

KOREA ZINC

Sustainability Report 2021



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Korea Zinc
www.koreazinc.co.kr

KOREA ZINC

Korea Zinc is the global nonferrous metal refining company that has been the foundation for the growth of the basic materials industry.



Sustainability Report 2021

About this report

Overview

Korea Zinc aims to make the world more plentiful by creating sustainable values. The current report is the second Sustainability Report published by Korea Zinc, which covers business performance, sustainability activities, performance, and future plans.

Reporting principles and standards

The Report follows the Core Option of Global Reporting Initiative (GRI) Standards, and the financial information abides by consolidation standards of the Korean International Financial Reporting Standards (K-IFRS)

Reporting period and scope

The reporting period is from Jan 1st, 2021 to Dec 31st, 2021, partially including some significant information from the first quarter of 2022. Quantitative data is presented over a three-year period, for better capture of trends. The Report is limited to sites in Korea including the headquarters and Onsan refinery, and noted in footnotes, etc. otherwise.

Change from previous year

A distinct difference from the previous report would be the sustainable management policy. In the chapter on 2. Sustainability, principles, and criteria for the Environmental (E), the Social (S), and the Governance (G) could be found, which make up sustainability management.

Independent assurance

The information in the report has been verified by an independent assurance provider, Korea Productivity Center (KPC) for accuracy, objectivity, and reliability. Financial information has been audited by Samjong KPMG LLC. and Greenhouse Gas data by the Korean Foundation for Quality. The verification reports could be found in the Appendix.

Contact

The report is published in Korean and English, and can be downloaded in PDF from the company's website (www.koreazinc.co.kr). Please refer to the following contact information regarding the report.

Korea Zinc ESG Management Team

542, Gangnam-daero, Gangnam-gu, Seoul
+82-2-519-3983 | jooble@koreazinc.co.kr

KOREA
ZINC

SUSTAINABILITY REPORT 2021

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For bountiful future for all humanities, Korea Zinc refines today and prepares for tomorrow

Dear those who share the vision for a sustainable future of Korea Zinc

For the last half-century, Korea Zinc has endeavored with the sole goal of refining nonferrous metals, to find itself firmly placed as the No.1 global leader in the nonferrous metal market. The management philosophy and mission of Korea Zinc behind these times are still embedded in sustainable management, which pursues economic as well as social and environmental values for a better future.

The pandemic for the last 2 years was not simply uncertainty in the global economy and a crisis in business management. COVID-19 not only challenged the dispersed humanities all across the continents but reaffirmed the roles that companies, along with the national governments, need to play in order to address global issues such as environmental and social problems and ultimately pursue values that benefit all of us.

In addition to pursuing sustainability management for a better future and economic values, Korea Zinc is facing the mission of our times, which calls for the sound development of the world. Therefore, for another 50 years ahead, it introduces its eco-friendly business engine, "Troika Drive" which will usher in a transition to a circular economy through decarbonization and achieve sustainable development.

First Engine of the Troika Drive, 'Renewable Energy and Hydrogen Business'

Korea Zinc will become the most eco-friendly yet competitive refinery in the energy-consuming industry of nonferrous metal by promoting renewable energy and green hydrogen business. On top of the solar energy production business already underway with the subsidiary in Australia, Sun Metals Corporation, we plan on implementing wind energy production business with another subsidiary, Arc Energy, thereby building infrastructure for green hydrogen on renewable energy, to lead the production and contribute to demand generation.

Second Engine of the Troika Drive, 'Resource Recycling Business'

By creating a resource cycle that reproduces · reuses valuable metal from industrial waste such as furnace dust, from steel production to refining, back and forth, and simultaneously cutting down on landfills and reducing demand for mining, we aim to contribute to environmental conservation. Further, the E-Waste recycling business for ever-growing IT product waste is under examination. With long-established skills and know-how, Korea Zinc will increase its growth rate and profitability without neglecting social responsibility.



Third Engine of Troika Drive, 'Secondary Battery Material Business'

We respond to Climate Change by decarbonizing via our secondary battery materials business. Copper, Nickel, Cobalt, Lithium, Aluminum, and Manganese, which are primary elements for the secondary battery used in electronic cars, are areas in which Korea Zinc has a competitive advantage based on our experiences in nonferrous metal refining. In that sense, Korea Zinc is promoting business in elecfoil using self-produced Copper and in the precursor for cathode material. Considering that technology extracting valuable metals from waste has been the key behind making Korea Zinc a global leader, the secondary battery recycling business would function as another engine forward. We are confident that we will make a meaningful contribution to creating value in a circular economy by producing electrolytic copper cathode, used for elecfoil, entirely from secondary material and by recycling waste batteries.

Our Core Business and new growth strategy are closely aligned, and they will prove that Korea Zinc's sustainable management means more than just a slogan by creating a better future for humanity and an original value that cannot be replicated. Working diligently in nonferrous metal refining for tens of years, building foundations for Korea's leap forward, Korea Zinc will thrive to create sustainable value beyond finance, based on the intrinsic trait for success and pride in the area.

Korea Zinc refines today, builds tomorrow, and we will not settle with achievements for now, but push forward for a more plentiful, and better future.

Thank you.

Yun B. Choi, Vice Chairman of Korea Zinc, *Yun B. Choi*

Chapter 1.

Korea Zinc

KOREA ZINC SUSTAINABILITY REPORT 2021

- **About Us**
 - Management Philosophy
 - History
 - Equity Structure
- **Global Network**
- **At a Glance**
- **Business Overview**
 - Production Process
 - Zinc, Lead, Copper Integrated Manifesting
 - Product Use
 - Representative Technique
 - Korea Zinc New Growth Strategy, Troika Drive
- **Business Review**
 - Global Market Situations of 2021
 - Financial Performance
 - Production Performance
 - Domestic and Export Performance
 - Sales Strategy



Korea Zinc Onsan Refinery

Founded on August 1st, 1974, Korea Zinc has grown into a global nonferrous metal refining company that produces Zinc and rare metals such as Lead, Gold, Silver, Copper, and Indium. Following the construction of a Zinc refinery with an annual capacity of 50,000 tonnes, it has made a series of investments in technologies and facilities.

Korea Zinc Co., Ltd.

Name of the company	Korea Zinc Co., Ltd.
Foundation	August 1 st , 1974
CEO	Yun B. Choi, Jin S. Roh, Sun H. Baek
Employees	1,550 (as of December 2021)
Headquarters	542, Gangnam-daero, Gangnam-gu, Seoul
Refinery	139, Ijin-ro, Onsan-eup, Ulju-gun, Ulsan
Homepage	www.koreazinc.co.kr



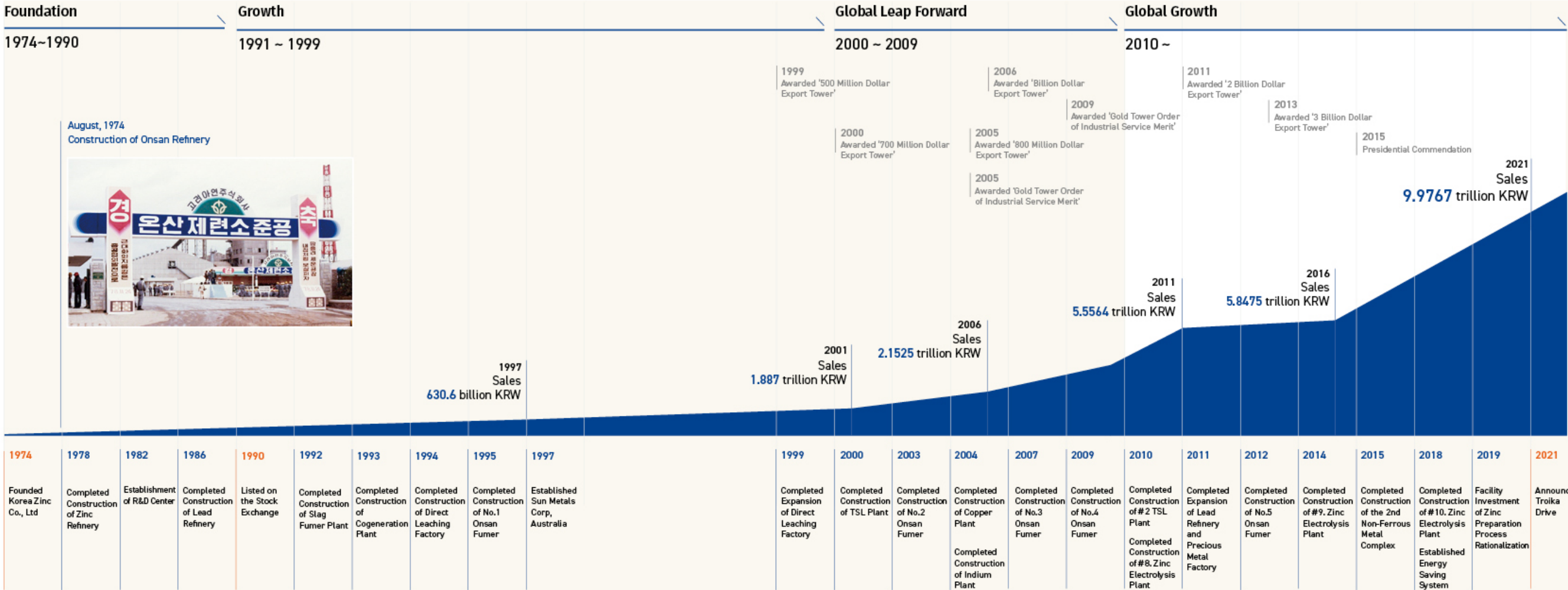
Management Philosophy

Mission	Transparent and Trusted Management	Pursuit of Technological Competitiveness	Eco-friendly Management	Contribution to Customer Satisfaction and Human Welfare
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As a global smelting enterprise, Korea Zinc takes an integrated approach by concentrating on securing resources overseas and discovering new rare metals, while continuing on the smelting-related business including resource recycling and recovering valuable metals from waste resources. We add to our sustainable vision via the development of renewable energy and hydrogen, based on technology from nonferrous metals.

For a bountiful future for all humanities, Korea Zinc refines today and prepares for tomorrow.

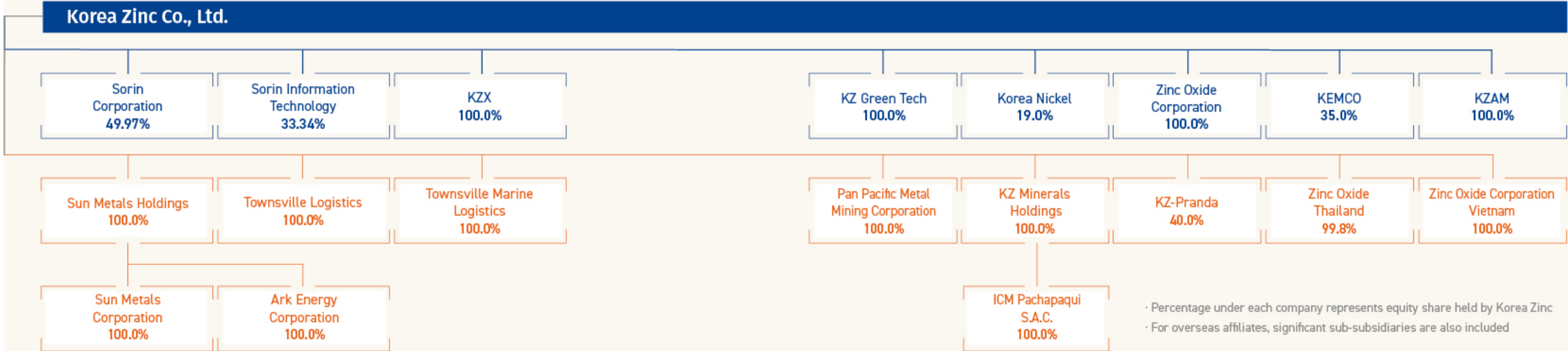
History



Management
Facilities and Infrastructure

Equity Structure (Simplified)

(as of December 2021)



Republic of Korea
Overseas

Korea Zinc has consistently established business foundations for value creation beyond domestic markets, through its overseas affiliates and subsidiaries. We are seeking M&A, Joint Venture, and equity acquisition in nonferrous metal refining, renewable energy or hydrogen, resource recycling, and secondary material business for better implementation, potential synergies, and strengthening of our position in the market.


Republic of Korea

Refining Business
Sorin Corporation Nonferrous metal trade and wholesale/retail
Sorin Information Technology Network business, SI business, solution business, software and hardware supply business
Young Poong Precision Corporation Acid-proof pump, steel structure design and manufacturing, general industry
Korea Nickel Nickel metal and nickel-containing alloy refining, manufacturing and sales
KZX Cargo transportation, port transportation business
KZ Green Tech Construction and operation of cogeneration power plant, energy management diagnosis business
SINL Logistics facility and warehouse rental business, and logistics business, etc.

