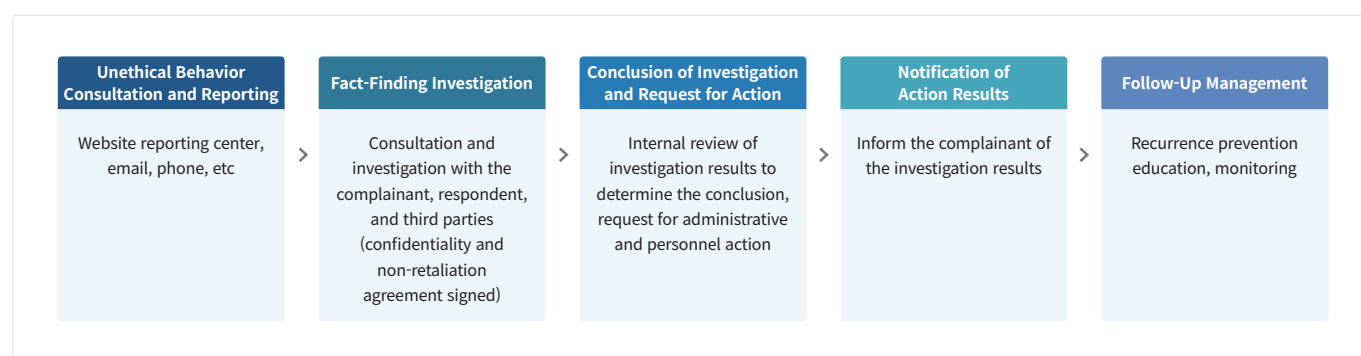
Operation of the Reporting Center

We maintain a reporting center where employees can report unethical behavior and violations of human dignity at any time. Stakeholders can also seek consultation and file reports. When employees receive solicitations, they are required to record and manage the details in the ‘Clean POSCO System,’ fostering a transparent corporate culture. In 2023, a total of 420 reports of unethical behavior were received and processed.

Number of Unethical Reports Received



I Reporting Process



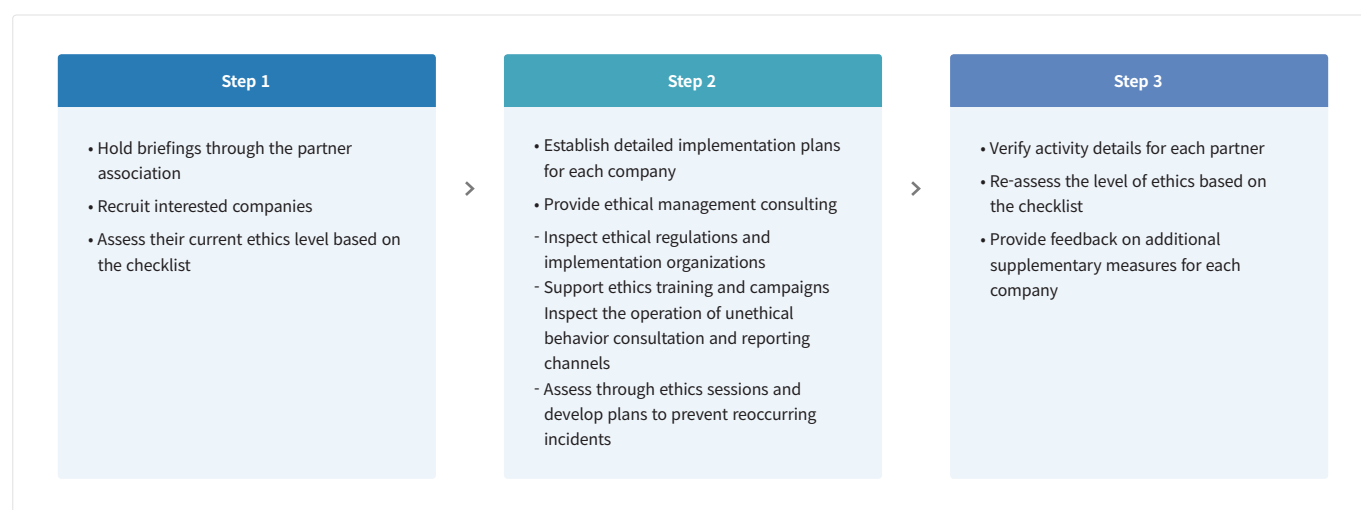
Actions Against Unethical Behavior

POSCO adheres to the Zero Tolerance Principle for the four major unethical behaviors: bribery, embezzlement, sexual ethics violations, and information manipulation. Violations of ethical standards are always met with appropriate punishment. POSCO prohibits any actions that could disclose the identity of whistleblowers and has codified a system for punishing such violations. Employees of the Corporate Audit Office, the audit organization, make an electronic pledge for whistleblower protection at the beginning of each year, ensuring the utmost protection of whistleblower identities.

Change Management

To foster win-win partnerships and ESG management among SMEs, we support the establishment of ethical management infrastructure. From 2020 to the present, we have assisted a total of 32 companies in implementing ethical regulations and systems, establishing unethical behavior reporting centers, providing ethics training campaigns, and offering ethical dilemma consultations. This support helps partners build a foundation for independently practicing ethical management. Additionally, following the support activities, we reassessed the ethical standards of our partners to confirm their improvement and provided feedback. This process enables partners to voluntarily establish and implement future development plans. Furthermore, through support activities focused on building ethical management infrastructure and compliance for small-sized and newly established business companies, we have prevented violations of human dignity and mitigated unethical risks.

I Support for Building Ethical Management Infrastructure for Partners



I Major Achievements in Establishing Ethical Management Infrastructure for Business Companies (Comprehensive)

Category	Major Improvements	Completion
Regulations	Revised and updated company regulations, including the code of ethics and guidelines to prevent sexual harassment/bullying	By May 2023
CEO's commitment	Held an ethical management pledge event	By June 2023
	CEO Message and employees' ethics pledge signing	By June 2023
Organization and System	Inspected the grievance handling process and established operational standards	By June 2023
	Introduced and informed about the reporting system/channel, and inspected the solicitation prevention process	By July 2023
	Implemented the unethical behavior inspection app and human dignity survey (ethics session)	By August 2023
Practical Activities	Conducted monthly ethics training and campaign activities for managers and employees	Monthly in 2023
	Conducted the no-gift campaign and operated a gift return center	By September 2023

Ethics Training Completion Rate

We are offering the company-wide mandatory course ‘Understanding POSCO’s Ethical Management (e-learning)’ with the aim of having all employees complete it.

Metric	Unit	2020	2021	2022	2023	2024 Goal
Ethics Training Completion Rate	%	99.9	100	100	100	100

Ethical Management


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- Fair Trade
- Policy


Fair Trade

The Fair Trade Compliance Program (CP) is an independently established and operated internal compliance system in order to comply with fair trade-related regulations on their own. By presenting clear standards of conduct related to fair trade to employees, the company has been operating a compliance program since 2002 to prevent violations of fair trade-related laws in advance and to ensure corporate transparency.


Implementation Requirements for CP (8 Essential Elements and Compliance Council)




Establishment and implementation of CP standards and procedures




Commitment and support for compliance from the CEO




Appointment of a compliance officer responsible for CP operations




Creation and utilization of a compliance manual



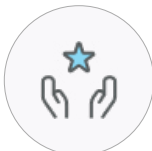
Continuous and systematic compliance training




Establishment of an internal monitoring system



Sanctions for employees who violate fair trade-related regulations






Effectiveness evaluation and corrective actions



Operation of the Compliance Council

CP Operational Status

Compliance Program (CP)	Compliance Manual and Training	Self-Inspection System and Council
 <p>To prevent violations of fair trade-related regulations and ensure corporate transparency, POSCO has been operating the Compliance Program since 2002.</p>	 <p>POSCO publishes the 'Fair Trade Compliance Manual' to assist employees in complying with fair trade-related regulations.</p> <p>The manual is regularly updated to incorporate the latest legal amendments. Furthermore, a compliance manual mobile app has been developed and is being operated to enhance accessibility for employees.</p>	 <p>We conduct risk inspections for legal violations using the Fair Trade Self-Inspection Checklist, led by operational departments.</p> <p>Additionally, we have established a Compliance Council composed of relevant department heads and have selected action leaders for each department to ensure the effective operation of the Fair Trade Compliance Program.</p>

Compliance Program (CP)

Overview

The Fair Trade Compliance Program (CP) refers to an internal compliance system that a company establishes and operates independently to ensure compliance with fair trade-related regulations.

To provide employees with clear guidelines on fair trade-related conduct, prevent violations of fair trade-related regulations in advance, and ensure corporate transparency, the company has been operating the Compliance Program since 2002.

Fair Trade Compliance Program Operating Guidelines

1. Scope of Application

These guidelines apply to all employees and all business activities related to fair trade. Employees are required to comply with fair trade-related regulations.

2. Core Principles of the Guidelines

- Establishment and Implementation of CP Standards and Procedures: Establish and implement necessary standards and procedures to ensure that all affiliated employees clearly understand and comply with fair trade-related regulations in their work.
- CEO's Commitment and Support for Compliance: The CEO will express a commitment to fair trade compliance through a message and conduct the Fair Trade Compliance Pledge annually.
- Appointment of a Compliance Officer Responsible for CP Operations: A fair trade compliance officer will be appointed based on the resolution of the board of directors.
- Creation and Utilization of Compliance Manuals: Fair Trade Compliance Manuals will be periodically distributed for various sectors, including marketing, purchasing, and large conglomerates.
- Continuous and Systematic Compliance Training: Conduct regular fair trade training for operational departments such as purchasing and sales, and provide fair trade training by hierarchy for new employees and managers. Additionally, operate e-learning courses such as "Learning Fair Trade Anew".
- Establishment of an Internal Monitoring System: Report CP operational performance and plans to the board of directors and operate internal and external fair trade consultation and reporting centers. Additionally, provide advisory and consultation services and conduct thematic inspections of vulnerable areas concurrently.
- Sanctions for Employees Violating Fair Trade Regulations: Enforce punishment regulations following the verification of illegal activities and promptly take disciplinary actions against those who violate the law.
- Effectiveness Evaluation and Corrective Actions: Conduct inspections and evaluations of the program's standards, procedures, and operations, and implement corrective actions accordingly. (Reference) Achieved an AA rating in the Fair Trade Commission CP Rating Evaluation for the years 2006-2012 and 2021-2023.
- Operation of the Compliance Council: Establish a Compliance Council composed of department heads from relevant areas such as marketing and purchasing.

Compliance Manual and Training

Compliance Manual

In 1996, POSCO published the Fair Trade Practice Manual to provide employees with a code of conduct for compliance with the Fair Trade Act. A revised edition was issued in 2001 to incorporate amendments to the Fair Trade Act. In 2004 and 2005, recent legal amendments, case decisions, and Q&A sections were added to create the “Fair Trade Compliance Manual for the Subcontracting Sector,” “Fair Trade Compliance Manual for the Unfair Trade Practices Sector,” and “Fair Trade Compliance Manual for Large Conglomerates” for practical use in departments. In 2007 and 2008, POSCO released the “Fair Trade Compliance Action Guideline for the Marketing Sector” and the “Fair Trade Compliance Action Guideline for the Purchasing Sector.”

In 2015, to enhance user convenience, the manuals for the marketing and purchasing sectors were each integrated and published. In 2016, the “Fair Trade Compliance Manual for Large Conglomerates” was revised. In 2020, the manuals for the marketing, purchasing, and conglomerate sectors were updated, and the “Overseas Subsidiaries CP Manual” was published for the first time.

In 2023, POSCO further innovated by integrating an interactive AI service, ChatGPT, into the Fair Trade Compliance Manuals, creating the new Fair Trade GPT.

Fair Trade Training

POSCO provides customized fair trade training, both online and offline, for its domestic and overseas subsidiaries.

For the sales and purchasing sectors, as well as for managers, general employees, and new employees, POSCO conducts separate group training sessions categorized by sector and hierarchy, both regularly and as needed. Additionally, an e-learning training program is available for online access at any time.

Additionally, through regular legal affairs councils for overseas subsidiaries, POSCO provides major compliance guidelines and actively works to prevent related risks.

Self-Inspection System and Council

Self-Inspection System

POSCO conducts fair trade self-inspections using checklists for each sector. This self-inspection process is the most effective method to identify and prevent fair trade violations in advance, ensuring the practical operation of the Fair Trade Compliance Program.

The Fair Trade Self-Inspection Checklist is included in compliance manuals to help employees prevent the risk of legal violations in advance. Additionally, to facilitate self-inspections without inconvenience during fieldwork or business trips, the company has developed and distributed a smartphone application.

Compliance Council

A. Compliance Council

- Purpose of Operation
 - To conduct operational inspections of the Fair Trade Compliance Program and provide consultation for compliance officers
- Composition and Roles
 - The Compliance Council is composed of approximately 20 department heads related to fair trade.
 - Fair trade action leaders are selected to oversee compliance inspections and fair trade compliance activities within their respective departments

B. Fair Trade Action Leaders

- Purpose of Operation
 - Provide practical support for the compliance program as dedicated personnel within each department
 - Enhance the operational efficiency of the Compliance Council and promote a fair trade compliance mindset
- Roles
 - Support educational activities for Compliance Council members
 - Provide consultation and advice on fair trade matters
 - Assist with departmental compliance inspection activities
 - Identify areas for improvement in CP operations

Ethical Management

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Ethics/Compliance

Fair Trade

Policy

Policy

Code of Ethics

Ethical Principles

1. Roles and Responsibilities of All Members

- We comply with relevant laws and company regulations and guidelines wherever POSCO conducts business globally.
- We maintain our dignity as employees and strive to uphold the corporate reputation.
- We take responsibility for practicing ethical behavior and do our utmost to establish an ethical culture.
- If we become aware that a situation or behavior, whether involving ourselves or others, violates or has the potential to violate the code of ethics, we promptly report it or seek consultation with a supervisor or the department responsible for ethical management.
- We actively cooperate with the department responsible for ethical management in investigations of cases with potential violations of the code of ethics.
- We never engage in retaliatory actions against whistleblowers or participants in investigations of ethical violations.
- We understand that if we violate the code of ethics, request others to violate the code of ethics, do not cooperate in the reporting and investigation of ethical violations, or engage in retaliatory actions against whistleblowers or participants in investigations, we may face corresponding disciplinary action. We understand that the zero tolerance principle applies specifically to the four major unethical behaviors: bribery, embezzlement, information manipulation, and sexual ethics violations.

Ethical Principles

1. Roles and responsibilities of all employees

- We comply with relevant laws and company regulations and guidelines anywhere in the world where POSCO conducts business.
- We endeavor to maintain our dignity as employees and protect our corporate reputation.
- We make our best efforts to establish an ethical culture by taking responsibility for practicing ethical behavior.
- We report to or consult an authority figure or the department in charge of ethical management¹⁾ immediately upon becoming aware of the fact that a situation faced or an action performed by us or another person violates or is likely to violate the Code of Ethics.
- We fully cooperate with investigations conducted by the department in charge of ethical management regarding matters that are likely to violate the Code of Ethics.
- We do not retaliate against informants or individuals who participate in an investigation in relation to Code of Ethics violations.
- We are aware of the fact that by violating the Code of Ethics, soliciting another person to violate the Code of Ethics, failing to report a Code of Ethics violation or cooperate with an investigation, or taking retaliatory action against an informant or individual participating in an investigation, we may become subject to disciplinary action as appropriate. In particular, we are aware that there is zero tolerance for the four major ethical violations²⁾: acceptance of bribery, misappropriation, fabrication of information, and sexual misconduct.

¹⁾ In accordance with guidelines on roles and responsibilities

²⁾ Acceptance of bribery: Accepting money or goods beyond a socially acceptable amount from a stakeholder

Misappropriation: Taking unlawful possession of company funds or assets

Fabrication of information: Falsifying, concealing, or distributing business-related information in a manner that contradicts the truth

Sexual misconduct: Conduct that causes distress through sexual harassment or sexual assault

2. Special responsibilities of executives and authority figures

- When the company's profits and ethics are in conflict, you have a duty to prioritize ethics in your operational and administrative decision making.
- You must exemplify ethical conduct in your work and fulfill your duty as an internal and external role model.
- You must train and guide staff members to understand the provisions of the Code of Ethics and Practice Guidelines and the importance of compliance.

- You must routinely examine your teams for ethical misconduct and proactively prevent unethical behavior that is likely to occur by identifying the causes, improving processes, and taking other measures.
- You must foster an organizational atmosphere that promotes and supports ethically correct behavior where staff members can speak up without worrying about adverse action.
- You must report to or consult the department in charge of ethical management immediately upon becoming aware of the fact that a staff member has violated the Code of Ethics.
- You have unlimited liability for any ethical misconduct you have engaged in, and supervisory liability for the ethical misconduct of a subordinate employee.

Ethics Charter

POSCO Group aspires to become a trusted and respected enterprise by deeply understanding that ethical management is the greatest value we must uphold in order to co-exist and co-prosper with our many stakeholders as a member of society.

Members of the POSCO family¹⁾ must comply with laws and ethics based on the ethical management philosophy of “doing the right thing in the right way,” while also seeking to achieve Integrity, Respect, and Mutual Empathy and establishing an ethical corporate culture in business activities that cover all the basics and comply with the rules.

At the employee level, we must pursue individual growth and company success by achieving a work-life balance, and create a positive work environment by establishing a corporate culture of mutual respect. We must fulfill our duty to respect everyone as human beings and to respect the human rights universally pursued by human society.

For our customers, we must understand that our future depends on customer trust and success. We must respect the customer voice at all times and create value that promotes customer prosperity.

For our shareholders, we must enhance shareholder value by making fair profits through transparent decision making and efficient business activity.

With our business partners, we must establish a fair trading system based on mutual trust and strengthen our corporate ecosystem in which we co-exist with our business partners through mutual growth.

At the community level, we must contribute to the development of society by fulfilling our duties and obligations. We must be deeply aware of the importance of environmental issues and do our best to protect the environment in all of our business activities.

POSCO family members must always be aware of the fact that our actions are directly linked to our self-respect as well as corporate value and reputation. We pledge to comply with the Code of Conduct and to ensure that ethics and integrity are at the heart of our culture and business operations.

July 2024

¹⁾ All employees of POSCO and its subsidiaries

Code of Conduct

1. Compliance with basic ethics and relevant laws

We do not seek personal gain.

- We do not put work-related pressure, issue instructions, or solicit favors that conflict with company interests in order to seek personal gain or undue gain for another person.
- All company funds and assets must only be used for work-related purposes and cannot be used to promote personal interests in any manner.
- We respect the political rights and preferences of individuals while maintaining the political neutrality of the workplace. We do not use company funds, personnel, facilities, etc. for political purposes.

We protect company information and assets.

- We understand the importance of the company's confidential information and intellectual property and keep them well protected.
- We do not distort information or distribute false information.

We practice fair competition and trading.

- We establish fair and transparent trading procedures in accordance with international standards and national fair trade laws. To maintain a fair trading system, we comply with domestic and foreign anti-corruption laws and standards including the UN Convention Against Corruption, the FCPA, the Act on Combating Bribery of Foreign Public Officials in International Business Transactions, and the Improper Solicitation and Graft Act.
- We do not force business partners or suppliers to agree to unreasonable working conditions or engage in disadvantageous activities.

2. Developing a culture of trust and human respect

We foster a wholesome organizational culture.

- We pursue both personal growth and company success by achieving a work-life balance.
- Employees create an organizational atmosphere of mutual cooperation through open communication based on trust.

We provide equal opportunities.

- We provide equal employment opportunities to all individuals with the required skills and qualifications.
- We provide equal opportunities for skill development and self-improvement. Individuals are remunerated in an appropriate manner based on fair evaluations of their skills and achievements.
- We foster a wholesome organizational atmosphere that celebrates employees who create meaningful outcomes regardless of their regional, academic, or other background.

We protect and respect human rights.

- We support the Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the UN Global Compact, the OECD Guidelines for Multinational Enterprises, and other internationally recognized human rights standards. We endeavor to avoid infringing human rights in the process of conducting business activities.
- We respect each employee as an individual. We do not engage in acts that may defame an employee or undermine human dignity such as verbal or physical abuse, bullying, and intimidation.
- We ensure proper working conditions by maintaining reasonable working hours and ensuring that no work is performed involuntarily by emotional or physical force.
- We do not discriminate against individuals on the grounds of ethnicity, nationality, gender, age, academic background, religion, regional background, disability, marital status, or sexual identity.

3. Realizing customer value**We commit to customer satisfaction.**

- We listen to and respect customer voice.
- We welcome our customer's valid requests and thoughtful suggestions, and prioritize to incorporate them to our business activities.

We create customer value.

- We fulfill customer needs and expectations by providing the best products through technological advancement.
- We respect our customer's culture and customs.

We build customer trust.

- Customer safety and well-being are given utmost consideration in our business activities. Products or services that may pose a threat to safety and health are not offered.
- We protect customer information and provide customers with accurate and timely information.

4. Good faith towards investors**We fulfill our obligations to investors.**

- We strive to increase corporate value and shareholder value at the same time by creating profit through transparent decision making and efficient business activities.
- We respect shareholder's fair suggestions and endeavor to build mutual trust.

We communicate transparently with investors.

- We provide key business information in a timely, fair, and faithful manner to facilitate investor decision making
- Our financial information is calculated through suitable processes and controls based on accurate transaction figures. All financial documents are prepared in accordance with "Generally Accepted Accounting Principles."

5. Co-prosperity with suppliers**We build mutual trust with suppliers.**

- We ensure fairness in our dealings with our suppliers through mutual respect and equal partnerships.
- Vendors are required to demonstrate a sense of responsibility before they are chosen as a supplier. We support our suppliers to maintain compliance with laws and regulations associated with workplace safety, employee human rights, and fair trade.

We pursue co-prosperity with suppliers.

- We seek mutual gains by sharing our outcomes with our suppliers.
- We support our suppliers to provide high quality products and services through effective communication and mutual cooperation.
- We aim to develop partnerships with our suppliers by providing fair opportunities and ensuring equitable terms of trade.

6. Social and environmental responsibility**We contribute to the development of the nation and society.**

- We strive to create and maintain stable jobs and to fulfill tax obligations.
- We actively participate in volunteering, disaster relief, and other activities to serve the community. We contribute to the sound development of society through our pro bono involvement in such fields as culture, arts, sports, and academia.
- We endeavor to build community trust in our company by providing support to improve the quality of life of local residents and strengthen the joys of life.

We commit to environmental protection and ecosystem conservation.

- We are deeply aware of the importance of environmental issues. We comply with domestic and foreign environment-related laws and strive to improve the environmental impact at all stages of the product life cycle including development, production, and use.

- We do our best to minimize pollutant emissions by introducing environmentally friendly production processes and by adopting the best available technologies to prevent environmental pollution.
- We endeavor to restore natural ecosystems and conserve biodiversity by making efficient use of natural resources and byproducts.

Practice Guidelines

Chapter 1. General Provisions

Article 1 (Purpose)

The purpose of these Practice Guidelines is to provide a frame of reference for making decisions and taking action in ethical dilemma situations that may arise during the course of work so that POSCO employees understand and apply the Code of Ethics correctly.

Article 2 (Scope)

These Guidelines apply to the Company and all employees.

Article 3 (Principle of Application)

Employees shall make decisions and take action based on the Code of Ethics and these Practice Guidelines when faced with an ethical dilemma situation in relation to work.