Resource Recycling Business
Zinc Oxide Corporation Production of crude Zinc oxide, and Iron oxide

Secondary Battery Material Business
KEMCO Nickel sulfate and second battery material manufacturing and sales
KZAM Manufacturing and sales of Copper foil for secondary battery materials


Headquarters



Located in Gangnam-gu, Seoul, the headquarters of Korea Zinc provides management tasks, including planning, finance, accounting, legal affairs, purchase of raw materials, and sales.

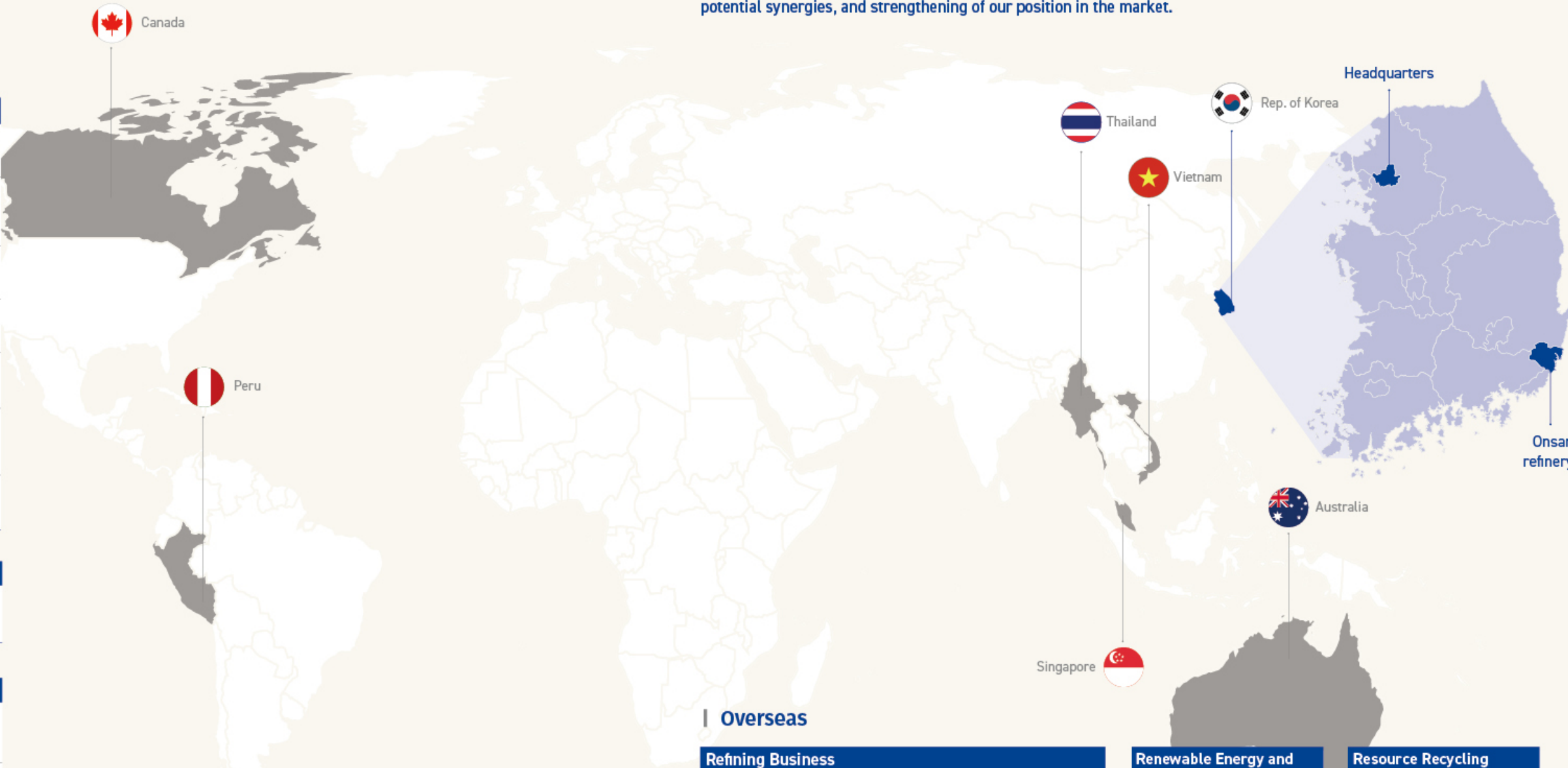
The number of employees: 152
(as of December 2021)

Onsan Refinery



Onsan Refinery annually produces more than 1,200,000 tonnes of base metals such as Zinc, Lead, precious metals, and rare metals, and is the largest producer of nonferrous metals among single-train metal refineries.

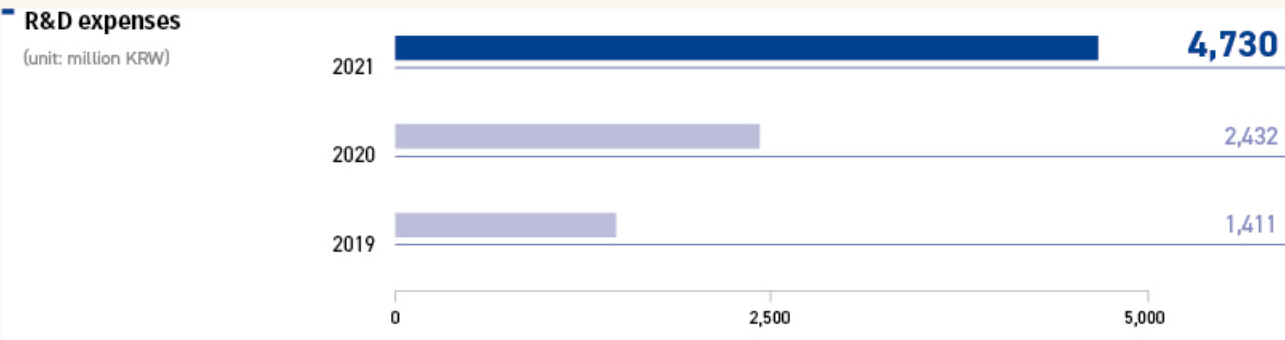
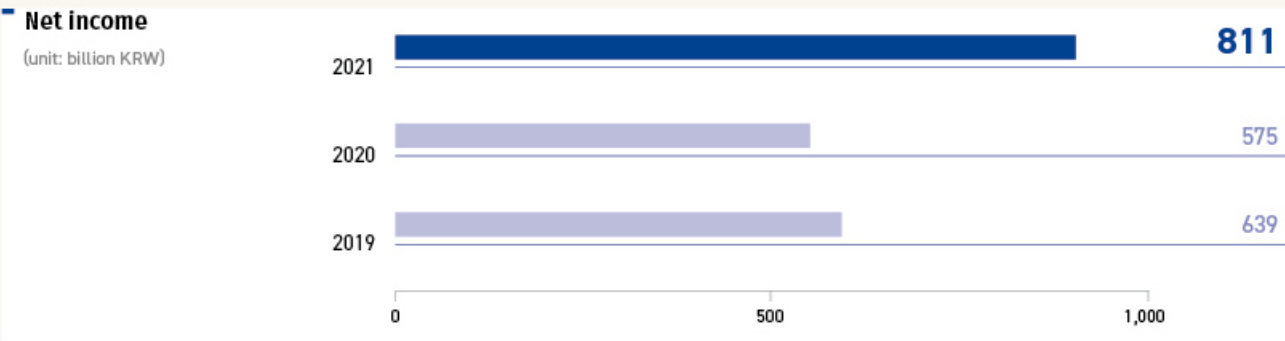
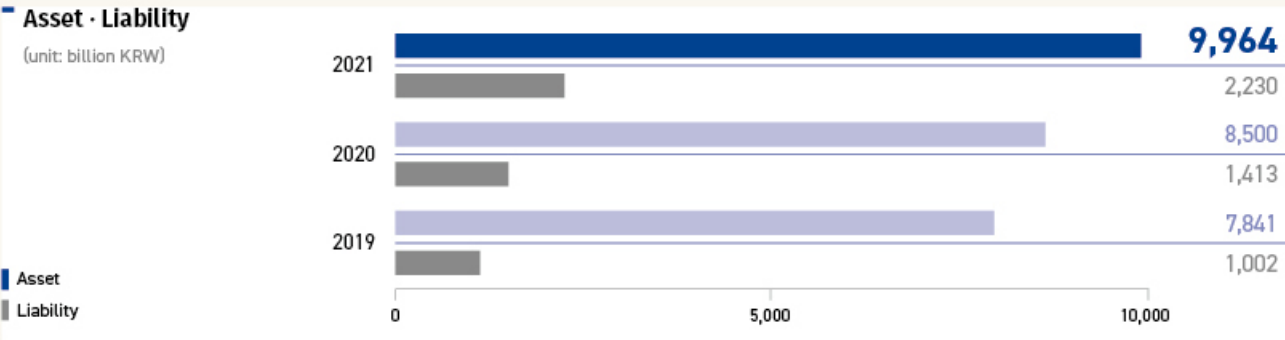
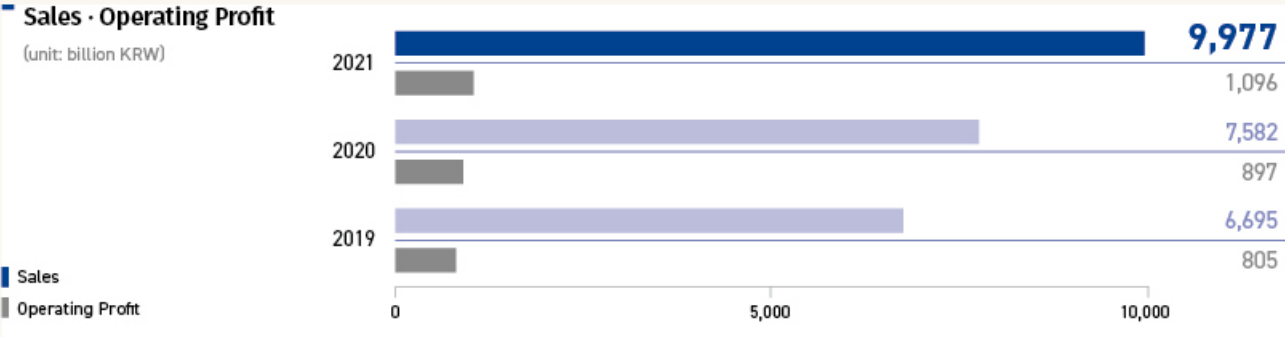
Number of employees: 1,398
(as of December 2021)



Overseas








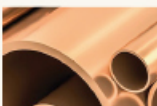





















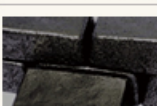



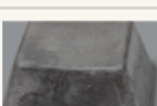



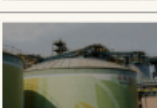

Refining Business	Renewable Energy and Hydrogen Business	Resource Recycling Business
 Sun Metals Corporation Refining, manufacturing and sales of zinc, sulfate, cadmium, etc	 Ark Energy Renewable energy development	 Zinc Oxide Corp. Vietnam Production of crude zinc oxide, and iron oxide
 Pan Pacific Metal Mining Corp. Mine development	 Ark Energy H2 Hydrogen business development	 Zinc Oxide Corp. Thailand Nonferrous metals trade
 ICM Pachapaqui S.A.C. Mine development	 Ark Energy Macintyre Wind power development	
 KZ-Pranda Sales of precious metals	 KZ Minerals Holdings Ltd. Investing in mine development	

Financial Performance



Global No.1 nonferrous metal refining company, Korea Zinc achieved the best performance since its foundation, with distinguished technology and stable financial structure as a basis, at sales of 9.9768 trillion KRW, operating profit of 1.0961 trillion KRW, and net income of 811.1 billion KRW in 2021.