However, if a frame of reference is not clearly prescribed herein, employees shall make decisions and take action according to the following decision-making principles. Employees who are not confident in their judgment shall consult the leader of the organization or the department in charge of ethical management and act accordingly.

- Lawfulness: Is my action likely to be interpreted as a violation of the law, rules, regulations or company Codes?
- Transparency: Can I disclose my decision-making process and the relevant details?
- Rationality: Am I making the best possible choice for the company and individuals?

Chapter 2. The Code of Ethics in Practice

1. Restrictions on the provision and acceptance of valuables

- “Valuables” means money (cash, gift certificates, vouchers, etc.), goods, and other articles that may bring about financial gain.
- Valuables shall not be provided to or solicited or accepted from stakeholders¹⁾ for any reason.
However, exceptions shall be made in the following circumstances:
 - Marketing or promotional gifts valued at or less than KRW 50,000 or up to KRW 150,000 for agricultural, marine, and processed goods (including ornamental plants)
 - Memorabilia bearing the company logo of a stakeholder and memorabilia routinely offered to attendees at stakeholder-organized events, not exceeding KRW 50,000
- Employees shall not solicit or accept gifts from foreign entities during international business trips.
- Valuables that are unanticipated and accepted due to unavoidable circumstances shall be returned, or if this is impracticable, report to the department in charge of ethical management.
- Employees who earn income (e.g., lecture fees) from external speaking opportunities using his/her work-related knowledge or position at POSCO shall donate 50% of the earnings.

¹⁾ Stakeholder: Employees or clients, suppliers, enterprises, business partners, domestic or foreign public institutions, and international organizations (including affiliated employees) that may directly or indirectly affect or be affected by rights and interests in relation to one's duties

2. Principles and restrictions concerning hospitality

- “Hospitality” means various activities that facilitate business-related gatherings and interactions, such as meals, social drinks, golf, performances, and entertainment.
- Hospitality in excess of KRW 100,000 per person shall not be offered to or accepted from stakeholders. If it is necessary to offer or accept hospitality in excess of KRW 100,000 per person in relation to work, prior approval shall be obtained from the head of the department. Hospitality in excess of KRW 100,000 per person that has been offered or accepted due to unavoidable circumstances shall be reported to the department in charge of ethical management
- Food worth up to KRW 30,000 per person may be provided to public officials, journalists, teachers, and other persons subject to the Improper Solicitation and Graft Act to facilitate work execution or for social, ceremonial, or other legitimate purposes
- Hospitality at an entertainment and drinks venue that offers services of a sexual nature is prohibited regardless of cost.

3. Principles and restrictions concerning convenience

- “Convenience” means benefits such as transportation, accommodation facilities, sightseeing, event support, etc. provided by or to a stakeholder.
- The provision or acceptance of transportation, accommodation facilities, or other convenience beyond a generally acceptable level²⁾ is prohibited.
However, this shall not include conveniences routinely provided to all attendees at an event, etc
- A convenience in excess of the permitted range that has been offered or accepted due to unavoidable circumstances shall be reported to the department in charge of ethical management.

²⁾ “Generally acceptable level” means a level that satisfies the following requirements:

- ① The benefit is at an acceptable level based on reasonable common sense and social norms, is justifiable when disclosed, in no way affects the fair handling of affairs, and does not pose a burden on either party.
- ② The benefit is appropriate not only in terms of cost but also with respect to the location, purpose, method, count, frequency, timing, recipient, content, and social ethics and conventions (customs).
- ③ There is no reciprocity regardless of amount.
- ④ The benefit complies with the Improper Solicitation and Graft Act and other relevant domestic and foreign laws. In the event of a conflict in the interpretation of laws, the higher-order law shall take precedence.

© The generally acceptable level may vary depending on factors such as the exact circumstances, nature of the work, and job position.

4. Principles and restrictions concerning congratulatory and condolence money

- Employees shall not notify stakeholders of their own family events or those of their colleagues. Informing a stakeholder through a third party shall be construed as a notification made by the employee concerned.
- However, employees may inform each other of their family events. Use of the Company's congratulations and condolences channel is advised. For the purpose of family event announcements, the scope of relatives shall be limited to immediate family members, namely the parents (or grandparents if the parents are already deceased) and children of employees and their spouses. Congratulations and condolence money between employees shall be at a generally acceptable level.
- The maximum limit for congratulations or condolence money paid to an external stakeholder shall be KRW 100,000, including floral wreaths or arrangements. However, congratulations or condolence money paid to a person subject to the Improper Solicitation and Graft Act shall not exceed KRW 50,000, excluding floral wreaths or arrangements.
- Congratulations and condolence money from external stakeholders shall not be accepted under any circumstance. Congratulations or condolence money that has been accepted due to unavoidable circumstances shall be returned or donated to the department in charge of ethical management.
- Employees shall submit the relevant information, such as proof of return of congratulations or condolence money accepted from a stakeholder, when requested by the department in charge of ethical management.
- Condolence flowers from stakeholders shall not be accepted, and those that are accepted due to unavoidable circumstances shall not be displayed.

5. Restrictions concerning solicitations and recommendations

- Employees shall not make solicitations or recommendations through an internal acquaintance or an external party regarding the following. If an employee has received a solicitation or recommendation, he/she shall register it in the "Clean POSCO System."
 - Requests for preferential treatment regarding various contracts, such as equipment/materials purchases
 - Requests for favorable and preferential treatment regarding personnel decisions such as hiring, promotions, rewards and punishments, and transfer of positions
 - Requests for excessive convenience, preferential treatment, etc. outside of usual procedures
 - Requests to neglect management and supervision tasks such as inspections and tests .
- Employees shall not unlawfully solicit favors directly or through a third party in relation to duties subject to the Improper Solicitation and Graft Act.

6. Restrictions concerning monetary transactions

- Employees shall not engage in cash loans, loan guarantees, name lending, or other monetary transactions with stakeholders.
- An employee who has engaged in a monetary transaction with a stakeholder due to a personal connection shall report it to the department in charge of ethical management.

7. Restrictions concerning event sponsorship

- Sponsorships from stakeholders shall not be accepted for events funded by the Company, such as department events or club activities.
- The acceptance of vehicles, venues, services, or other conveniences required for an event shall be construed as acceptance of sponsorships.
- A sponsorship that has been accepted due to unavoidable circumstances shall be reported to the department in charge of ethical management.

8. Principles concerning the use and protection of Company assets

- The Company's budget resources, such as meeting expenses and operating expenses, shall be used as intended by the budget and in accordance with legal requirements, and shall not be used for personal purposes.
- As a general rule, business expenses shall be paid with a Company card.
- In addition to the budget, all tangible and intangible assets, including Company supplies and facilities, shall be used for work-related purposes only. Ongoing efforts shall be made to protect assets by periodically reviewing asset classification and protection measures.
- Employee information (telephone numbers, email addresses, etc.) is also considered Company assets and shall not be used for personal purposes.

9. Principles concerning information protection

- Important or confidential Company information shall be strictly protected and controlled.
- Important information shall be relayed to the intended recipient immediately upon recognition.
- The falsification, concealment, or distortion of work-related information or the reporting or distribution of incorrect information shall be regarded as fabrication of information.
- Employees shall manage internal Company information acquired during the course of work according to the security level, and shall not use the information for personal purposes.

10. Fair trade regulations and building mutual trust with suppliers

- Employees shall comply with international standards and national laws and regulations concerning fair trade to ensure fair competition in domestic and international markets and refrain from engaging in unfair trade practices such as colluding with competitors regarding production, prices, bidding and market segmentation.
- Employees shall fulfill their social responsibility by refraining from using a position of power against a client or supplier to make demands or unlawful requests.
- Employees shall respect the rights and property of others, including intellectual property rights, and shall not infringe upon them to create business or generate profit.
- The information acquired from a supplier shall be strictly protected as stipulated in relevant laws and regulations and contract terms.
- Employees shall support suppliers to comply with laws and regulations concerning fair trade and ESG.

11. Principles concerning the prevention of conflicts of interest

- "Conflict of interest" means a situation where a personal relationship with an employee of a supplier has an improper influence on an employee's work performance.
- Employees shall not engage in unfair trade practices such as signing unlawful private contracts, making high-price purchases, tunneling work, or leaking trade information to give preferential treatment to a certain individual or corporation.

- Employees shall prevent conflicts of interest by strictly denying improper requests from a supplier's employee with whom there is a personal connection, including former employees.
- Employees shall not make unofficial contact with a supplier's employee with whom there is a personal connection, and shall report any unintentional contact to the head of the department or the department in charge of ethical management.
- Employees shall not attend gatherings of former employees without the Company's approval.
- Where an employee has a personal connection to a supplier's employee, he/ she shall consult the head of the department or ethics officer and adjust his/her duties, etc. accordingly.
- When the head of the department recognizes a work-related conflict of interest involving himself/herself or a staff member, he/she shall adjust the relevant duties or otherwise take action to avoid the conflict of interest. If it is impracticable to avoid the conflict of interest due to the nature of the work, he/she shall consult the department in charge of ethical management.
- Retired employees shall also prevent conflicts of interest with POSCO and its business entities.

12. Developing an organizational culture of human respect

- Employees shall not engage in verbal, physical, or visual behavior that may offend others, such as the use of profanities, verbal abuse, physical abuse, or sexual harassment that violates the human rights of an individual.
- Violations of human respect may be subject to disciplinary action in accordance with the relevant regulations.
- Employees shall respect each other's privacy and shall not slander or undermine others or disclose personal information.
- Employees shall comply with national labor laws and international standards, including working conditions for minors and minimum working age requirements.
- Safety rules shall be strictly observed, and any risks identified shall be addressed appropriately.

Chapter 3. Reporting Unethical Conduct and Rewards and Sanctions

1. Reporting obligations and confidentiality

- Employees who recognize the fact that he/she or someone else has violated the Code of Ethics or these Guidelines shall actively protect the Company and employees from unethical practices by reporting to or consulting the head of the department or the department in charge of ethical management as quickly and conveniently as possible. However, violations of human respect shall be reported to the department in charge of ethical management without delay.
- Executives and department heads shall report to and consult the department in charge of ethical management immediately upon being informed of a violation of the Code of Ethics by a staff member, and shall not downplay or conceal the incident.
- The department in charge of ethical management may conduct a fact check of the reported incident if necessary, and the employees concerned shall actively cooperate.
- Employees shall not take adverse action against, or disclose the identity of, an informant or whistleblower.
- Where it is likely that an informant or whistleblower may be subject to adverse action in terms of employment, a change of position or other personnel measures shall be taken if so desired by the informant.
- If an employee becomes aware of the fact that an incident has been reported, either by chance or during the course of work, he/she shall keep it confidential or face disciplinary action.

2. Rewards and sanctions (disciplinary action)

- The Company may award part of the clawback resulting from an ethical misconduct investigation to the informant as compensation in accordance with the relevant regulations.
- The compensation criteria shall be in accordance with the guidelines on compensation and indemnity for informants of ethical misconduct and other relevant regulations.
- The Company shall firmly reprimand employees who violate the Code of Ethics and Practice Guidelines in accordance with the relevant regulations.
- The Company may restrict Company access and business to employees who have been dismissed after violating the Code of Ethics.

3. Reporting of violations and protection of informants

- Employees who become aware of a violation of the Code of Ethics or these Practice Guidelines shall actively protect the Company and employees from the violation by reporting it to the head of the organization or department or the department in charge of ethical management for timely resolution.
- Employees are not subject to any disadvantage for legitimate reporting.
- The counseling and reporting channels are as follows.
 - ※ Unethical counseling and reporting channels
 - Phone(only in Korean): 080 – 577 – 6262 (Ethical Dilemma Consultation)
 - 080 – 390 – 3366 (Non-ethics Reporting Center)
 - Online: POSCO Homepage > Contact Us >> Ethics dilemma counseling / Unethical reporting center
 - E-mail : ethics@posco.com
 - ※ Consultation and reporting channels for violations of respect for human beings
 - Phone(only in Korean) : 080 – 390 – 8585
 - Online: Home page > Contact Us >> Consultation and reporting on bullying and sexual harassment in the workplace
 - E-mail : humanrights@posco.com

Anti-Corruption Compliance Guidelines

Chapter 1 General Provisions

Article 1 Purpose

POSCO is committed to adhering to the highest global legal and ethical standards in conducting business worldwide. The purpose of the POSCO Anti-Corruption Compliance Guidelines is to ensure that POSCO employees, as well as POSCO’s group companies, agents, and business partners, comply with global anti-corruption laws and standards.

Chapter 2 Business Procedures

Article 2 Global Anti-Corruption Compliance

POSCO employees are responsible for complying with all global anti-corruption laws and standards. Major global anti-corruption laws and standards include the US FCPA (Foreign Corrupt Practices Act), the UK Bribery Act, the OECD Anti-Bribery Convention, and the UN Global Compact. The FCPA prohibits US stock exchange-listed companies from bribing foreign officials and establishes requirements for accurate bookkeeping, management, and internal controls related to accounting. The UK Bribery Act prohibits UK companies and companies doing business in the UK from bribing foreign officials and business partners. The OECD Anti-Bribery Convention is the first international convention to criminalize the bribery of foreign officials. The Republic of Korea has enacted and implemented the “Act on Combating Bribery of Foreign Public Officials in International Business Transactions” to comply with this convention. The UN Global Compact sets forth guidelines for corporate responses to all forms of corruption, including bribery.

POSCO employees must comply with global anti-corruption laws and standards, as well as local anti-corruption laws in the regions where they conduct business. In the Republic of Korea, these include the Criminal Act, the Act on the Aggravated Punishment of Specific Crimes, the Act on the Aggravated Punishment of Specific Economic Crimes, and the Improper Solicitation and Graft Act. Even if an action is taken based on social or business practices, it cannot be exempt from liability if it violates global anti-corruption laws, standards, or local laws. In the event of a conflict between global anti-corruption laws, standards, local laws, and POSCO’s anti-corruption compliance guidelines, the strictest standards will be followed.

Anti-corruption Compliance Guidelines

Chapter I. General Provisions

Article 1. Objective

POSCO seeks to observe the highest legal and ethical standards in conducting business in all areas around the world. The objective of these Anti-corruption Compliance Guidelines is to ensure that global anti-corruption laws and standards are being complied with by not only POSCO employees, but also POSCO Group companies, agents, and counterparties.

Chapter II. Procedures

Article 2. Global Anti-Corruption Standards

POSCO employees shall observe legal and ethical standards regarding global anti-corruption set out in the Foreign Corrupt Practices Act of 1977 (FCPA) (United States), the Bribery Act of 2010 (United Kingdom), the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Convention) and the UN Global Compact. The FCPA prohibits any company, US or non-US, listed on a national securities exchange in the United States from giving bribes to any non-US foreign government officials and requires the bookkeeping of accurate records and implementation of adequate internal controls. Considering that POSCO is listed on the New York Stock Exchange (NYSE), it must abide by the FCPA.

The Bribery Act prohibits UK companies and any non-UK entities doing business in the UK from giving bribes to any non-UK, foreign civil servants and business partners outside the UK. The OECD AntiBribery Convention is the first international convention to criminalize bribery to foreign government officials. In Korea, the Act on Combating Bribery of Foreign Public Officials in International Business Transactions was enacted and implemented to execute the OECD Convention. The UN Global Compact regulates all forms of corruption of corporate entities.

POSCO employees not only shall observe the global anti-corruption laws and standards but also the local anti-corruption laws and regulations of the countries where they do business. For instance, in the Korea, some of the local laws and regulations include the Criminal Code, the Act on the Aggravated Punishment of Specific Crimes, the Act on the Aggravated Punishment of Specific Economic Crimes, and Anti-Graft Act, among others. An act committed as a social or business customary practice, if in violation of the global anti-corruption laws and standards or local laws, will not be exempt. On the other hand, if there is a conflict or inconsistency between the global anti-corruption laws, standards, local laws and the Anti-Corruption Compliance Guidelines, the strictest standards shall prevail.

Article 3. Prohibition and Restrictions on Hospitality and Convenience

General principles	<p>No POSCO employees shall provide or receive anything of value as convenience to or from any stakeholder, including foreign or local government officials, counterparts, with the intention of wrongdoing to obtain or retain any business benefits. In this regard, 'anything of value' shall include, but is not limited to:</p> <ul style="list-style-type: none"> • Securities, real estate, meals, gifts, golf • Expenses of transportation, accommodation, etc. • Any rights to use or receive discounts on products or services • Any political contributions • Any transfer or exemption of liabilities, employment, privileges, or any other tangible or intangible economic benefits PROVIDED, HOWEVER, THAT it may be permitted to provide or receive a generally accepted hospitality or convenience if it is necessary to conduct the ordinary business for sales promotion, execution of a contract or promotion of mutual business understandings, etc., when the following conditions are met: • The level of business hospitality and convenience is reasonable and legitimate. • The business hospitality and convenience should not be offered frequently within a given time period. • Relevant expenditure details shall be accurately reflected in the Company's books and must comply with the Company's internal regulations in relation to other procedures.
Meals, gifts, etc	<p>When POSCO employees provide any meal or gift to a stakeholder as a gesture of goodwill or courtesy or to promote social relationship, they must comply with the following:</p> <ul style="list-style-type: none"> • The meal or gift is provided only at necessary points of time with a clear cause and is not provided frequently within a given time period. • Matters concerning business hospitality, including meals, shall be subject to the Company's Code of Ethics, and in the case of public officials who are subject to Anti-Graft Act, relevant laws must be followed.
Convenience	<p>Whenever POSCO employees provide any convenience to a stakeholder, they must comply with the following.</p> <ul style="list-style-type: none"> • Employees shall not provide or receive convenience such as transportation, accommodation, etc. beyond a generally accepted level, except where a convenience is provided generally and equally to all attendees of an event. • The convenience shall be of a reasonable level and shall be directly or indirectly related to sales promotion, demonstration or explanation, execution of a contract or performance of obligations thereunder, etc. • The convenience shall not provided to anyone other than the stakeholders themselves (friends, etc.) • Any costs incurred by the convenience should not paid to the stakeholders, but should be paid directly to the service providers, such as airlines and hotels.

Article 4. Prohibition and Restrictions on Express Fee

No POSCO officer and employee shall make any express fee to any domestic and foreign government officials to gain favor. Express fees are a relatively small amount, and is provided or intended to be provided to a government official who is involved in daily routine work, in order to expedite a legitimate business decision or other transaction, which may include:

- Receipt and processing administrative documents, such as visa issuance
- Customs clearance, and loading or unloading of products related to logistics, etc.
- Opening a telephone line or providing supply of electricity or water

Article 5. Agents and Joint Ventures

Agents	<p>An agent is a person who handles matters such as contract awarding, customs clearance, license approval, and tax affairs on behalf of a company. Global anti-corruption laws and standards such as the FCPA, prohibit an agent from making any payment of money or providing any valuables to a stakeholder, including foreign or local government officials, and counterparties on behalf of the company with a fraudulent intent. Therefore, while working with an agent, one should exercise their duties and responsibilities in a manner that ensures that there is no violation of any global anti-corruption laws and standards. Before signing a contract with an agent, the following should be considered: if any of the following applies, the final decision on whether to sign a contract with the agent shall be made based via Agent Contract Checklist.</p> <ul style="list-style-type: none"> • Whether an agent has a past or present record of improper business practices (e.g., actual or alleged incidence of giving or receiving bribery or other corrupt practices) • Whether an agent is related to a former and current public official (e.g., recommendation of an agent by a public official, stake-holding by a public official) • Whether an agent requests an unusual or complicated method of payment (e.g., advance payment, third party payment) • Whether information provided by the agent is incomplete or inaccurate <p>When entering into a contract with an agent, the following must be expressed in the contract:</p> <ul style="list-style-type: none"> • Agent's roles and responsibilities in complying with the global anti-corruption laws and standards • Criteria for computing the agent's remuneration and method of payment • Right of the Company to terminate a contract with the agent in the event that the agent violates global anti-corruption laws and standards • Right of the Company to conduct an investigation where there is a reasonable concern that the agent may violate the global anti-corruption laws and standards. After executing a contract with an agent, POSCO employees will manage that the agent complies with the global anti-corruption laws and standards, and upon finding of a violation, shall report immediately to the Corporate Audit Office, so that the Company can take any appropriate measures, such as rectifying the violation or terminating the contract with the agent. On the other hand, whenever there is any question or concern with regard to the violation of global anti-corruption laws and standards in an agency contract, please contact the Corporate Audit Office.
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Joint ventures	Under the global anti-corruption laws and standards, such as the FCPA, joint venture companies or joint venture partners are prohibited from making any payment of money or providing anything of value with fraudulent intentions to any stakeholders, including but not limited to, domestic/foreign government officials and counterparties, and hence, the laws and regulations applicable to agents also apply to joint venture businesses.
Miscellaneous	The Anti-Corruption Compliance Guidelines that apply to agents may be used vis-à-vis counterparties, including, but not limited to suppliers and customers, mutatis mutandis based on mutual understanding.

Article 6. Accounting Records and Management

Global anti-corruption laws and standards strictly stipulate that it is necessary to keep a system of accounting controls to record and monitor all business transactions in order to ensure that they are accurately recorded.

Therefore, POSCO employees shall keep and properly account for invoices, receipts, and other related payment documents that arise from the business, and any possession of expenditures or assets which is not listed in the books of the Company is strictly prohibited. In addition to maintaining the books and records, all businesses must be carried out as per the following via the Company's internal accounting management system:

- All transactional expenses and costs shall be executed only after approval by a person with proper authority.
- All transactions shall be recorded as per the accounting standards and approved from a person with proper authority.
- The Company's assets shall be utilized only upon approval from a person with proper authority.
- A due diligence on the Company's assets will be conducted periodically.

Article 7. Anti-Corruption Compliance Training

POSCO employees shall implement and attend anti-corruption compliance training sessions under the guidance of the Corporate Audit Office, and submit records of attendance to the Corporate Audit Office.

Article 8. Whistleblowing and Protection for Whistleblowers

POSCO employees shall report to the Corporate Audit Office when they learn or have a reason to believe that any violation of the global anti-corruption laws and standards or the Anti-Corruption Compliance Guidelines has occurred.

The Company shall fully protect whistleblowers who report any violation of global anti-corruption laws and standards or the Anti-Corruption Compliance Guidelines to the Corporate Audit Office, and strictly prohibit disclosure of the whistleblower's identity, and retaliation against or search for the whistleblower, and shall not subject the whistleblower to any type of disadvantages, such as in relation to the whistleblower's employment relationships with POSCO.

Article 9. Reward and Punishment

POSCO may reward its employees who have contributed to achieving the objectives of the AntiCorruption Compliance Guidelines as per the relevant regulations of reward and punishment. POSCO may take disciplinary actions against its employees who violate the global anti-corruption laws and standards and the Anti-Corruption Compliance Guidelines as per the rules of employment and the rules of reward and punishment, and such disciplinary actions may include dismissal, suspension, salary reduction, reprimand, etc.

On the other hand, POSCO will not be responsible for any fine or cost, etc. if a civil or criminal penalty is imposed on its employees for violation of the global anti-corruption laws and standards.

Information Security

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Information Security

Policy

Information Security

Protection of Core Technologies

POSCO, which possesses seven national core technologies, undergoes annual security management inspections by government agencies, continuously improving its security level. Additionally, POSCO identifies key assets such as personnel, documents, facilities, and systems, and applies tailored protection measures for each asset.