2021 Production Performance

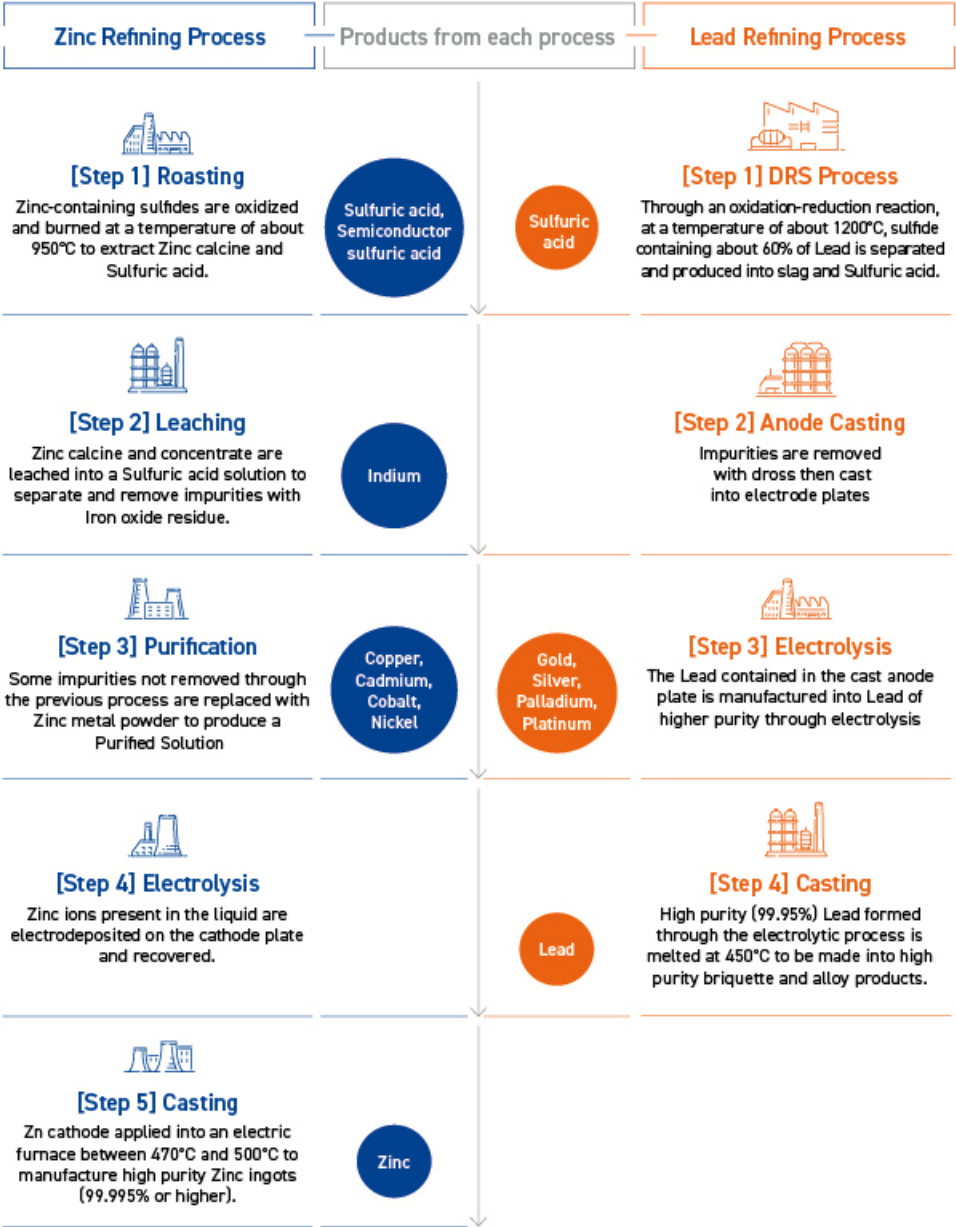
Product		Amount	Product Use			
Base Metals	 Zinc	640,400 tonnes	 Vehicle	 Construction	 Electronics	
	 Lead	426,400 tonnes	 Storage Battery	 Wire		
	 Copper	27,400 tonnes	 Secondary Battery	 Machinery	 Construction	
Precious Metals	 Gold	14 tonnes	 Jewelry	 Medicine	 Display	
	 Silver	2,200 tonnes	 Solar Panel	 Semiconductor	 Wireless Communications	
Rare Metals	 Cadmium	4,600 tonnes	 Battery	 Alloy		
	 Bismuth	1,100 tonnes	 Medicine	 Cosmetics		
	 Indium	91 tonnes	 Display	 Electronic Device	 Solar Panel	
	 Tellurium	121 tonnes	 Battery	 Thermometer	 Heating Machine	
	 Antimony	3,700 tonnes	 Flame Retardant	 Battery	 Medicine	
Others	 Sulfuric acid for semiconductor	157,400 tonnes	 Semiconductor Wafer Cleaner			

BUSINESS OVERVIEW

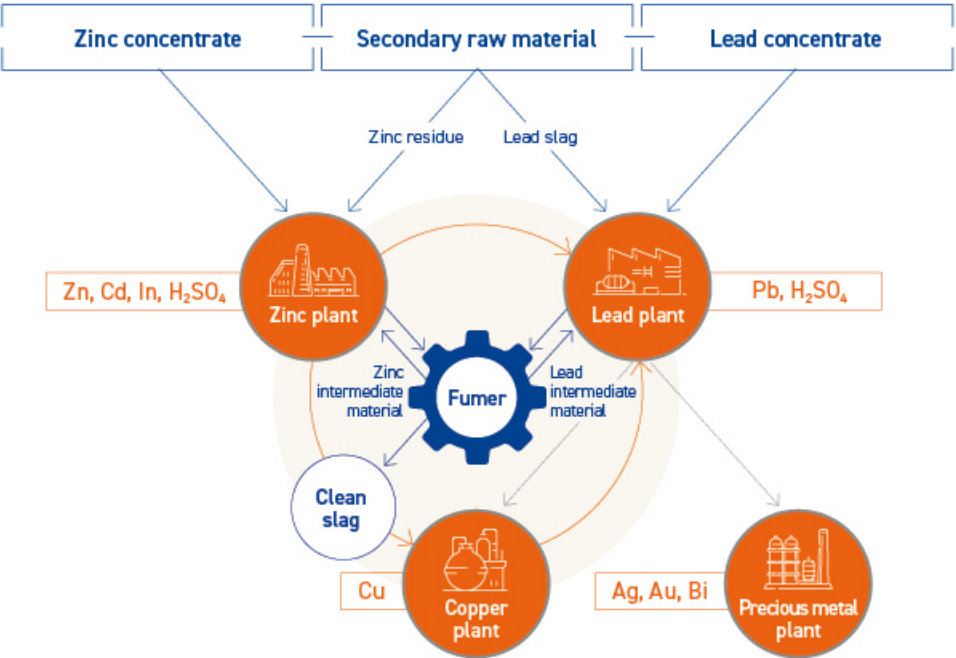
The major product of Korea Zinc is Zinc and Lead, and valuable metals such as Gold, Silver, Copper, and Sulfuric acid and by-products are recovered and commercialized for sale. Korea Zinc places itself as the global No.1 nonferrous metal refining company, maintaining distinguished technological competitiveness through active R&D investment, cost reduction through economies of scale, as well as bold M&A.

Production Process

Zinc and Lead only exist in an ore state, and refining only one type of metal would handle the other metals as impurities, lowering the productivity. Also, processing and disposing of impurities worsen environmental pollution. Korea Zinc integrates the refining process of Zinc, and Lead within one plant, retrieving precious metals at almost 100%, thereby securing cost competitiveness and minimizing environmental impact.



Zinc, Lead, Copper Integrated Manifesting



Product and Use

Among the major products of Korea Zinc, Zinc products are used for plating to protect steel materials in steel pipes, plates, wires, and iron structures. Lead is mainly used in batteries, along with wire covering, radiation shield, pigments, waterproofing and soundproofing materials. Gold recovered from Zinc and Lead refining is produced at a purity of 99.99% and is made into a bar of 1kg, used in jewelry, electroplated products, semiconductors, etc. Silver is also produced with a purity of 99.99%, and used in solar energy industry, jewelry, and conductive electronic parts.

Type	Product	Product Use	Product Image
Base Metals	Zinc	Zinc plates, machine parts, brass (copper), pigment and tire additives, etc.	
	Lead	Storage batteries, wire sheaths, radiation shields, etc.	
	Copper	Wires, elecfoils, Copper pipes, liquid crystals, ICs, coins, instruments, etc.	
Precious Metals	Gold	Jewelry, electronic device materials, tableware, etc	
	Silver	Jewelry, solar panel production, electronic batteries, camera film rolls, etc.	
Rare Metals	Indium, Bismuth, Antimony, etc.	LCD, cosmetics, solar cells, flame retardants, glass stain, batteries, colorants, pigments, Manganese smelting catalyst etc.	
Others	Sulfuric acid	Metal refining, semiconductor cleaner, dyes, explosives, etc.	

Representative Technique

Since its foundation on, Korea Zinc has been applying electrowinning electrolysis to refine the purest Zinc. In 2000, Top Submerged Lance (TSL) technique was introduced, a nonferrous refining residual processing method extracting valuable metals and other by-products, achieving successful resource development and minimizing environmental impact. The DRS method, first commercialized globally by Korea Zinc in 2018, has also proven energy conservation and pollution prevention effects. Meanwhile, In 2016, Korea Zinc has completed rationalization of the leaching process for Zinc by replacing its aging facilities with lower productivity that have been running for the past 40 years.

Top Submerged Lance (TSL) Method

It recover valuable metals (zinc, lead, copper, silver, indium. etc.) from residues or cakes that are inevitably produced when refining nonferrous metals or from wastes coming from other industries, and reproduces the final residue into an eco-friendly slag, to be used as aggregates with reduced environmental impact. Tackling the common concern of refineries all over the world, TSL technology was certified as new Korea Technology (KT) and new Environmental Technology (ET) by the Ministry of Science and ICT and the Ministry of Environment.

Direct Redox Smelter (DRS) Method

Commercialized by Korea Zinc for the first time, DRS technology combines the two previous processes (oxidation-reduction) into one furnace, thereby reducing energy and pollution. DRS can be used for various raw materials.

Koreazinc Copper Process (KCP) Method

An original technique developed by Korea Zinc, KCP produces electric copper of high purity over 99.9935%. Copper products manufactured using the KCP method are highly ductile and are widely used in various industries including machine parts, construction materials, wires, etc.

Rotary Hearth Furnace (RHF) Method

Dust generated during the steelmaking process contains harmful materials such as Cadmium and Lead, and is classified as designated waste and handled at a high cost. ZOC, a subsidiary of Korea Zinc, produces Direct Reduced Iron (DRI) and Crude zinc oxide (HZO), which is a raw material for zinc anodes, using the Rotary Hearth Furnace technique (RHF) based on the regeneration technology of Electric Arc Furnace Dust (EAFD).



RHF(Rotary Hearth Furnace)

Korea Zinc New Growth Strategy, Troika Drive

Troika Drive

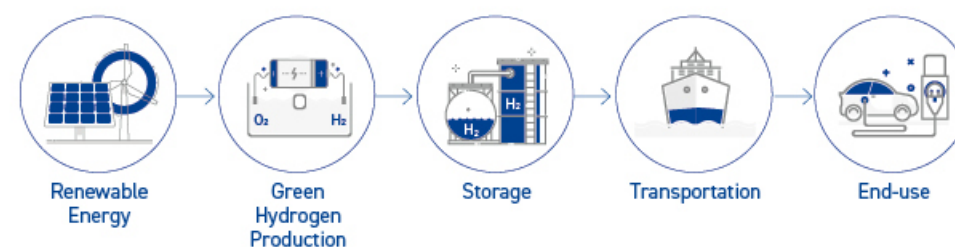
'Troika Drive', the new growth strategy of Korea Zinc, consists of renewable energy and hydrogen business, resource circulation and recycling business, and secondary battery business. Troika Drive conveys our commitment to creating a value consistent with the current era, by achieving synergy between the old and new, nonferrous refining business and the new eco-friendly business. Korea Zinc has been a leading nonferrous business, and now leaping into pioneering a sustainable future.



Renewable Energy and Hydrogen Business

Korea Zinc takes exceptional initiative in broadening the eco-friendly business spectrum. In February of 2021, Ark Energy, a subsidiary in Australia, started a wind power business, and Korea Zinc is also embarking on renewable and hydrogen energy business with Epuron, acquired via SA in December 2021.

Green Hydrogen Business Model



Major Networks in Renewable Energy and Hydrogen Business

Ark Energy
General management of renewable-green energy

Ark Energy H2
Production of green hydrogen

Ark Energy Macintyre
Production of renewable energy such as wind energy



EPURON
POWER FOR PORTFOLIOS
Epuron
Development of renewable energy

Sun Metals
Sun Metals Corporation(SMC)
Production of solar energy

Townsville Logistics
Transport of green hydrogen

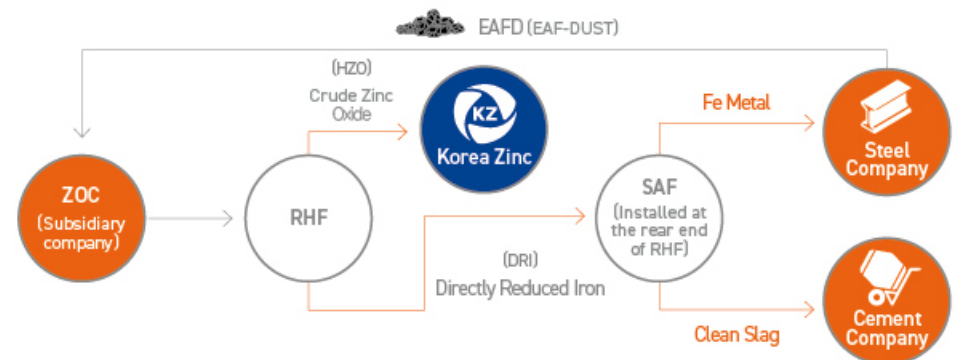


Circulation Business

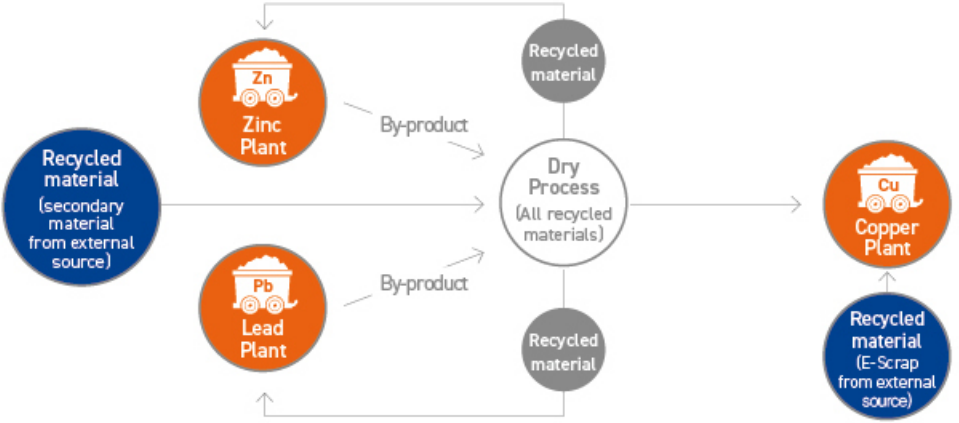
Zinc Oxide Corporation (ZOC), a subsidiary, purchases steel dust, a waste emitted by domestic steel mills during production, and reproduces it into Crude zinc oxide (HZO) and Direct Reduced Iron (DRI) for sale. Circulation business of Korea Zinc that converts waste from steel companies into products, not only reduces landfill waste but also reduces demands for mining, minimizing environmental impact and contributing to environmental protection. As Korea Zinc is successfully operating the circulation business model across 'Steel-Smelt-Steel' industries, we aim to stretch the target to include waste batteries and electronics, constructing an eco-friendly circulation system and developing it as our new growth engine.



Recycling Process for HZO and DRI



E-Waste Recycling Resource Process

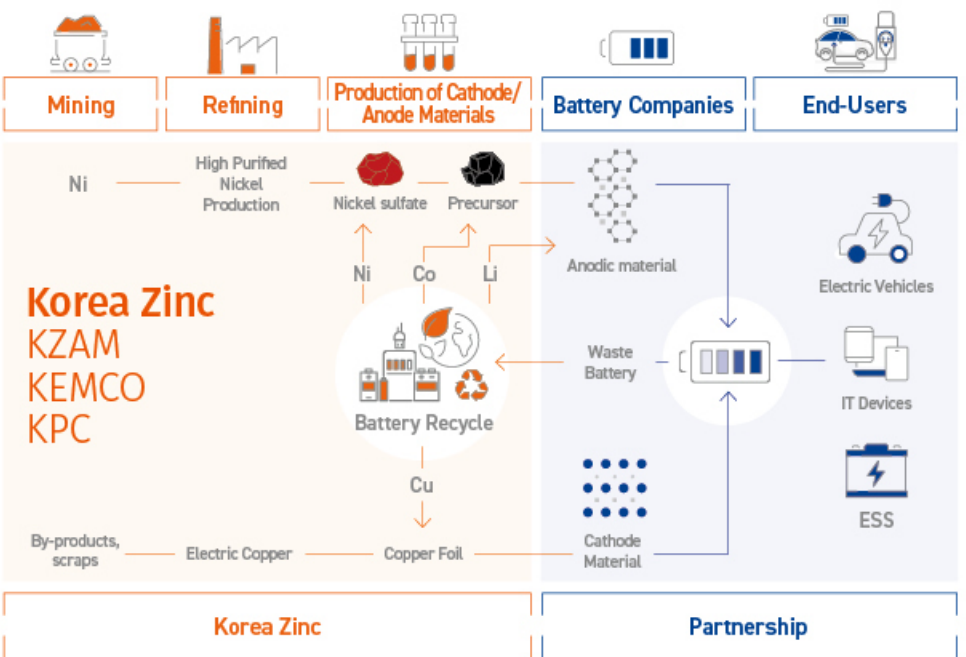


Secondary Battery Material Business

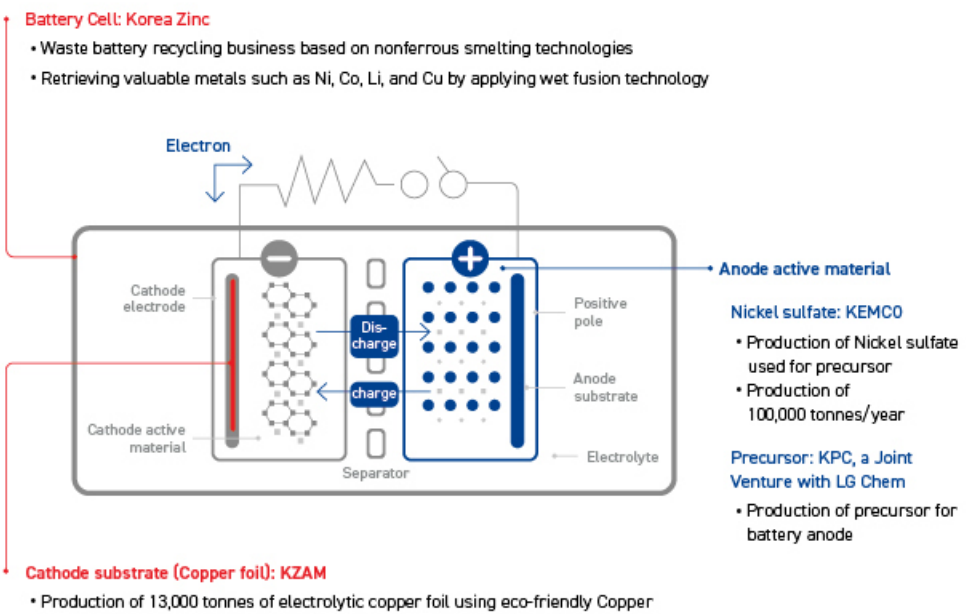
Value Chain for Core Materials of the Secondary Battery

Korea Zinc can constructively take advantage of its technologies and experiences in the secondary battery material business. With the enlarged supply of electronic vehicles, demand for the secondary battery is expected to rise substantially. On top, the core substances for electronic vehicles are Copper, Nickel sulfate, Cobalt, Lithium, Aluminum, and Manganese, in which Korea Zinc can securely take the lead based on nonferrous metal smelting technologies.

For a successful secondary battery business, Korea Zinc is promoting the battery recycling business based on nonferrous metal smelting technologies. Korea Zinc will focus on establishing a value chain for stabilizing supply and strengthening technological competitiveness, via KPC, a Joint Venture (JV) with LG Chem, KEMCO, and its subsidiary, KZAM.



Secondary Battery Cell Structure and Business Area



The nonferrous metal industry is a key national industry and is becoming more crucial as the importance of nonferrous raw materials increases. Based on a solid financial structure, Korea Zinc continues to expand its business area, and is acknowledged as a blue-chip with distinguished competitiveness. 2021 marked the initiation of the eco-friendly business fueled by 'Troika Drive', with renewable energy and green hydrogen energy business, material recycling business, and secondary battery material business.

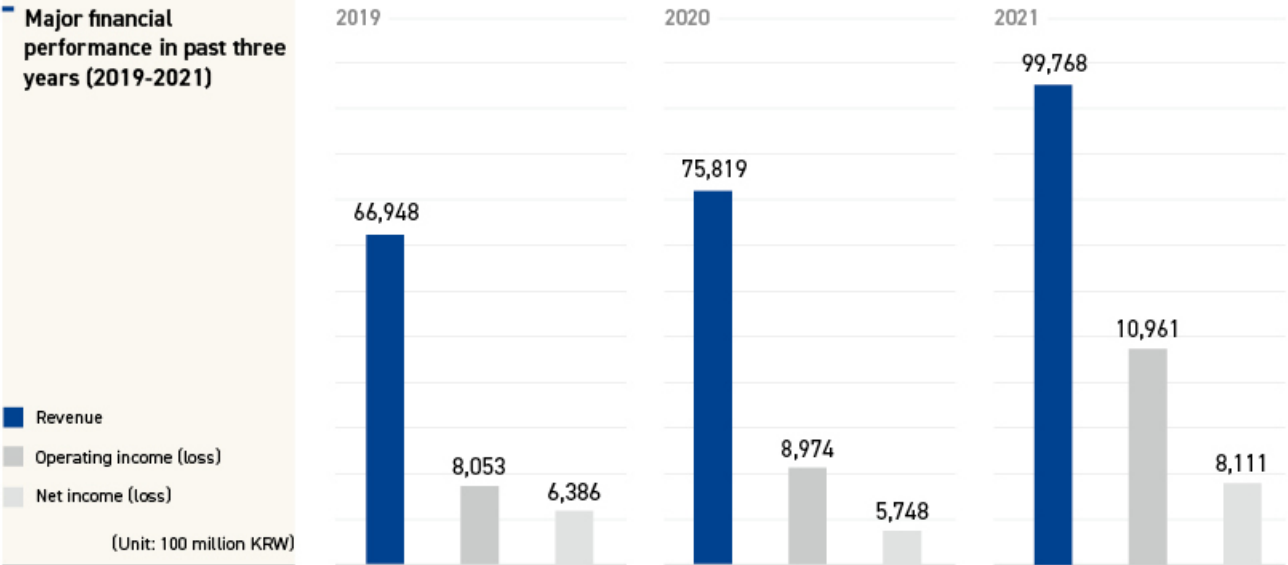
2021 Global
Market Situations

In 2021, countries around the world exerted various policy efforts to overcome the crisis caused by COVID-19. Accompanied by the reinforced quarantine system with the provision of vaccines and social distancing, and expansionary fiscal and monetary policies, the global economy is slowly showing signs of recovery. On the other end, Inflationary pressures due to quantitative easing and fiscal spending, and other potential threats due to disruptions in global supply and production costs are deepening. The nonferrous metal market was also struck with falling treatment charge.



Financial
Performance

Major financial
performance in past three
years (2019-2021)



Sales Performance

Type	2019	2020	2021	Compared to 2020	
				Amount	Ratio (%)
Sales	66,948	75,819	99,768	▲ 23,949	▲ 31.6
Cost of Sales	57,436	65,468	87,205	▲ 21,737	▲ 33.2
Gross Profit	9,512	10,351	12,563	▲ 2,212	▲ 21.4
SG&A Expenses	1,459	1,378	1,602	▲ 224	▲ 16.3
Operation Income	8,053	8,974	10,961	▲ 1,987	▲ 22.1
Net Other Income	(28)	(26)	(62)	▼ 36	▼ 138.5
Net Finance Income (costs)	683	(818)	463	▲ 1,281	▲ 156.6
Income Before Income Tax	8,724	8,124	11,391	▲ 3,267	▲ 40.2
Income Tax Expense	2,338	2,376	3,279	▲ 903	▲ 38.0
Net Income	6,386	5,748	8,111	▲ 2,363	▲ 41.1

(Unit: 100 million KRW)

Stock Information

Type	Unit	2019	2020	2021
Face Value	KRW	5,000	5,000	5,000
Total Number of Shares	shares	18,870,000	18,870,000	18,870,000
Stock Price				
- Highest	KRW	489,000	461,000	607,000
- Lowest	KRW	404,000	293,500	397,500
- Closing	KRW	425,000	401,500	511,000
Foreign Ownership	%	26.4	23.6	18.2

Comparison of KOSPI
index and Korea Zinc stock
price fluctuations based
on the closing price of the
first trading day of 2021



Production Performance

Production Performance for the past three years (2019-2021)

(Unit: tonnes)

The Korea Zinc's Onsan refinery has the capacity of producing 650,000 tonnes of Zinc, 430,000 of Lead, 12 tonnes of Gold, 2,500 tonnes of Silver, and 1,500,000 tonnes of Sulfuric acid per year, while the final product goes through several unit processes. Facility management is carried out regularly, which might temporarily reduce production, but does not interrupt the overall production process.