Steel Value Chain Information Security

POSCO conducts various support activities for domestic business companies, overseas subsidiaries, and major partners with whom it shares information. These activities include annual information security level assessments, security consulting, and employee security training, aimed at strengthening the overall security of the steel value chain.

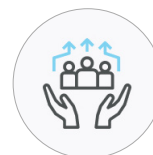
Information Security Support Activities



Support for Comprehensive Security
and Operational System Assessments



Inspection of Security System Operations
and Penetration Testing Support



Support for Improving Security Management
Capabilities and Fostering Security Experts

Prevention and Response to Cyber Security Incidents

The group integrated security control center, which operates 24/7 year-round, continuously collects and analyzes domestic and international hacking trends through an advanced monitoring system. It identifies, blocks, and mitigates potential cyber threats. To prepare for external cyber attacks.

POSCO conducts security risk assessments at each stage from system design to operation. Utilizing internal security specialists and external professional agencies, POSCO regularly performs penetration testing and other system penetration tests on main websites and business systems to identify and improve vulnerabilities.

I Threat Detection and Response Process

1 LEVEL	Detection	- Detect threats using the integrated security control system and collected internal and external information
2 LEVEL	Analysis	- Assess whether it is an attack and determine the extent of the damage - Take preliminary action if necessary
3 LEVEL	Dissemination	- Notify specific departments and the entire company, and request follow-up actions based on the analysis results
4 LEVEL	Response	- Prevent the spread of the incident and take follow-up measures - Analyze the cause and integrate findings into future policy improvements

POSCO has adopted the standards of the Korea Internet & Security Agency to establish a five-level internal threat alert system and has developed a 'Cyber Crisis Response Manual.' This manual outlines the response procedures and roles of related departments for each type of threat, ensuring immediate response to cyber security incidents and preventing the spread of damage.

I POSCO Internal Threat Alert Levels

1 LEVEL	Normal	General security threat situation with no impact on internal and external systems
2 LEVEL	Attention	Increased potential for internal threats due to external security issues
3 LEVEL	Caution	Situation that partially affects specific services and operations but can be resolved with appropriate actions
4 LEVEL	Alert	Situation that affects specific services and operations, with actions being delayed
5 LEVEL	Severe	Situation that severely affects critical services and operations, with persistent risks present

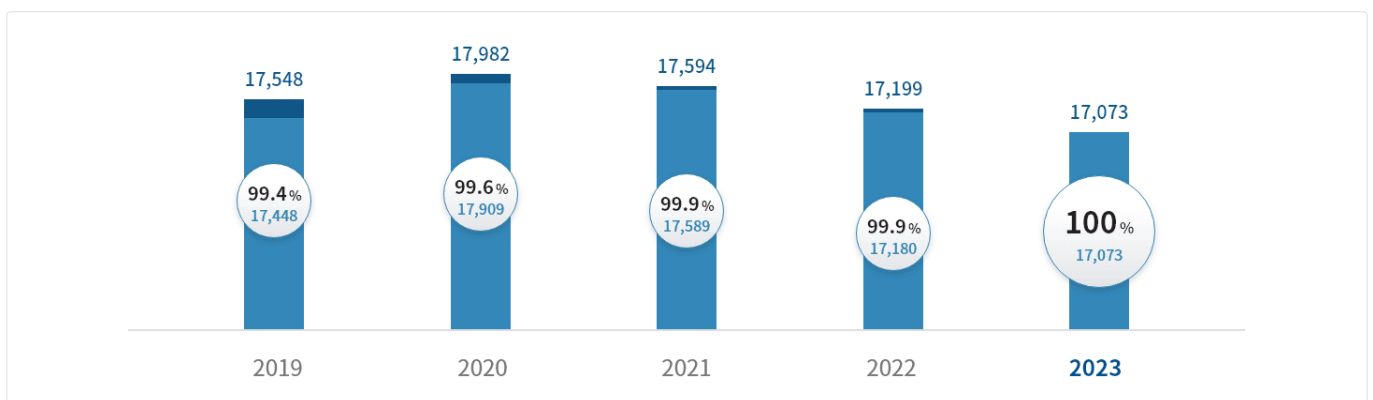
Strengthening Employees' Information Security Awareness

To enhance employees' security awareness, POSCO periodically conducts information security campaigns, training, and inspection activities, encouraging employees to internalize security in their daily work. All employees are required to complete mandatory information security e-learning courses annually. New employees, newly appointed executives and managers, and personnel involved with national core technologies receive role-specific differentiated information security training.

Additionally, POSCO operates an Information Security Reporting Center, enabling employees to report signs of hacking incidents, information leaks, and security vulnerabilities, as well as propose ideas for enhancing security. In 2023, a total of 30 reports were received and processed. Employees who contribute to information security activities, such as making security reports, receive appropriate rewards, while those found to have committed security violations face disciplinary action according to company regulations.

I Information Security e-Learning Training Performance

● Enrollment ● Completion | (Unit: people, %)



Information Security

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Information Security

Policy

Policy

Information Security Policy

Information Security Principles

POSCO adheres to international information security standards and relevant laws both domestically and internationally. We strive to protect our information assets, including core technologies and personnel, which are the sources of our competitiveness, to secure and maintain global competitiveness. To this end, we have established fair and reasonable policies and standards for information security. All employees are committed to internalizing information security practices to ensure effective implementation and maintain the highest level of information security. To ensure effective implementation, we have set five strategic directions to guide the operation of our information security management system.

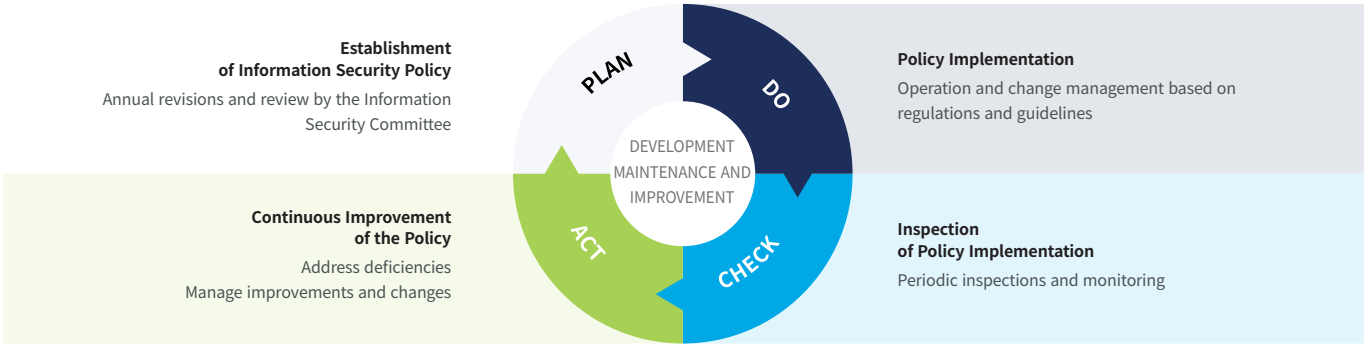
- POSCO recognizes information security as an integral part of its business activities and has established an information security management system to promptly respond to changes in the business environment.
- POSCO employees understand their responsibility for information security and continuously participate in training and education to enhance their expertise and improve the overall level of information security.
- POSCO employees integrate information security into their daily routines and embed information security activities as a fundamental part of the corporate culture.
- POSCO establishes a systematic information security organization with clearly defined roles and responsibilities.
- POSCO identifies security vulnerabilities and continuously manages them through established procedures.

Information Security Policy Operating Framework

POSCO, based on its information security principles, has established information security regulations and personal information protection regulations. The company has implemented an information security system that includes 12 detailed guidelines, such as document management guidelines and drawing management guidelines. These regulations and guidelines are revised annually, taking into account the latest laws, systems, and internal and external environments. The revisions are reviewed by the company-wide Information Security Committee and approved by top management. All employees can access these documents through the standard document management system.

Additionally, revisions are posted on the company portal system (EP) to ensure easy access for employees. The information security policy framework consists of four levels: principles, regulations, guidelines, and operational procedures. The information security regulations outline the operational standards for various information security activities, including policy, organization, change management, and security incident response, as well as specific areas like asset protection, personnel security, and document security. Moreover, sector-specific information security policies are established as subordinate guidelines under the information security regulations and are operated under the supervision of their respective implementing departments. POSCO has developed and implemented detailed standards for security management measures that cover the entire lifecycle of critical information, including documents, drawings, and system data. Additionally, through the personal information protection regulations, POSCO clearly defines the administrative and technical measures for protecting the personal information of customers and employees. Consent forms for the collection and use of personal information, as well as for third-party provision, are obtained from employees and customers to secure stakeholder consent. This effectively controls access to critical information and prevents unauthorized disclosure.

Since obtaining the international information security standard ISO 27001 certification in 2021, POSCO has maintained a global level information security management system through continuous follow-up audits. Additionally, POSCO conducts security consulting activities to enhance the security levels of its overseas subsidiaries, business companies, and partners, contributing to the security reinforcement and shared growth of the entire value chain, including customers and suppliers. Through these efforts, POSCO minimizes security-related risks and protects information assets by complying with regulatory requirements and relevant laws, thereby ensuring reliability and security.



Information Security Committee

POSCO appoints Information Security Officers and Personal Information Protection Officers who possess expertise. The Information Security Committee, overseeing information security and cybersecurity strategies, is chaired by the executive in charge of information security and meets annually. During these meetings, the company’s major information security activities are shared, and discussions are held on strategies, implementation directions, and policies. This approach allows POSCO to establish preventive and responsive measures for security threats and ensures prompt and proactive responses to security incidents.

Chairperson	• Executive in charge of information security
Members	• Regional information security department heads, heads of departments responsible for operating regulations/guidelines, individuals appointed by the chairperson
Secretary	• Head of the company-wide information security department
Functions	• Review company-wide information security strategies and implementation plans • Review the establishment, revision, and abolition of information security regulations and guidelines • Discuss matters deemed important by the chairperson

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Domestic Worksites

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E (Environmental)

GHG Emissions

GHG Emissions	Unit	2021	2022	2023
Direct/indirect emissions (Scope 1&2)¹⁾	tCO ₂ e	78,490,212	70,185,623	71,971,900
Direct emissions (Scope1)	tCO ₂ e	77,101,095	68,305,993	70,588,012
Indirect emissions (Scope2)	tCO ₂ e	1,389,117	1,879,630	1,383,895
Direct/indirect emissions intensity (based on crude steel production, Scope 1&2)	tCO ₂ e/ton	2.05	2.05	2.02
Other indirect emissions (Scope 3)²⁾	tCO ₂ e	12,872,905	7,107,502	7,419,787
Other indirect emissions (Scope 3, upstream)	tCO ₂ e	5,038,027	4,570,474	5,229,508
Purchased goods & services ¹⁾	tCO ₂ e	3,422,572	2,583,823	2,764,127
Capital goods ²⁾	tCO ₂ e+	-	857	563
Fuel and energy-related activities not included in Scope 1&2 ³⁾	tCO ₂ e	-	298,540	334,942
Transportation of raw and subsidiary materials ⁴⁾	tCO ₂ e	1,605,907	1,537,143	1,926,052
Waste generated in operations ⁵⁾	tCO ₂ e	-	141,520	195,608
Business travel ⁶⁾	tCO ₂ e	174	346	486
Employee commuting ⁷⁾	tCO ₂ e	9,374	8,245	7,730
Other indirect emissions (Scope 3, downstream)	tCO ₂ e	7,834,878	2,537,028	2,190,279
Downstream transportation & distribution ⁸⁾	tCO ₂ e	-	489,786	26,936
Downstream leased assets ⁹⁾	tCO ₂ e	2,087,193	1,888,240	1,974,893
Downstream investments ¹⁰⁾	tCO ₂ e	5,747,685	159,002	188,450

¹⁾ The total of direct and indirect emissions is derived by truncating decimal points from each worksite's direct and indirect emissions (Scope 1 & 2), which may result in discrepancies

²⁾ The calculation boundaries for all categories are restricted to Pohang and Gwangyang Steelworks

¹⁾ This is limited to purchased raw materials that have the most direct impact on steel production among purchased products (including iron ore, coal, and limestone, which together account for over 90% of usage).