Type	Location	Product	Annual Production Capacity	2019	2020	2021
Onsan Refinery	Ulsan	Zinc	650,000	650,086	643,542	640,372
		Lead	430,000	413,060	435,040	426,415
		Gold	12	7.6	9.5	13.7
		Silver	2,500	2,083	2,321	2,202
		Sulfuric acid	1,500,000	1,251,259	1,309,118	1,298,192
SMC (Subsidiary)	Townsville, Australia	Zinc	220,000	209,831	227,775	206,780
		Sulfuric acid	430,000	444,801	481,618	408,549
		Other	-	277,593	184,668	139,621
ZOC (Subsidiary)	Gyeongju	Zinc	62,000	58,486	46,140	48,514

Sales and Proportion by each product in 2021

Onsan Refinery

Type	Sales (million KRW)	Proportion (%)
Zinc	2,280,407	31.84
Lead	1,203,728	16.81
Gold	919,191	12.83
Silver	2,080,245	29.04
Other	678,935	9.48
Total	7,162,506	100.00

SMC

Type	Sales (thousand USD)	Proportion (%)
Zinc	656,385	85.27
Other	113,355	14.73
Total	769,740	100.00

ZOC

Type	Sales (million KRW)	Proportion (%)
Crude zinc oxide	76,217	100.00

Domestic and Export Performance

Product sales by channels

Products by Korea Zinc are sold in domestic markets or exported overseas. Zinc and Lead are basic materials, maintaining stable demand in both domestic and overseas markets. In 2021, domestic sales of major products amounted to 2.4945 trillion KRW and export sales of 4.668 trillion KRW.

Product	Type	Onsan Refinery (Unit: million KRW)	SMC (Unit: 1,000 USD)	ZOC (Unit: million KRW)
Zinc	Export	1,495,109	464,321	-
	Domestic	785,298	192,064	76,217
Lead	Export	870,334	-	-
	Domestic	333,394	-	-
Gold	Export	13,358	-	-
	Domestic	905,833	-	-
Silver	Export	2,026,986	-	-
	Domestic	53,259	-	-
Other	Export	262,229	96,071	-
	Domestic	416,706	17,284	-
Total	Export	4,668,016	560,392	
	Domestic	2,494,490	209,348	76,217
	Total	7,162,506	769,740	76,217

* Due to the difference in item classification between Onsan Refinery and the SMC, SMC sulfuric acid products are merged into 'Other.' and announced so. For more information on SMC sulfuric acid product sales, domestic sales, and exports, please refer to pages 13 and 20 of the 2021 Korea Zinc Business Report

Sales Strategy

Korea Zinc plans to strengthen communication, expand customer visits and technical support, and enhance work efficiency grounded on cooperation with the customers. Beyond producing products that exceed customer demands, Korea Zinc will struggle to serve the exceptional value through strict quality control.

Besides, long-term contracts with major customers will enable stable product sales, and continuous communication will enable proactive identification and response to customer demands.



Chapter 2.

Sustainability

KOREA ZINC SUSTAINABILITY REPORT 2021

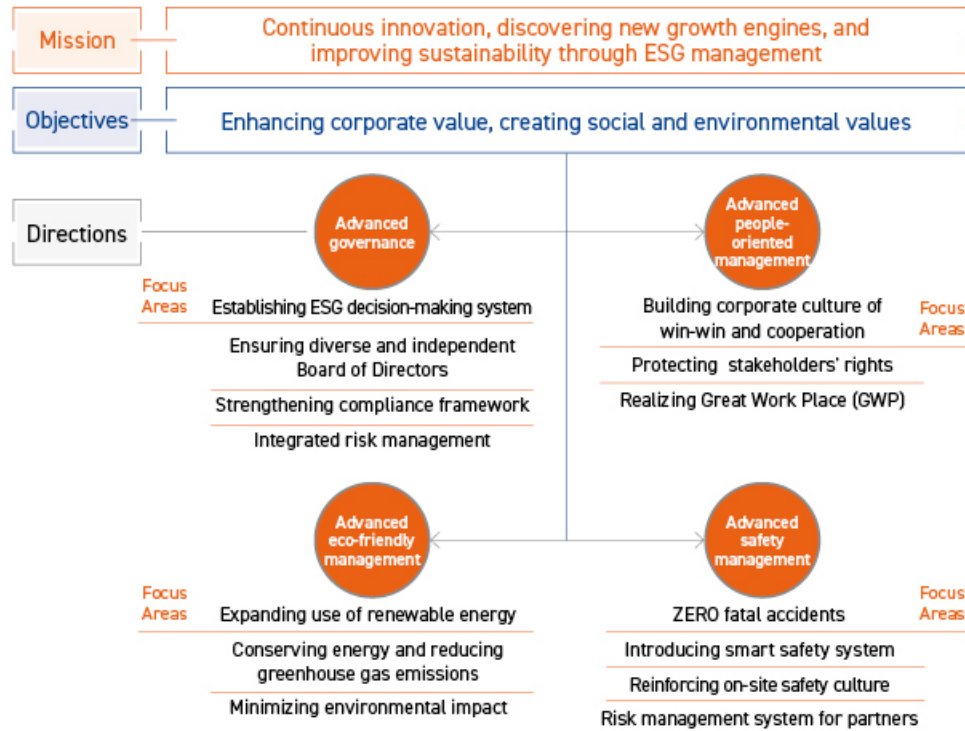
– Strategy & System

Business Ethics
Anti-Corruption
Fair Transaction
Risk Management
Human Rights
Research and Development (R&D)
Conflict Minerals
Tax
Safety and Health
Environmental Management
Green Purchasing
Biodiversity
IT & Cyber Security
Shared Growth
Social Contribution
Stakeholder Communication

STRATEGY & SYSTEM

Korea Zinc sets four main objectives to achieve healthy growth and development: 'advanced governance', 'advanced people-oriented management', 'advanced eco-friendly management', and 'advanced safety management'. Korea Zinc aims to create meaningful corporate, social, and environmental values via authentic and systematic sustainable management.

Strategies



Operating System

Organizational Structure

In 2021, Korea Zinc established an advisory body directly under the CEO, titled 'Sustainability Management Committee', along with Sustainability Management Division and ESG Management Team, dedicated to the job. Sustainability Management Division is responsible for sustainable management and ESG business, reporting activity and performance regularly to the committee.



Sustainable Development Goals (SDGs)

Features of SDGs

UN SDGs Promotion Report

SDGs, as put forward by the United Nations, encompass 17 management objectives for the period of 2016 to 2030 to solve various social and environmental problems for realizing harmonious development between humankind and nature. Korea Zinc supports the SDGs and aligns with sustainable management or objectives, thereby minimizing negative social and environmental effects of its business activities and contributing to achieve objectives.



UN SDGs	Activities of Korea Zinc		Page
 1 No poverty	End poverty in all its forms everywhere	Social contribution activities to reduce poverty for the socially vulnerable and underprivileged	78-81
 3 Good health and well-being	Ensure healthy lives and promote well-being for all	Strengthening safety-related institutions and operating related programs for employees and business partners	52-55
 4 Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Education programs on capacity building and life planning for all employees	77-78
 7 Affordable and clean energy	Ensure access to affordable, reliable, sustainable, and modern energy	Development and expansion of renewable energy, such as solar, wind, and hydrogen energy	19
 8 Decent work and economic growth	Promote inclusive and sustainable economic growth, employment and decent work for all	Creating new jobs and recruiting people through promoting new businesses	18-21, 86
 9 Industry, innovation and infrastructure	Build resilient infrastructure, promote sustainable industrialization and foster innovation	Increasing investment in minimizing environmental impact and participatory activities in institutions for a healthy industrial ecosystem	62-66
 11 Sustainable cities and communities	Make cities inclusive, safe, resilient and sustainable	Residential development projects to improve residential areas and buildings of lower-income families or welfare facilities	78-81
 12 Responsible consumption and production	Ensure sustainable consumption and production patterns	Continuous production through inter-industry circulation and cooperation	20
 13 Climate action	Take urgent action to combat climate change and its impacts	Conversion to renewable energy via energy conservation, greenhouse gas reduction, and the RE100	67-71

Business Ethics

Code of Ethics

Based on the Code of Ethics established in 2003, Korea Zinc conducts fair, transparent, and reliable management. The Code of Ethics serves as the basis for value judgment and decision-making in the works of all employees of Korea Zinc. In addition, ethics regulations provide more detailed guidance on the Code of Ethics. In 2021, Ethical Management Guidelines were separated for employees and the company, for more strengthened application.

1.

We place customer satisfaction as our top priority and gain trust from customers by improving the quality of products and services for transparent and trusted corporate management.
2.

We conduct business based on good faith and comply with relevant laws and regulations, ethics, and order of commerce.
3.

We carry out our work with integrity, sincerity, and passion, and we lead innovation based on expertise.
4.

We uphold the honor and personal dignity of the company and do not demand or receive any form of financial or non-monetary benefits from customers and counterparts.
5.

We do not use the company's property for personal gain, and if individual interests conflict with the interests during the business, we prioritize the company's interests and act accordingly.
6.

We strive to promote sustainable development and create a better world through social responsibility.

Ethical Management Guidelines (employees)

For all employees

Anti-corruption

- Employees keep in mind that bribery and corruption can undermine the company's ethical reputation.
- Employees do not accept or promise the any monetary and non-monetary bribes from anyone regarding their duties.
- Employees do not take unfair advantage of the company's assets or their position and do not allow third-parties to acquire them either.

Information protection

- Employees strictly protect and manage the company's business information and customer information acquired for work purposes.

Prohibition of conflict of interest

- Employees shall prevent any conflict of interest or relationship with customers or the company. If any, the employees shall immediately report all relevant information to the compliance team and the team head.

Anti-money laundering and insider transaction

- Employees shall not involve themselves or any other stakeholders that include the company, customers, partners, and suppliers in money laundering for the proceeds acquired through unlawful activities.
- Employees shall not engage in unfair activities such as market price manipulation or the use of undisclosed information acquired during the business.

Ethical Management Guidelines (Company)

For the company

No discrimination

- The company does not discriminate based on connections in acquaintance, family, educational backgrounds, gender, religion, age, disability, or marital status.

Free and fair competition

- The company respects the autonomy and creativity of each employee, offers equal opportunities based on each employee's ability and qualifications, and compensates accordingly.
- The company respects the free market economy order and competes fairly with competitors based on mutual respect.
- The company complies with a fair contract without making unreasonable demands or providing unreasonable support for a particular company using its status.
- The company complies with the laws and regulations related to fair trade, including the Monopoly Regulation and Fair Trade Act, and prohibits anti-trust and anti-competitive practices.

Environmental protection and conservation

- In establishing policy standards and procedures, the company considers the environment as a major factor and strives for eco-friendly business activities.
- The company complies with environmental regulations and shall prevent and manage disasters and preserve a clean environment.

Safety and health

- The company strives to create a comfortable and safe work environment and to prepare benefits and environments that balance work and life.
- The company actively takes necessary measures to protect its employees from occupational accidents and injuries, disasters, diseases and infectious diseases, and maintains a safe working environment.

Whistleblower system

- The company operates an easily accessible whistleblower system for employees.
- The company protects the personal protection of the whistleblower and takes necessary measures to ensure the whistleblower is not treated unfairly, discriminated against, or retaliated against.

Reports received through the official channel of Korea Zinc are thoroughly reviewed, and the company takes measures under internal disciplinary regulations when violations are detected. Korea Zinc is making efforts to improve awareness of fraudulent reports and ensure that the informant's identity is thoroughly protected.

Department in charge	Phone	Online channel
Audit Team	+82-2-519-3697	Whistle-blowing channel on company website (www.koreazinc.co.kr)

Reporting Channel

Violation and Actions Taken

Type	Unit	2019	2020	2021
Number of HR committees held	case	4	15	11
Number of disciplinary referrals	person	9	30	49

Anti-corruption

Anti-corruption is an absolute principle of transparent and trusted corporate management. Korea Zinc complies with international agreements and national & foreign laws on anti-corruption. We also established the anti-corruption principles to prevent, identify, and fix corruption that may occur in business activities.

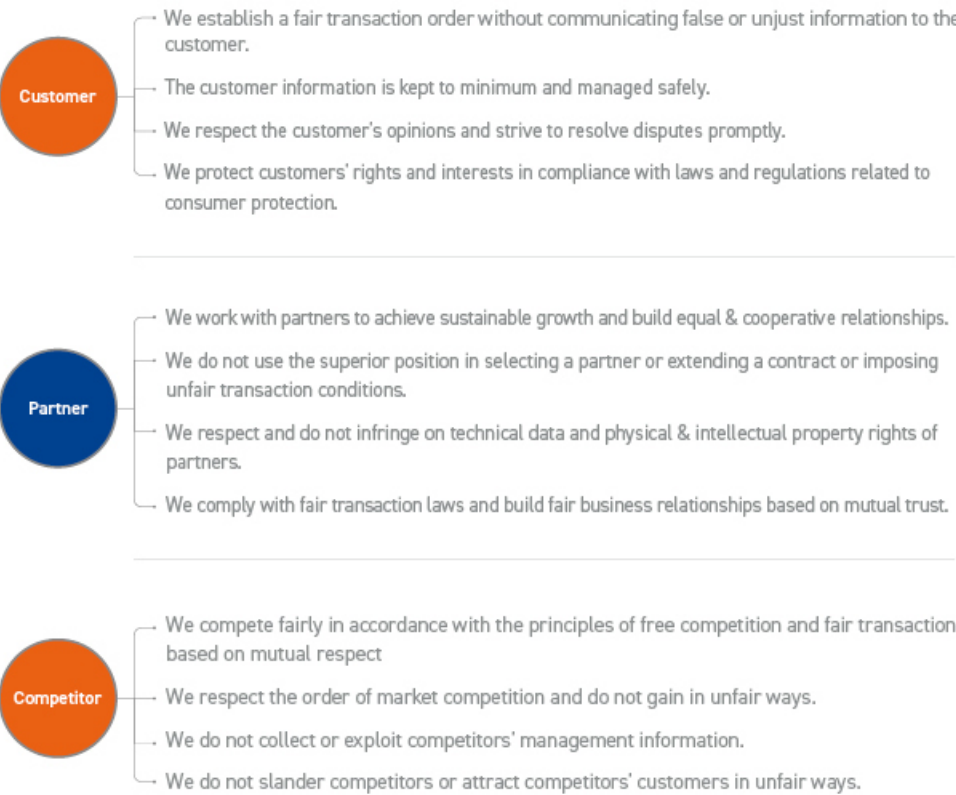
Principles

- We will fully input time, human resource, budget, facilities, and other resources in making, implementing, and maintaining policies & systems to prevent corruption.
- We will appoint those in charge of anti-corruption, identify the competencies required (related experience, education, training, etc.) and ensure their qualifications.
- When hiring, we will require compliance with the anti-corruption guidelines as a condition, where violations will lead to disciplinary measures authorized by the organization. Upon employment, we will share anti-corruption policies and provide related education and training. Those who refuse work that seems corrupt will be ensured not to be discriminated against, retaliated against, or receive any disciplinary actions.
- Prior to recruitment, rotation, and promotion of those exposed to corruption risk or those subject to anti-corruption policies, we will verify their compliance with related regulations. We will periodically review incentive systems to function as protection against corruption, and monitor employees' compliance with the anti-corruption regulations.
- We will raise awareness of corruption and the anti-corruption guidelines and provide regular training to employees on anti-corruption principles, corruption influences, corruption-prone conditions and ways to identify them, and bribery/solicitation response tips, and reporting concerns. Same training will be provided to related personnel at medium-level corruption risk or above (e.g. outsourcing, counterpart companies).
- We will communicate anti-corruption policies, systems, procedures, and ranges with related parties and stakeholders including contractors, suppliers and investors, etc. in an effective manner.
- Rational and appropriate measures will be taken to guarantee stakeholders are properly complying with anti-corruption guidelines.
- We will regularly check that employees are reasonably complying with anti-corruption policies and encourage them to comply with policies.
- We will prevent corruption and implement appropriate control measures through investigations of confirmed or suspected bribery.
- We will continue to monitor corruption and suspected activities. And we will also activate whistle-blowing.

Fair Transaction

Korea Zinc established the principle of fair transaction to promote employees' self-compliance with fair transaction, protect customer rights and interests, establish fair transaction order among partners and competitors, and create a fair-transaction culture that complies with laws and principles.

Fair Transaction Principles



The Four Practices

For fair transaction with partners, Korea Zinc implements four fair business practices for large-small business cooperation, introduced by the Fair Transaction Commission, in businesses with partners.



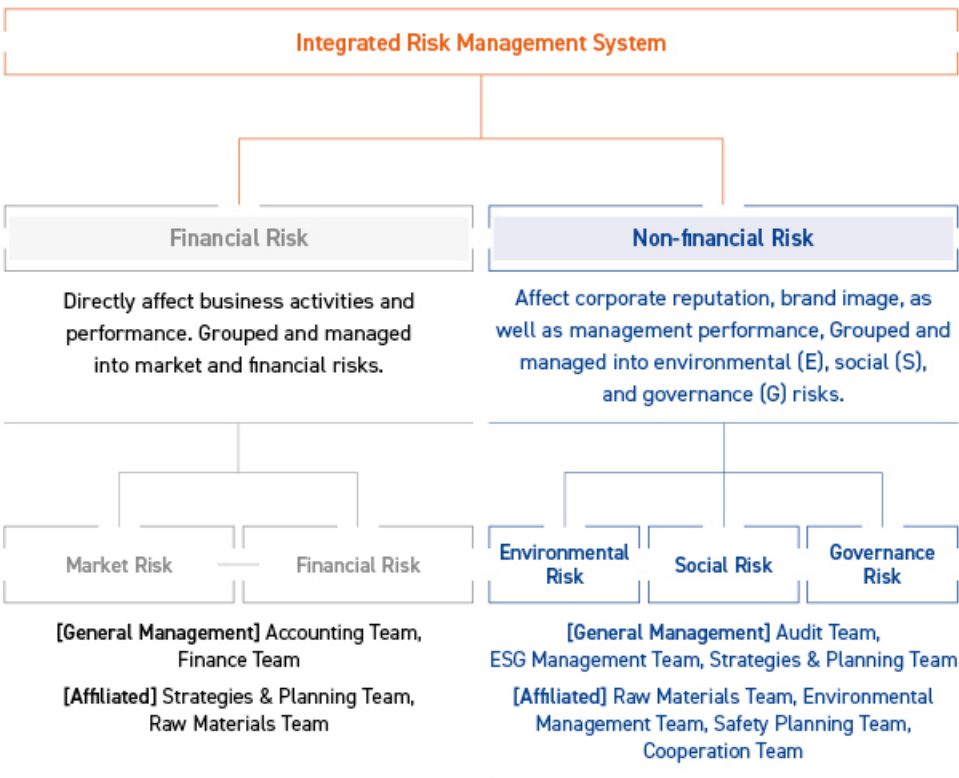
Risk Management

Korea Zinc operates an integrated risk management system to identify and prevent potential risk factors in advance, respond effectively, and minimize the negative impact. Risks that may affect Korea Zinc's business and operational activities are classified as financial and non-financial risks and managed by designated departments.

Risk Management and Action Plan

- Critical risks are determined through comprehensive consideration of the likelihood, severity of outcome, and current management, and are planned, and responded to appropriately.
- Measures to deal with risks include elimination of causes, reduction of impact, and acceptance for other opportunities, risk avoidance, sharing, or maintenance. Planning of these measures is divided into goal setting, planning investment and maintenance, improvement plan, and management standards.
- The results of the actions taken should be followed by process setting, improvement, and implementation, and effectiveness should be evaluated so the objective is appropriately targeted.

Risk Management System



Responding to market risks

Zinc, Lead, Gold, Silver, and Copper produced by Korea Zinc are major industrial metals and raw materials, whose demand and price are affected by trends in the industry and global economy. Korea Zinc identifies risk factors for each product and responds strategically. The price fluctuations of Zinc and Lead are monitored on monthly basis, using the London Metal Exchange (LME) prices and the currency.

Risk Factor and Impact of Major Product

	Zinc	Lead	Gold	Silver
Market and Policy Factors	Economic/material circulation policy	Environmental impact and regulations	Increase in premium products	Eco-friendly policies
Impacts	Increase in demand (industrial and raw material)	Decrease in demand and investment	Increase in demand (precious metal)	Increase in demand (solar power panels, etc)
Other factors (environmental or social aspects)	Climate Change issues such as floods or abnormal high temperature	Diffusion of electric vehicles	Human rights and social issues including child labor, forced labor, conflicted minerals, etc.	
Potential impacts	Reduced use of production facilities, decrease in production	Decrease in production	Suspension of mine development and transactions, investment withdrawal, etc.	

Exchange Risk Management

International market prices such as LME (London Metal Exchange) and LBMA (London Bullion Market Association), which affect the prices of Zinc, Lead, Gold, and Silver products of Korea Zinc, are based on USD. Korea Zinc checks and manages the effects of exchange rate fluctuations through regular sensitivity analysis of exchange rate fluctuations.

Price Risk Management

To manage the risk of fluctuations in prices of nonferrous metals, Korea Zinc fulfills a Natural Hedge strategy where the price of raw materials and selling price are at equilibrium. To this end, it applies the average price of LME (London Metal Exchange) from the previous month to the selling price and the price of MAMA (Month After Month of Arrival) or 2 months to the purchasing price of its raw materials.

Non-financial Risk Management

Non-financial risks including the environmental, social, and governance risks are increasing, such as increased climate change impact on business activities, corporate distress due to poor supply chain management, and reputational damage due to embezzlement and malpractice. In response to these changes in the business environment, Korea Zinc integrates financial and non-financial risks and manages them systematically, and strives to preemptively respond to various non-financial risks.

Principles to Managing Non-financial Risks

1. We recognize that non-financial risk is a crucial factor for the sustainable management of Korea Zinc.
2. We operate a system to identify potential non-financial risks before making business-related decisions.
3. We select and manage sensitive non-financial risks or those negatively affect sustainability management.
4. We assess non-financial issues in developing projects involving social and environmental impact such as the construction of production or facilities, thereby reducing or relieving the risks.
5. We communicate and disclose key policies related to non-financial risks to internal and external stakeholders.
6. Through the participation of all employees, we aim to reach a consensus on non-financial risk management and enhance management capacity.

Human Rights

Basic Principles of Human Rights

Korea Zinc respects human rights in doing business and strives to protect them. To this end, we have established basic principles to respect human rights and we try our best to eliminate potential violations in management activities. Korea Zinc complies with the law on labor and human rights, guarantees stable employment and appropriate wages, and supports the principles of human rights illustrated by the UN Human Rights Commission's 'World Human Rights Declaration' and 'Basic Guidelines on Business and Human Rights.'

In particular, as modern slavery, which violates the free will of workers, has emerged as a global human rights issue, Korea Zinc and its Australian subsidiary, SMC, have enacted and applied a policy to prohibit Modern Slavery in management activities.

No discrimination

Employees should not be discriminated against for nationality, race, age, gender, sexual orientation, disability, pregnancy, religion, political or union affiliation, marriage, etc. in employment, promotion, compensation, and other HR activities and services.

Humanitarian treatment

All employees are respected, and there should be no harsh or inhumane treatment, such as sexual harassment, punishment, mental or physical coercion, verbal abuse, or unreasonable work restrictions.

Prohibition of forced labor

We do not restrain mental or physical freedom and make individuals work against free will, such as assault, threat, confinement, and human trafficking. All work is voluntary, and we do not require workers to hand over government-issued identifications, passports, or work permits on condition of employment.

Women's and child labor

No child workers are employed in any position. 'Child' is defined as those below a certain age, as determined by the laws of each country or region. Young workers and pregnant women are excluded from dangerous work and we comply with working conditions, such as age restrictions, in accordance with the ILO (International Labor Organization)'s national ratification agreement.

Working hours

We comply with regular, overtime, and holiday-related regulations as specified by the laws of each country and region.

Wages and benefits

Payments paid to all workers comply with all applicable national and regional labor laws, including minimum wage, overtime, and legal benefits.

Freedom of association and collective bargaining

We recognize freedom of association and collective bargaining rights guaranteed by labor laws in each country and region and create an environment where workers can communicate with management on working conditions without fear of discrimination, retaliation, or intimidation.

Safety and health assurance

We comply with workplace health and safety laws.

Protection of personal information

The personal information of all stakeholders is strictly protected, and the information is not leaked or used for any other purpose without prior permission from the stakeholders.

R&D

Operating System

As of December 2021

R&D Performance

Investment in a New Business

Intellectual Property Rights

In order to maintain Korea Zinc's unrivaled technological competitiveness in smelting nonferrous metals, we operate a technology research institute. The Institute is committed to improving product quality and process innovation, as well as developing new technologies and securing them, such as by-product recycling for enhancing productivity and manufacturing rare metals. The Institute consists of Development Research Team for developing new processes and products, and Analysis Management Team for product quality, specification, and process management.



	Unit	2019	2020	2021
R&D expenses	million KRW	1,411	2,432	4,730
R&D expenses/sales	%	0.03	0.04	0.07

For the active promotion of the renewable energy business, Korea Zinc signed a stock purchase agreement (SA) in December 2021 to acquire a 100% ownership of Epuron, an Australian renewable energy development company, for 31.5 million (USD). Established in 2003, Epuron specializes in all related work 'one-stop', including the development and licensing of new renewable energy such as solar and wind power, EPC (Engineering, Procurement, Construction) projects, and performance monitoring.