²⁾ Calculated based on assets acquired by POSCO in 2023, including steel mill equipment and vehicles

³⁾ Emissions are calculated using the carbon footprint from the energy used by the steelworks

⁴⁾ Emissions from transportation of certain sold products, based on the terms of delivery (cost of freight), have been reclassified (downstream → upstream)

⁵⁾ Calculated based on commissioned waste from worksites, utilizing data from the government's waste management system 'Allbaro Sys.'

⁶⁾ ⁷⁾ Calculated from the business travel and commuting data of employees at Pohang and Gwangyang Steelworks

⁹⁾ Calculated from the Scope 1 & 2 emissions of the lime calcination plant leased by POSCO FUTURE M among leased assets

¹⁰⁾ Increase compared to the previous year is due to the inclusion of emissions data from other investment companies

Energy

Energy ¹⁾	Unit	2021	2022	2023
Total energy consumed	GJ	380,052,800	333,781,599	354,002,733
Energy directly consumed	GJ	369,264,360	319,078,303	342,940,165
Natural gas	GJ	41,270,222	30,750,384	45,697,279
Renewable fuel	GJ	0	0	0
Kerosene	GJ	0	0	2,643
Gasoline (total)	GJ	4,587	6,249	5,569
Gasoline (for vehicles)	GJ	4,587	6,249	5,569
Diesel (total)	GJ	189,168	218,348	189,682
Diesel (for vehicles)	GJ	185,423	195,695	184,969
LPG (total)	GJ	34	30	0
LPG (for vehicles)	GJ	34	30	0
Off-gas	GJ	327,800,350	288,103,292	294,493,858
Propane	GJ	0	0	5,377
Other fuels	GJ	0	0	2,545,757
Energy indirectly consumed	GJ	10,788,169	14,703,073	11,058,453
Electricity	GJ	10,746,994	14,618,973	10,834,095
Steam	GJ	41,175	84,100	224,358
Percentage of electricity consumed	%	2.8	4.4	3.1
Renewable energy consumed ²⁾	GJ	270	223	4,116
Percentage of renewable energy consumed	%	0.00007	0.00007	0.00116
Total energy intensity (based on crude steel production)	GJ/ton	9.9	9.8	9.9
Electricity sold ³⁾	GJ	13,840	8,671	4,338

¹⁾ The energy consumption for 2021 and 2022 is limited to the Pohang/Gwangyang Steelworks, while the energy consumption for 2023 is on a company-wide basis. Total energy consumption includes K-ETS-based energy consumption and self-generated renewable energy consumption.

²⁾ For 2021 and 2022, renewable energy consumption is limited to self-generated renewable energy consumption. For 2023, renewable energy consumption includes certified renewable energy consumption (purchased renewable energy and self-generated renewable energy consumption).

³⁾ Applies only to renewable energy sales.

Water (Overall)

Water (Overall)	Unit	2021	2022	2023
Total water withdrawal	ton	143,218,271	145,115,608	153,645,403
Municipal water supply	ton	0	0	0
Surface water	ton	100,116,109	108,957,548	115,497,855
Groundwater	ton	6,298,260	3,451,420	4,154,290
Desalinated water	ton	7,390,041	3,608,003	5,044,618
Treated municipal wastewater	ton	29,413,861	29,098,637	28,948,640
Total water withdrawn from regions with 'High' baseline water stress	ton	0	0	79,009,396
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	0	0	0
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	0	0	51.42
Total water withdrawn intensity (based on crude steel production)	ton/ton	3.7	4.2	4.3
Total water consumed	ton	68,353,529	73,375,512	72,416,383
Total water withdrawn from regions with 'High' baseline water stress	ton	0	0	35,888,873
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	0	0	0
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	0	0	49.56
Total wastewater discharge	ton	74,864,742	71,740,096	81,229,020
Reused wastewater	ton	47,804,712	44,625,210	40,390,660
Percentage of reused wastewater¹⁾	%	25.0	23.5	20.8
Number of worksites using recycled water	Count	2	2	2
TOC (Total Organic Carbon)²⁾	ton	-	96	291
T-N	ton	948	685	671
SS	ton	169	135	137

¹⁾ Data adjustment for 2021 and 2022 due to formula change

²⁾ Measurements began in 2022, following the transition of the Ministry of Environment's metric for measuring organic substances in water pollutants to TOC. The 2022 performance data is limited to Gwangyang.

Water (Pohang)

Water (Pohang)	Unit	2021	2022	2023
Total water withdrawal	ton	-	-	69,591,389
Municipal water supply	ton	-	-	-
Surface water	ton	-	-	36,488,459
Groundwater	ton	-	-	4,154,290
Desalinated water	ton	-	-	-
Treated municipal wastewater	ton	-	-	28,948,640
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	-
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	-	-	-
Total water withdrawn intensity (based on crude steel production)	ton/ton	-	-	4.8
Total water consumed	ton	-	-	34,235,266
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	-
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	-	-	-
Reused wastewater	ton	-	-	19,516,566
Percentage of reused wastewater	%	-	-	21.9

Water (Gwangyang)

Water (Gwangyang)	Unit	2021	2022	2023
Total water withdrawal	ton	-	-	84,054,014
Municipal water supply	ton	-	-	-
Surface water	ton	-	-	79,009,396
Groundwater	ton	-	-	-
Desalinated water	ton	-	-	5,044,618
Treated municipal wastewater	ton	-	-	-
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	84,054,014
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	-	-	100
Total water withdrawn intensity (based on crude steel production)	ton/ton	-	-	4.0
Total water consumed	ton	-	-	38,181,117
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	35,888,873
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	-	-	94.0
Reused wastewater	ton	-	-	20,874,094
Percentage of reused wastewater	%	-	-	19.9

Waste

Waste	Unit	2021	2022	2023
Total waste generated	ton	21,806,614	19,116,670	19,523,945
Recycled	ton	21,509,991	18,787,137	19,242,974
Incinerated	ton	60,302	62,031	52,034
Landfilled	ton	236,196	267,470	228,633
Disposed in other ways	ton	125	32	304
General waste generated	ton	21,712,129	19,020,091	19,415,454
Recycled	ton	21,433,251	18,727,793	19,184,667
Incinerated	ton	49,900	45,485	43,342
Landfilled	ton	228,978	246,813	187,445
Disposed in other ways	ton	0	0	0
Designated waste generated	ton	94,485	96,579	108,491
Recycled	ton	76,740	59,344	58,307
Incinerated	ton	10,401	16,546	8,691
Landfilled	ton	7,219	20,657	41,188
Disposed in other ways	ton	125	32	304
Total waste generated intensity (based on crude steel production)	ton/ton	0.57	0.56	0.55
Percentage of total waste recycled	%	98.6	98.3	98.56

Resource recycling

Resource recycling	Unit	2021	2022	2023
Total Blast furnace slag recycled	ton	12,441,549	10,283,369	10,441,336
Granulated slag recycled	ton	11,454,700	9,422,994	8,902,915
For cement industry	ton	11,243,762	9,210,120	8,737,012
For other uses, including fertilizer	ton	210,938	212,874	165,903
Air-cooled slag recycled	ton	986,849	860,375	1,538,421

Air Pollutants

Air Pollutants	Unit	2021	2022	2023
Total emissions of air pollutants	ton	61,445	51,806	51,707
NOx	ton	35,755	27,877	27,796
SOx	ton	25,474	23,750	23,764
Dust	ton	216	180	147

Other Environmental Metrics

Other Environmental Metrics	Unit	2021	2022	2023
Number of environmental regulation violations	Case	12	9	12
Number of water quality-related regulation violations	Case	3	1	2
Number of administrative actions due to violations of environmental regulations and rules	Case	11	9	12
Administrative fines	Case	3	1	7
Non-monetary penalties (improvement orders, etc.)	Case	8	8	2
Number of wastewater-related incidents	Case	0	0	1
Percentage of zero-emission vehicles owned	%	12	21	16
Number of zero-emission vehicles owned	Count	71	156	121
Total number of vehicles owned	Count	590	751	757

Environmental and Energy Management System

Environmental and Energy Management System	Unit	2021	2022	2023
Environmental management system (ISO 14001) certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100
Energy management system (ISO 50001) certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100

S (Social)

Human Resources

Human Resources	Unit	2021	2022	2023
Total number of employees	Persons	18,259	18,122	17,985
Number of executives	Persons	86	67	67
By Gender				
Males	Persons	84	66	63
Females	Persons	2	1	4
Percentage of females	%	2.3	1.5	6.0
By Age				
Under 30 years old	Persons	0	0	0
30-50 years old	Persons	2	0	0
Over 50 years old	Persons	84	67	67
Number of employees excluding executives	Persons	18,173	18,055	17,918
By Gender				
Males	Persons	17,126	17,046	16,918
Females	Persons	1,047	1,009	1,000
Percentage of females	%	5.8	5.6	5.6
By Age				
Under 30 years old	Persons	2,921	3,035	3,241
30-50 years old	Persons	7,365	7,353	7,472
Over 50 years old	Persons	7,887	7,667	7,205
Number of management employees ¹⁾	Persons	4,030	4,068	4,041
By Gender				
Males	Persons	3,974	3,997	3,970
Females	Persons	56	71	71
Percentage of females	%	1.39	1.75	1.76
By Age				
Under 30 years old	Persons	0	1	2
30-50 years old	Persons	1,088	1,193	1,363
Over 50 years old	Persons	2,942	2,874	2,676
Number of regular employees (permanent)	Persons	17,559	17,107	16,926
By Gender				
Males	Persons	16,561	16,147	15,970
Females	Persons	998	960	956
Percentage of females	%	5.7	5.6	5.65
Percentage of regular employees (permanent)	%	96.2	94.4	94.1
Number of contingent employees (contractors)	Persons	685	1,007	1,052
By Gender				
Males	Persons	635	957	1,004
Females	Persons	50	50	48
Percentage of females	%	7.3	5.0	4.6
Percentage of contingent employees (contractors)	%	3.8	5.6	5.9
Total new hires	Persons	1,192	1,336	1,512
By Gender				
Males	Persons	1,114	1,276	1,467
Females	Persons	78	60	45
Percentage of females	%	6.5	4.5	3.0
By Age				
Under 30 years old	Persons	681	882	974
30-50 years old	Persons	78	103	119

Human Resources	Unit	2021	2022	2023
Over 50 years old	Persons	433	351	419
Total employee turnover	Persons	1,070	1,180	962
Turnover rate	%	5.6	6.5	5.3
Number of voluntary departures	Persons	359	568	424
Voluntary departure rate	%	2	3.1	2.3
Number of involuntary departures	Persons	711	612	538
Retirements at mandatory age	Persons	691	588	519
Layoffs	Persons	0	0	0
Other reasons for departure	Persons	20	24	19
Number of employees subjected to regular performance evaluations ²⁾	Persons	15,819	15,300	15,663
By Gender				
Males	Persons	14,952	14,464	14,795
Females	Persons	867	836	868
By employment type				
Non fixed-term employees (permanent)	Persons	15,663	15,137	15,492
Fixed-term employees (contract-based)	Persons	156	163	171
Number of employees with disabilities	Persons	588	565	580
Number of employed veterans	Persons	711	738	705

¹⁾ Data adjustment for 2021 and 2022 due to changes in internal management criteria.