In January 2022, Korea Zinc decided to invest 50 million (USD) in Energy Vault, a Swiss energy storage system developer. Evx, developed by Energy Vault, is a new concept energy storage platform that uses an electric motor to lift 30 tonnes of blocks when there is room for power supply, and generates power by sequentially lowering the blocks when there is insufficient power supply. Korea Zinc plans to install Evx near its Australian subsidiary Sun Metals Corporation (SMC) refinery to ensure a stable power supply undisturbed by the weather conditions.



[Renewable energy development]
Website: epuron.com.au



[Energy Storage System(ESS) development]
Website: www.energyvault.com



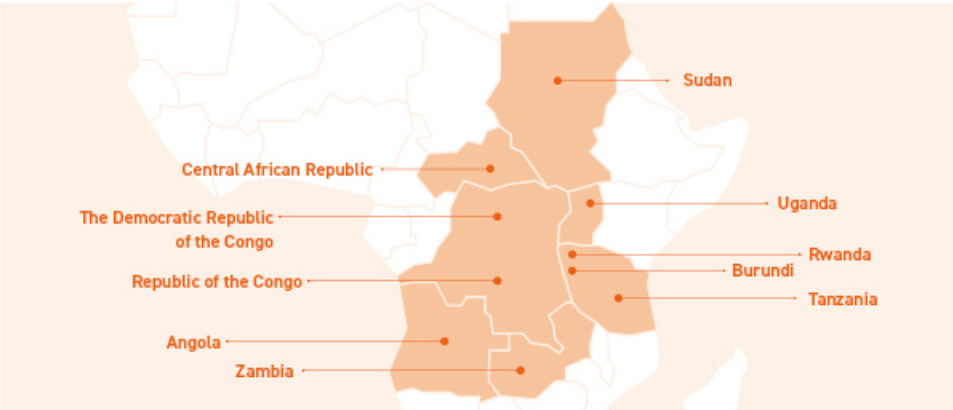
As of December 2021, Korea Zinc has a total of six trademark rights, including the trademark "KZ" marked on its representative products such as Zinc ingots and Lead ingots, and holds patent rights for 11 cases.

Conflict Minerals

Armed groups that seize the mines in the conflict areas are likely to mine using child labor and forced labor, and mineral sales funds are used to purchase weapons and suppress residents. To block the inflow of funds into armed groups in conflict zones and prevent the use of minerals involved in accounting irregularities, Korea Zinc established principles and standards for conflict mineral management through the Supply Chain Management Policy enacted in 2016.

Scope of Conflict Minerals

The conflict minerals recognized by Korea Zinc include the four major minerals (3GTs) mined in conflict zones in Africa, which are Tin, Tantalum, Tungsten, and Gold, and additionally, Silver.



Conflict zones (10 countries in Africa)

Conflict Minerals Management Principles and Standards

Korea Zinc does not use conflict minerals (Tin, Tantalum, Tungsten, Gold, and Silver) produced through inhumane processes or involved in accounting irregularities.

- To establish a responsible supply chain, Korea Zinc is joining global efforts to secure a legitimate and ethical supply of Gold and Silver not involved in crime, armed conflict, or human rights abuses.

We strictly comply with the following policies based on honesty and transparency.

- There is no tolerance for direct or indirect bribery and corruption, and we comply with the general regulations on anti-money laundering.
- We do not launder cash or avoid taxes, and we make necessary efforts to prevent money laundering related to conflict minerals.
- Gold and Silver produced in areas where armed conflict or human rights abuses are involved are not supplied.

Korea Zinc executes the following for responsible management of the supply chain.

- When receiving raw materials from conflict and dangerous areas, we conduct a Due Diligence Survey according to the OECD Due Diligence Guide for the suppliers and conduct the same for the subcontractors to assess reliability and risk identification.
- We will purchase conflict minerals in accordance with the responsible supply chain management policy, and to prove this, we provide information on the Due Diligence Survey and request the supplier to cooperate.
- We ensure that we will not do business with suppliers that do not comply with responsible supply chain management policies.
- We aim to maintain a long-term relationship with suppliers to serve as a lever for responsible supply chain management of suppliers.

Tax

As a global company, Korea Zinc considers it important to comply with tax laws and institutions and manage tax risks. Korea Zinc faithfully complies with tax laws set by the state, pays taxes sincerely on realized profits, and prepares standards and procedures to effectively and systematically manage tax risks. Chief Financial Officer (CFO) oversees tax affairs and reports them to management and the Board of Directors when tax issues have a significant impact on the business.

Tax principles and standards

Compliance with national tax laws and international regulations

We strictly comply with the laws and regulations of the tax authorities in all domestic and foreign transactions, and preemptively identify and respond to enactment, revision, rules, and precedent creation.

Tax risk management

We strive to minimize tax risks related to Korea Zinc management activities and identify tax issues and impacts before making important decisions. In addition, evidence of the decision-making is recorded and stored in a standardized document. If it is deemed necessary, we receive advice on effective/efficient management of tax risks from specialized institutions such as law firms, accounting firms, and tax firms.

Tax report and payment

Korea Zinc faithfully fulfills its tax reporting and payment obligations in accordance with the laws of the country where profits are realized through business and faithfully fulfills the taxpayer's obligations required.

Eliminating tax avoidance

Korea Zinc does not make transactions for the purpose of transferring income between countries or avoiding taxes by taking advantage of differences in laws, deficiencies in the international tax system, and tax havens. We endeavor to ensure that profits realized are legally and consistently taxed in accordance with relevant laws and regulations.

Compliance with normal transactions

Korea Zinc maintains a transaction structure consistent with regulations for transactions with affiliated international parties. To prevent improper risk allocation and income transfer, it is important to thoroughly understand transaction details with overseas corporations through the Transfer Price of internal standards based on OECD Guidelines* and Base Erosion and Profit Shift Guidelines.

Respect for the customs office

Korea Zinc strives to establish a constructive and cooperative relationship based on mutual trust and respect with the tax authorities of the site country and faithfully responds to tax investigations or requests for related data.

Transparency, accuracy, and objectivity of tax information

In order to ensure transparency in the tax burden, the relevant information is disclosed to stakeholders of Korea Zinc without concealing, distortion, or exaggeration. The audit report discloses the criteria for calculating corporate tax expenses, deferred tax assets and liabilities, composition details of corporate tax expenses, and tax rates in financial statements and annotations, and secures the accuracy and objectivity of related information through external audits.

* OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations and with local tax laws in each country

Safety and Health

Safety and Health Policy

With the goal of "zero serious accidents," Korea Zinc has issued a safety declaration and established a safety & health policy in safety to ensure that the work site is safe for all employees. We will do our best to build a safety culture in the workplace and that of our partners through various safety capacity-building activities, which also cover their employees.

1. Establishing a safety-first culture

When establishing management activities, regulations, or making decisions, Korea Zinc prioritizes securing the safety of facilities. The safety and health management system is periodically reviewed and certified, and the results are disclosed transparently.

2. Internalization of safety and health objectives

All organizations of Korea Zinc comply with safety and health laws, regulations, and other requirements and are actively involved in activities to set and achieve safety and health goals.

3. Strengthening the safety management capacity of employees

All employees of Korea Zinc recognize safety and health activities as mandatory, actively participate in the prevention of accidents and occupational disease, and concentrate their company-wide capabilities by identifying and removing risk factors in advance.

4. Strengthening support for safety and health of partner companies

Korea Zinc achieves a safe and pleasant workplace by strengthening safety and health capabilities through education and training and by laying the foundation for cooperative development with partner companies.

5. Advancing safety and health systems

Korea Zinc operates a safety and health system with sustainable & practical standards with continuous improvements, in which all employees actively participate.

Golden Rules in Safety

Six rules that must be recognized and followed in all work at Korea Zinc are defined as Golden Rules. All employees and partner workers must comply with the fundamental safety rules.



Do not dismantle or damage
safeguarding equipments
(Safety fence, emergency stop device)



Obey the work zone speed limit
Fasten the seat belt
Do not use cell phone



Wear personal protective equipment



Use fall protection when working at
heights of 2 metres or higher
(safety harness)



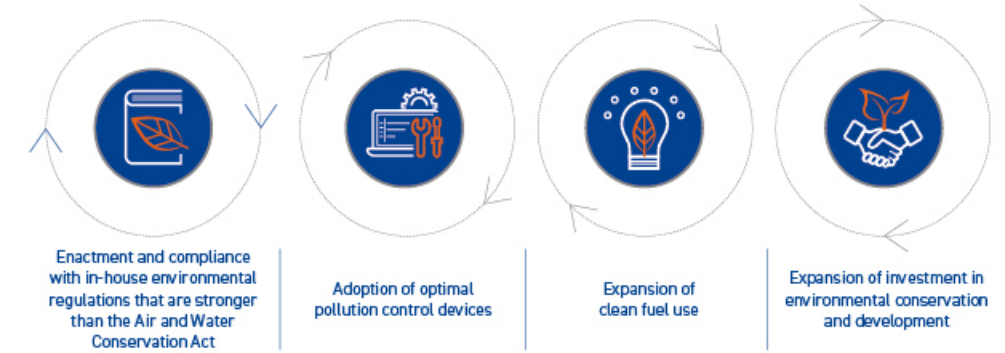
Monitor oxygen and toxic gas level
before entering a confined space



Get authorization for operations after
facility maintenance

Environmental Management

Environmental Management Goals



Environmental Management Policy

1. The environmental management system is established, operated, and continuously developed to minimize the environmental impact caused by business activities.
2. All employees participate in eco-friendly management and production of world-class products simultaneously.
3. We comply with environment regulation, strengthening preventive environmental management activities for preventing environmental accidents.
4. We set environmental goals, quality standards, and safety goals for detailed action plans, and conduct performance evaluations to make consistent improvements.
5. We establish the roles and responsibilities for environmental preservation, and provide environmental awareness and education for employees.
6. We keep environmental awareness by participating local conservation programs.

Environmental Management System ISO 14001 Certification Obtained



ISO 14001 Certification

Korea Zinc's Onsan refinery has been maintaining ISO 14001 certification, which is an international standard for environmental certification since 2015 when it first obtained it. Korea Zinc regularly evaluates the environmental management system through independent specialized institutions and improves tasks.

*ISO 14001(Environmental Management System) Certification: ISO 14001 certification is an international standard for environmental management system that can be applied to all industrial fields and activities, and environmental risks can be managed efficiently by identifying, evaluating, managing, and improving environmental management levels.

Green Purchasing

Since environmental overload might result from production or facility maintenance, Korea Zinc established environmental standards for purchased products through 'Partner Evaluation and Management Regulation' in 2005, and specified green buying regulations thereof. Korea Zinc aims to achieve eco-friendly management via green buying principles for basic materials, consumables (MRO), civil engineering, construction, electricity, and chemical facilities.

Promoting Green Purchase

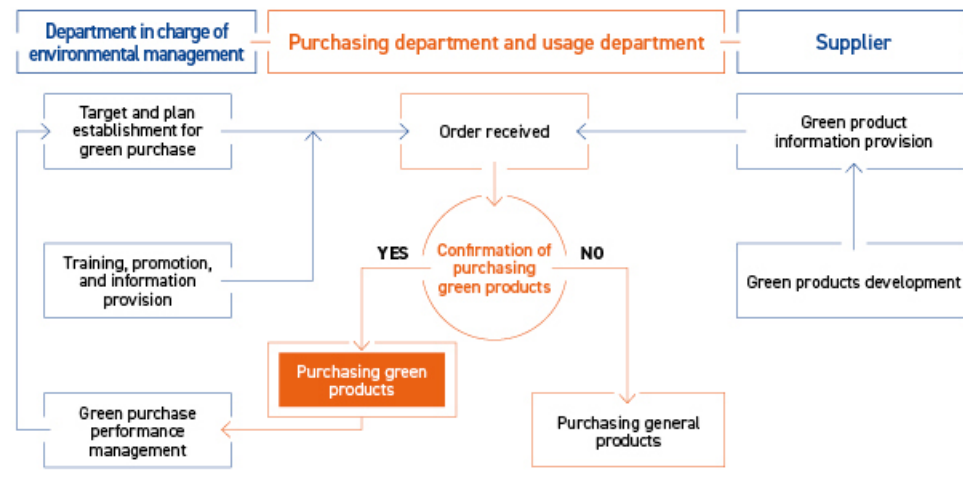
1. Green purchase of Korea Zinc considers eco-friendliness in the entire process of product production and business operation.
2. Korea Zinc will achieve green purchase by purchasing certified products from basic materials to consumables (MRO), civil engineering, construction, electricity, chemical facilities, and services.
3. The related department will monitor and manage green purchases in environmental affairs and purchasing of materials, to expand green purchases throughout the company.
4. For sustainable growth, Korea Zinc will take into account the environmental impact of purchased goods and take diverse measures for green purchases.
5. We will actively support reviewing the purchase of green products at the request of the related departments.
6. Means and measures for green purchase will be considered in establishing a purchase plan.