²⁾ Data adjustment for 2021 and 2022 due to aggregation errors in some metric data.

Work-Life Balance

Work-life balance	Unit	2021	2022	2023
Number of employees using flexible work arrangements	Persons	4,935	5,316	8,185
Number of employees using infertility vacation	Persons	85	81	111
Parental leave				
Total parental leave-takers	Persons	106	152	260
Males	Persons	57	96	156
Females	Persons	49	56	104
Employees returning from parental leave	Persons	121	141	249
Males	Persons	46	79	149
Females	Persons	75	62	100

Training

Training	Unit	2021	2022	2023
Total training hours	Hours	1,332,271	1,769,947	1,808,072
Average training hours per person	Hours/Person	73	98	100.53
Total training cost	KRW million	26,954	22,938	31,934
Average training cost per person	KRW million/Person	1.48	1.27	1.78
Occupational safety training				
Number of employees who completed compulsory occupational safety training ¹⁾	Persons	-	73,964	82,366
Information security training				
Total training hours	Hours	31,953	24,338	14,228
Number of employees who completed compulsory information security training	Persons	17,589	17,180	17,073
Non fixed-term employees (permanent)	Persons	16,795	16,158	15,980
Fixed-term employees (contract-based)	Persons	794	1,022	1,093

¹⁾ Duplicate calculation of completers based on mandatory training completion criteria

Retirement Pension Plans

Retirement Pension Plans	Unit	2021	2022	2023
Defined Benefit (DB) Retirement Pension				
Current value of defined benefit liabilities	KRW million	1,330,938	1,193,500	1,259,340
Fair value of plan assets	KRW million	1,543,469	1,475,606	1,557,782
Recognition of net asset amount under defined benefit plans	KRW million	212,531	282,106	298,442

Labor-Management Relations

Labor-Management relations	Unit	2021	2022	2023
Percentage of employees under collective bargaining agreements	%	100	100	100
Number of strikes causing work stoppages	Count	0	0	0

Safety

Safety	Unit	2021	2022	2023
LTIR	Person/200,000 hours	0.10	0.19	0.07
Employee LTIR	Person/200,000 hours	0.10	0.11	0.03
Contractor LTIR	Person/200,000 hours	0.10	0.25	0.10
LTIFR	Person/1 million hours	0.51	0.93	0.35
Employee LTIFR	Person/1 million hours	0.52	0.56	0.17
Contractor LTIFR	Person/1 million hours	0.51	1.26	0.50
TRIR ¹⁾	Person/200,000 hours	-	0.35	0.34
Employee TRIR	Person/200,000 hours	-	0.27	0.35
Contractor TRIR	Person/200,000 hours	-	0.41	0.32
TRIFR ¹⁾	Person/1 million hours	-	1.73	1.67
Employee TRIFR	Person/1 million hours	-	1.37	1.76
Contractor TRIFR	Person/1 million hours	-	2.06	1.60
Accident rate	%	0.06	0.13	0.07
Employee accident rate	%	0.04	0.08	0.02
Contractor accident rate	%	0.09	0.19	0.13
Fatality rate	‰	0.29	0.30	0
Employee fatality rate	‰	0	0	0
Contractor fatality rate	‰	0.60	0.63	0
Employees				
Number of employee LTIs	Persons	19	20	6
Number of employee TRIs ¹⁾	Persons	-	49	62
Number of employee fatalities	Persons	0	0	0
Number of employees injured in accidents	Persons	7	14	4
Number of employee near-miss accidents	Cases	5,149	6,391	5,987
Contractors				
Number of Contractor LTIs	Persons	20	50	20
Number of Contractor TRIs ¹⁾	Persons	-	82	64
Number of Contractor fatalities	Persons	1	1	0
Number of Contractor employees injured in accidents	Persons	15	30	16
Number of Contractor near-miss accidents	Cases	362	289	1,909
Safety and Health Management System (ISO 45001/OHSAS 18001/KOSHA-MS) Certification				
Target worksites for certification	Count	2	2	2

Safety	Unit	2021	2022	2023
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100
Quality Management System (ISO 9001 or IATF 16949) Certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100

¹⁾ By identifying and addressing even minor incidents, preventive metrics have been introduced and managed to prevent major accidents (since 2022).

CSR Activity Achievements

CSR Activity Achievements	Unit	2021	2022	2023
Employee volunteering				
Hours volunteered	Hours	296,729	346,855	402,945
Number of volunteers	Persons	12,024	13,096	13,589
Volunteer hours per person	Hours/Person	16	19	21.8
Employee volunteering participation rate	%	67	73	73.6
CSR expenses				
Donations ¹⁾	KRW million	49,115	54,257	52,171
Investment in local communities	KRW million	38,891	47,970	47,129
Other	KRW million	9,323	5,306	4,788
	KRW million	901	982	254

¹⁾ CSR expenses in 2021, excluding expenses related to the GEM matching fund, has been revised from KRW 49.45 billion to KRW 49.11 billion.

Supply Chain Management

Supply Chain Management	Unit	2021	2022	2023
Supplier Relationship Management (SRM) assessments				
Total number of suppliers	Count	1,469	1,408	1,380
Number of assessed suppliers	Count	1,159	1,182	1,132
Percentage of assessed suppliers	%	78.9	83.9	82.02

G(Governance)

Production Information

Production Information	Unit	2021	2022	2023
Crude steel produced	kt	38,263	34,219	35,682
Blast furnace/converter	kt	36,907	33,255	34,625
Electric arc furnace	kt	1,356	964	1,057
Percentage from blast furnace/converter	%	96.5	97.2	97.03
Percentage from electric arc furnace	%	3.5	2.8	2.96
Main raw material consumed				
Iron ore	Mt	55.6	49.1	50.3
Metallurgical coal Mt	Mt	25.4	22.7	23.2
Limestone Mt	Mt	6.9	5.5	5.5

Fair Trade/Anti-Corruption

Fair Trade/Anti-Corruption	Unit	2021	2022	2023
Number of employees who completed fair trade training ¹⁾	Persons	3,136	3,783	3,836
Fair trade compliance				
Total number of instances for which fines were incurred for unfair competition and violation of the fair trade compliance	Cases	0	0	0
Number of ongoing cases	Cases	0	0	0
Number of resolved cases	Cases	0	0	0
Total number of instances for which non-monetary sanctions were incurred	Cases	0	0	0
Number of ongoing cases	Cases	0	0	0
Number of resolved cases	Cases	0	0	0
Total monetary value of fines for instances of unfair competition and violation of the fair trade compliance	KRW	0	0	0

¹⁾ Based on the individual completion of training programs, which may result in double counting the same individuals

Ethics

Ethics	Unit	2021	2022	2023
Number of ethics reports filed	Cases	322	403	420
Corruption	Cases	107	165	124
Violations of human rights	Cases	34	46	68
Abuse of power	Cases	19	16	23
Other	Cases	162	176	205
Number of resolved ethics reports	Cases	322	403	420
Ethics training				
Total training hours	Hours	36,444	35,198	23,320
Number of participants who completed compulsory ethics training	Persons	18,222	17,599	17,490

Domestic and International Subsidiaries

🏠 > Data & Report > Domestic and International Subsidiaries

E (Environmental)

GHG Emissions

GHG Emissions ¹⁾	Unit	2021	2022	2023
Direct/indirect emissions (Scope 1&2)	tCO ₂ e	86,839,473	78,597,749	80,670,542
Direct emissions (Scope 1)	tCO ₂ e	84,175,763	75,459,988	77,733,232
Indirect emissions (Scope 2)	tCO ₂ e	2,663,710	3,137,761	2,937,316
Direct/indirect emissions intensity ²⁾ (Based on crude steel production, Scope 1&2)	tCO ₂ e/ton	2.02	2.03	2.02

¹⁾ The 2023 emissions of overseas subsidiaries have not been subject to third-party verification by a GHG verification agency.

²⁾ Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

Energy

Energy	Unit	2021	2022	2023
Total energy consumed	GJ	421,703,663	375,227,502	399,524,674
Energy directly consumed	GJ	400,355,301	350,246,630	376,575,153
Coal	GJ	481,616	455,618	578,042
Natural gas	GJ	46,499,182	35,806,533	53,490,729
Gasoline (total)	GJ	4,587	6,249	7,234
Diesel (total)	GJ	350,923	395,479	380,995
LPG (total)	GJ	34	30	2,837
Off-gas	GJ	353,018,961	313,582,720	319,561,539
Others	GJ	0	0	2,553,777
Energy indirectly consumed	GJ	21,341,433	24,973,020	22,716,209
Electricity	GJ	19,549,609	23,178,662	20,847,918
Steam	GJ	1,791,824	1,794,358	1,868,291
Renewable energy consumed	GJ	6,928	7,852	233,314
Total energy intensity (based on crude steel production) ¹⁾	GJ/ton	9.8	9.7	10.0
Electricity sold	GJ	2,910,784	2,925,795	2,914,377

¹⁾ Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

Water

Water	Unit	2021	2022	2023
Total water withdrawal ¹⁾	ton	157,593,396	158,824,531	170,812,894
Municipal water supply	ton	9,947,095	9,536,820	12,877,787
Surface water	ton	104,544,139	113,129,651	119,787,559
Groundwater	ton	6,298,260	3,451,420	4,154,290
Desalinated water	ton	7,390,041	3,608,003	5,044,618
Treated municipal wastewater	ton	29,413,861	29,098,637	28,948,640
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	89,212,884
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	0
Total water withdrawn intensity ²⁾ (based on crude steel production)	ton/ton	3.7	4.1	4.3
Total water consumed	ton	79,035,722	83,411,991	85,469,418
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	43,323,450
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	0
Total wastewater discharge	ton	78,557,674	75,412,540	85,343,476
Reused wastewater	ton	49,740,878	46,422,080	42,810,429
Percentage of reused wastewater ³⁾	%	24.0	22.6	20.0
Number of worksites using recycled water	Count	5	5	6

¹⁾ Data update for 2021 and 2022 (Management criteria change)

²⁾ Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

³⁾ Data adjustment for 2021 and 2022 due to formula change

Air Pollutants

Air Pollutants	Unit	2021	2022	2023
Total emissions of air pollutants ¹⁾	ton	76,865	64,887	65,083
NOx	ton	43,121	34,416	34,403
SOx	ton	30,974	28,298	28,500
Dust	ton	2,770	2,174	2,178

¹⁾ POSCO Maharashtra and POSCO Thainox comply with country-specific regulations, but their emissions are measured using concentration standards (ppm) and are therefore not included in the total air pollutant emissions.

Environmental and Energy Management System

Environmental and Energy Management System	Unit	2021	2022	2023
Environmental management system (ISO 14001) certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	5	5	7
Certification rate	%	100	100	100

Waste

Waste ¹⁾	Unit	2021	2022	2023
Total waste generated	ton	23,969,604	21,434,230	21,850,026
Recycled	ton	23,654,146	21,085,401	21,529,069
Incinerated	ton	64,944	66,795	57,401
Landfilled	ton	236,469	267,486	231,224
Disposed in other ways	ton	14,045	14,548	32,332
General waste generated	ton	23,412,389	20,903,291	21,211,451
Recycled	ton	23,130,060	20,607,298	20,965,635
Incinerated	ton	53,351	49,180	47,357
Landfilled	ton	228,978	246,813	187,480
Disposed in other ways	ton	-	-	10,979
Designated waste generated	ton	557,215	530,939	638,574
Recycled	ton	524,086	478,103	563,434
Incinerated	ton	11,592	17,615	10,045
Landfilled	ton	7,492	20,673	43,743
Disposed in other ways	ton	14,045	14,548	21,353
Total waste generated intensity (based on crude steel production) ²⁾	ton/ton	0.56	0.55	0.55
Percentage of total waste recycled ²⁾	%	98.68	98.37	98.53

¹⁾ Data adjustments for 2021 and 2022 are due to error correction.

²⁾ Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

S (Social)

Human Resources

Human Resources ²⁾	Unit	2021	2022	2023
Total number of employees	Persons	22,976	23,181	24,340
Number of executives	Persons	92	76	84
By Gender				
Males	Persons	90	75	80
Females	Persons	2	1	4
Percentage of females	%	2.2	1.3	4.8
By Age				
Under 30 years old	Persons	0	0	0
30-50 years old	Persons	2	0	6
Over 50 years old	Persons	90	76	78
Number of employees excluding executives	Persons	22,884	23,105	24,256
By Gender				
Males	Persons	21,444	21,692	22,735
Females	Persons	1,440	1,413	1,521
Percentage of females	%	6.29	6.12	6.27
By Age				
Under 30 years old	Persons	4,496	4,618	4,764
30-50 years old	Persons	10,295	10,581	11,854
Over 50 years old	Persons	8,093	7,906	7,638
Number of management employees	Persons	4,388	4,472	4,640
By Gender				
Males	Persons	4,296	4,357	4,507
Females	Persons	92	115	133
Percentage of females	%	2.10	2.57	2.87
By Age				
Under 30 years old	Persons	19	13	8
30-50 years old	Persons	1,383	1,541	1,849
Over 50 years old	Persons	2,986	2,918	2,783
Number of regular employees (permanent)	Persons	21,914	21,793	22,869
By Gender				
Males	Persons	20,573	20,484	21,448
Females	Persons	1,341	1,309	1,421
Percentage of females	%	6.12	6.01	6.21
Percentage of regular employees (permanent)	%	95.38	94.01	93.96
Number of contingent employees (contractors)	Persons	1,047	1,380	1,464
By Gender				
Males	Persons	947	1,276	1,360
Females	Persons	100	105	104
Percentage of females	%	9.6	7.6	7.1
Percentage of contingent employees (contractors)	%	4.6	6.0	6.0
Total new hires	Persons	1,502	1,663	1,807
By Gender				
Males	Persons	1,382	1,554	1,729
Females	Persons	120	109	78
Percentage of females	%	7.99	6.55	4.32
By Age				
Under 30 years old	Persons	883	1,146	1,139
30-50 years old	Persons	154	144	215

Human Resources ¹⁾	Unit	2021	2022	2023
Over 50 years old	Persons	465	373	453
Total employee turnover	Persons	1,334	1,424	1,287
Turnover rate ¹⁾	%	5.46	6.17	5.53
Number of voluntary departures	Persons	609	794	715
Voluntary departure rate	%	2.49	3.44	3.07
Number of involuntary departures	Persons	725	630	572
Retirements at mandatory age	Persons	699	598	537
Layoffs	Persons	2	4	11
Other reasons for departure	Persons	24	28	24

¹⁾ Data adjustments for 2021 and 2022 are due to changes in internal management criteria.

Safety

Safety	Unit	2021	2022	2023
LTIR	Person/200,000 hours	0.08	0.14	0.06
Employee LTIR	Person/200,000 hours	0.08	0.10	0.03
Contractor LTIR	Person/200,000 hours	0.08	0.19	0.08
LTIFR	Person/1 million hours	0.41	0.72	0.28
Employee LTIFR	Person/1 million hours	0.4	0.48	0.14
Contractor LTIFR	Person/1 million hours	0.42	0.94	0.39
TRIR ¹⁾	Person/200,000 hours	-	0.27	0.26
Employee TRIR	Person/200,000 hours	-	0.23	0.28
Contractor TRIR	Person/200,000 hours	-	0.31	0.24
TRIFR ¹⁾	Person/1 million hours	-	1.35	1.29
Employee TRIFR	Person/1 million hours	-	1.14	1.38
Contractor TRIFR	Person/1 million hours	-	1.53	1.22
Accident rate	%	0.05	0.10	0
Employee accident rate	%	0.03	0.06	0.02
Contractor accident rate	%	0.07	0.14	0.09
Fatality rate	‰	0.22	0.23	0
Employee fatality rate	‰	0	0	0
Contractor fatality rate	‰	0.44	0.46	0
Employees				
Number of employee LTIs	Persons	19	22	7
Number of employee TRIs ¹⁾	Persons	-	53	69
Number of employee fatalities	Persons	0	0	0
Number of employees injured in accidents	Persons	7	14	5
Contractors				
Number of Contractor LTIs	Persons	22	50	23
Number of Contractor TRIs ¹⁾	Persons	2	82	71
Number of Contractor fatalities	Persons	1	1	0
Number of Contractor employees injured in accidents	Persons	16	30	19
Safety and Health Management System (ISO 45001/OHSAS 18001/KOSHA-MS) Certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	4	5	7
Certification rate	%	80	100	100
Quality Management System (ISO 9001 or IATF 16949) Certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	5	5	7
Certification rate	%	100	100	100

¹⁾ By identifying and addressing even minor incidents, preventive metrics have been introduced and managed to prevent major accidents (since 2022)

G(Governance)

Production Information

Production Data	Unit	2021	2022	2023
Crude steel produced	kt	42,964	38,635	39,942
Blast furnace/converter	kt	40,043	36,285	37,630
Electric arc furnace	kt	2,921	2,350	2,312
Percentage from blast furnace/converter	%	93.2	93.9	94.2
Percentage from electric arc furnace	%	6.8	6.1	5.8

GV-24273

Verification Opinion Statement

GHG Emissions

POSCO Corporation

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Greenhouse Gas Emissions (hereinafter 'GHG Inventory') of POSCO Corporation (hereinafter 'Company') for 2023.

Verification Scope

KFQ's verification covered on all facilities and emission sources under the operational control and organizational boundary of Company during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme¹⁾], [Rules for verification of operating the greenhouse gas emission trading scheme²⁾] and 'ISO14064-3' for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment 2) Notification No. 2021-112 of Ministry of Environment

Level of Assurance

The Verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as reasonable level of assurance. And it was confirmed through an internal review whether the process before the verification was conducted effectively.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption from the report through the verification, KFQ provides our verification opinions as below;

- 1) The Inventory Report has been stated in accordance with "Rule for emission reporting and certification of greenhouse gas emission trading Scheme" and "ISO 14064-1".
- 2) The materiality assessment result of GHG emissions has satisfied the criteria for an organization that emits more than 5,000,000tCO₂-eq by meeting less than 2% of the total emissions, as per "Rules for verification of operating the greenhouse gas emission trading scheme".
- 3) Thus, KFQ concludes that the Greenhouse Gas Emissions of Company in 2023 is correctly calculated and stated in accordance with "Rule for emission reporting and certification of greenhouse gas emission trading Scheme".

Unit : tCO₂eq

Scope 1	Scope 2	Total
70,588,011.591	1,383,894.847	71,971,900

* The totals in this verification statement do not match the totals in emission trading scheme because the total emissions of each facility are calculated by truncating to integer units

June 19th, 2024


CEO Ji-Young Song
Korean Foundation for Quality



국립환경과학원

GI-24272

Verification Opinion Statement

GHG Emissions

POSCO Corporation

Verification Target

Korean Foundation for Quality (hereinafter "KFQ") was engaged to conduct an independent verification for "2023 Quantity of GHG emission (Scope3) and Avoided GHG Emissions" reported by POSCO Corporation(hereinafter 'the Company').

Verification Scope & Purpose

This verification provides limited assurance that GHG emission (Scope3) and Avoided GHG Emissions are reported without not significant errors and distortions.

The scope of verification under the Company's operational control is as follows:

- GHG emission (Scope3) : Purchased goods and services, Upstream transportation and distribution, Business travel, Employee commuting, Investments, Downstream leased assets
- Avoided GHG Emissions : High-strength automotive steel sheets, Low core loss electrical steel, Blast furnace slag

Verification Criteria

his verification was conducted based on the following criteria:

- GHG emission (Scope3)
 - WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard
 - ISO14064-1:2018
 - GHG Protocol Corporate Standard
 - ISO14064-3:2019
- Emission factor
 - Upstream emissions information disclosed by raw material suppliers
 - LCA information for 'Environmental Product Declaration' products
 - Environmental Product Declaration evaluation coefficient (2021)
 - GHG emission calculator tool (UNFCCC)
 - ICAO calculator
- Avoided GHG Emissions
 - Internal calculation criteria of the Company

Level of Assurance & Responsibility

The assurance level of the verification was performed to satisfy the limited assurance level. The Company is responsible for selecting verification standards, the criteria of the verification & emission calculation and the scope of verification (Scope3) further to calculation of GHG emission and Avoided GHG Emissions.

Verification Process

KFQ performed verification in accordance with ISO14064-3(Specification with guidance for the verification and validation of greenhouse gas statements) and the above verification criteria. To obtain limited confidence that the emission has been properly calculated based on accurate data, KFQ planned and conducted the verification through an identification of the calculation result of GHG emission (Scope 3) and Avoided GHG Emissions which were provided by the Company and a cross-check between them.

Verification Limitation

This verification is not intended to confirm the validity of the calculation criteria itself which was established by the company. Therefore, the verification results contain inherent limitations of uncertainty in the Company's own calculation criteria. Depending on the Company's own calculation criteria, a significant difference can occur in the result of the calculation, and it can affect comparability.

GI-24259

Verification Opinions

Through the verification process, KFQ obtained the following conclusion on the GHG emission (Scope3) and Avoided GHG Emissions results

- 1) The Company's "2023 GHG emission (Scope3) and Avoided GHG Emissions" was appropriately calculated according to the "Technical Guidance for Calculation Scope 3 Emission (Greenhouse Gas Protocol)" and internal standards.
- 2) Critical errors and omissions were not found in The Company's "2023 GHG emission(Scope3) and Avoided GHG Emissions" in the Carbon Reporting. Parts of the activity data in the process of emission calculation are assumed based on conservative principles to prevent underestimation of the emission.
- 3) It was confirmed that the internal criteria of Avoided GHG Emissions maintains consistency and accuracy in its' internal criteria. Parts of activity data and parameters in the process of reduction effects calculation were assumed based on conservative principles to prevent overestimation of the reduction.
- 4) The final calculated "2023 GHG(Scope3) emission and Avoided GHG Emissions" are as follows

Unit : tCO₂eq

Criteria		2023
GHG Emission (Scope3)	Purchased goods and services	2,764,127
	Capital goods	563
	Fuel-and energy-related activities(not included in scope1 or scope2)	334,942
	Upstream transportation & distribution	1,926,052
	Waste generated in operations	195,608
	Business travel	486
	Employee commuting	7,730
	Downstream transportation & distribution	26,936
	Downstream leased assets	1,974,893
	Franchises	188,450
	Total	7,419,787
Avoided GHG Emissions	High-strength automotive steel sheets	1,799,663
	Low core loss electrical steel	4,518,715
	Blast furnace slag	5,803,260
	Total	12,121,638

June 19th, 2024


CEO Ji-Young Song
Korean Foundation for Quality



National Institute of
Environmental Research

Report Preparation



2023 Sustainability Report contains content in digital form on the ESG website(<https://sustainability.posco.com>).

The provided PDF is an integrated version of the ESG website content, and you can view and print only the desired content from the ESG website.

The cover features the Gwangyang Steelworks and the Yi Sun-sin Bridge, the longest suspension bridge in South Korea where POSCO's Steel Plate and Wire Rod are used.

Through the images, POSCO's vision slogan 'Better World with Green Steel' is realized as 'The Road to a Sustainable Future'.

In collaboration with : POSCO ESG Ambassador, 5 oversea subsidiaries for consolidated disclosure(PT. KRAKATAU POSCO, POSCO YAMATO VINA, Zhangjiagang Pohang Stainless Steel, POSCO Maharashtra, POSCO Thainox)

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Better World with Green Steel