Certification Range of Korea Zinc Green Purchase

Recognition as a green purchase follows the Environmental Technology and Environmental Industry Support Act, and purchases with certification from abroad will be examined through internal standards.



Green Purchase Process



Biodiversity

Commitment policy

Korea Zinc strives to minimize the negative impact on biodiversity occurred during business activities, in areas near the worksite. To this end, we identify the animal and plants in the area where the worksite is located, check the habitat of endangered species, and analyze the potential impact of management activities.

1. Korea Zinc will comprehensively predict, analyze, and evaluate the impact on the environment in promoting projects and policies, examine biodiversity, and continuously monitor its impact.
2. All workplaces covered by the World Heritage area* and IUCN Category I-VI protected area** will comply with the legal requirements of countries, and regions.
3. We will conduct an environmental impact assessment, considering the socio-environment and characteristics of each country and region where workplaces are located.
4. With the protection of endangered rare and endemic species as a top priority, we will support the initiatives of the country and region where the workplace is located to protect biodiversity and make sustainable use of resources.
5. We will continue delivering education and information to enhance their knowledge and understanding of biodiversity protection issues, for a consensus among employees and stakeholders.
6. We will strive to achieve a No Net Loss (NNL) and Net Positive Impact (NPI) that offset biodiversity degradation caused by business activities in areas with critical habitats, through restoration efforts.

In order to protect the ecosystem of creatures living around the workplace, Korea Zinc will continue to comply with the biodiversity policy, regularly monitor pollution levels, and if necessary, work with specialized institutions to evaluate the impact on biodiversity.

* World Heritage Site

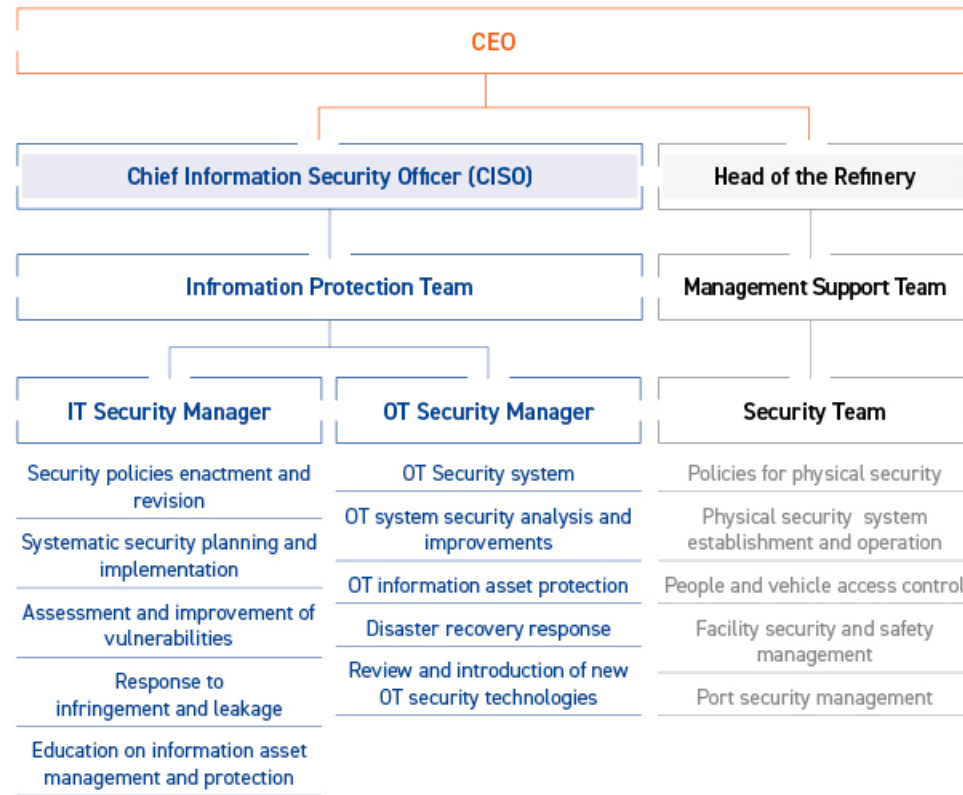
** World Conservation Union-designated protected areas for biodiversity protection, national parks, natural monuments, geological topography, habitat/species management areas, ecological, biological, and cultural values, and sustainable natural resource use areas



IT & Cyber Security

Information Protection Systems and Functions

Korea Zinc continues to make various efforts to strengthen corporate competitiveness, and protect its information assets from cyber threats and information leakage accidents. In order to systematically manage important information assets such as core technologies, trade secrets, and personal information, Korea Zinc established an information protection team under the Chief Information Security Officer (CISO) in 2021 to detect and respond to various security threats and information leakage risks.



Information Protection Policy

Korea Zinc has established information protection policies and regulations for all employees, to raise awareness of information protection and to protect customer value. For tangible and intangible assets, including core technologies and personnel, we take necessary administrative, technical, and physical measures required for prevention, detection and management of security incidents. Internal policies are enacted and revised to monitor the latest trends and comply with various regulations.

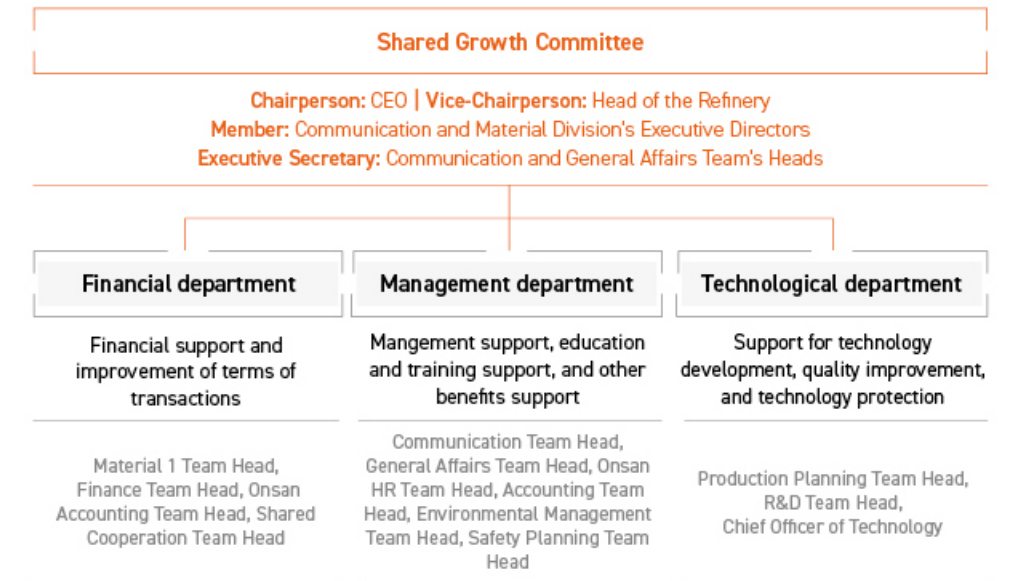
Policy

1. We protect the company's information assets from infringement attacks, illegal access, and leaks.
2. We comply with various legal security requirements related to information protection.
3. We promote a sound security culture through education, inspection, and communication.
4. Appropriate investment and a reasonable level of control are maintained to strengthen information protection.
5. We cooperate with partner companies and strive to improve the security system.

Shared Growth

Shared Growth System

The history behind how Korea Zinc became the global No.1 nonferrous metal refinery company can be dedicated to cooperation with partners. Korea Zinc will spare no effort in support to grow with partners. To promote systematic shared growth, we conduct activities under the objectives: 'establishing win-win management practice and fair trade order,' 'fostering excellent partnership and enhancing competitiveness,' and 'strengthening the competitiveness of Korea Zinc.'



As of December 2021, Korea Zinc has made joint growth agreements with 82 partners. To enhance the management stability of partners and promote effective shared growth, Korea Zinc conducts various activities such as financial support, improvement of transaction conditions, technical support, quality improvement, technical protection, education and training, benefits, incentives, and reflection of raw material price increase on delivery unit price, and long-term supply contract.

Major Activities of Shared Growth



Social Contribution

Social Contribution Promotion System

Korea Zinc's social contribution activities aim to develop a healthy society and contribute to solving social problems, with sincerity. With belief that sharing and caring are the driving forces for our future and the company, Korea Zinc will actively carry out social contribution activities for a happy world for everyone.



Donation and Sponsorship Policy

Donations and sponsorship projects conducted by Korea Zinc as part of social contribution are operated ethically and compatibly with management activities. In accordance with Article 31 of the Korean Political Funds Act, Korea Zinc does not donate with a purpose of influencing policies. Also, we do not donate or sponsor companies in legal or financial conflict or affiliated with a particular political party or organization.

1. The donation and sponsorship of Korea Zinc shall be made through a legally established charity only when it complies with the relevant laws and aims for clear charity.
2. Donations or sponsorship shall not be made in connection with auctions, bids, contract renewals, or future business relationships. In addition, the company shall not use donations or sponsorship agreements as a means of obtaining favorable terms from the organization or its affiliates or related parties.
3. Donations or sponsorship must comply with ethical management policies, such as the principle of preventing bribery and preventing corruption, and cannot be made without the approval of the exclusive right holder.
4. No employee may provide financial payments or other contributions to a political party, political enterprise, or candidate.

Article 31 of the Political Funds Act

Restriction on Donation [Act No. 18842, April 20, 2022]

- ① Foreigners, domestic and foreign corporations or organizations shall not donate political funds.
- ② No one shall donate political funds with funds related to domestic or foreign corporations or organizations.

Stakeholder Communication

Communication Channels

According to stakeholder classification standards proposed by ISO 26000, an international standard for CSR, Korea Zinc systematizes and manages stakeholders into shareholders, investors, customers, employees, partners, and local communities. Korea Zinc identifies the interests and needs of stakeholders regarding the business activities and regularly checks activities' impact on stakeholders. To this end, communication channels such as website, reports and SNS, for each stakeholder are established, through those channels, Korea Zinc share major activities, events, achievements and plans.

Based on transparent disclosure of management information, Korea Zinc will hear out for sincere communication with stakeholders.

Stakeholder	Major Interest	Communication Channels	
		Shared	Separate
Shareholder, Investor Shareholders and investors holding shares or bonds issued by Korea Zinc	<ul style="list-style-type: none"> • Top decision body • Management strategy and investment planning • Compliance • Financial and non-financial performance • Risk management, etc 		<ul style="list-style-type: none"> • General meeting of shareholders • Corporate Governance Report • Investor meetings (IR, NDR, Conference Call), etc
Customer Domestic and foreign companies that purchase products manufactured and produced by Korea Zinc	<ul style="list-style-type: none"> • Product quality and safety • Product price competitiveness • Product Terms and Conditions • Brand reputation, etc 		<ul style="list-style-type: none"> • Customer Satisfaction Survey • Korea Zinc Company brochure, etc • Voice of Customers (VOC)
Employee Employees working through a contract with Korea Zinc	<ul style="list-style-type: none"> • Work-life balance • Labor-management relations • Benefits program • Assessment and compensation • Strengthening of business capabilities, etc 	<ul style="list-style-type: none"> • Website (www.koreazinc.co.kr) • Sustainable Management Report • Social Network Instagram (www.instagram.com/koreazinc) • Youtube (Korea Zinc TV) 	<ul style="list-style-type: none"> • In-house Portal (KZ Groupware) • Company magazine (KZ PEOPLE) • Collective Bargaining • Counseling Office, etc
Partner A company that provides goods or services to the operation of a zinc facility and production of products, and its employees	<ul style="list-style-type: none"> • Fair trade • Shared growth • Win-win cooperation • Supply chain management policy, etc 		<ul style="list-style-type: none"> • Meeting of business partners • Joint Growth Promotion Committee • Company website
Local Community The government, related agencies, and organizations, NGOs, residents in the vicinity of Korea Zinc	<ul style="list-style-type: none"> • Community influence • Social contribution (donation and sponsorship) • Addressing Climate Change • Participation in government policy • Revitalization of industrial ecosystems, etc 		<ul style="list-style-type: none"> • Regional briefing sessions and meetings • Regular meetings with donation and sponsorship organizations • Membership association workshops, conferences, etc



Chapter 3.

Performance

KOREA ZINC SUSTAINABILITY REPORT 2021

— Materiality Assessment

Creating a Safe Work Environment

Establishing an Advanced Governance Structure

Minimizing Environmental Impact

Responding to Climate Change

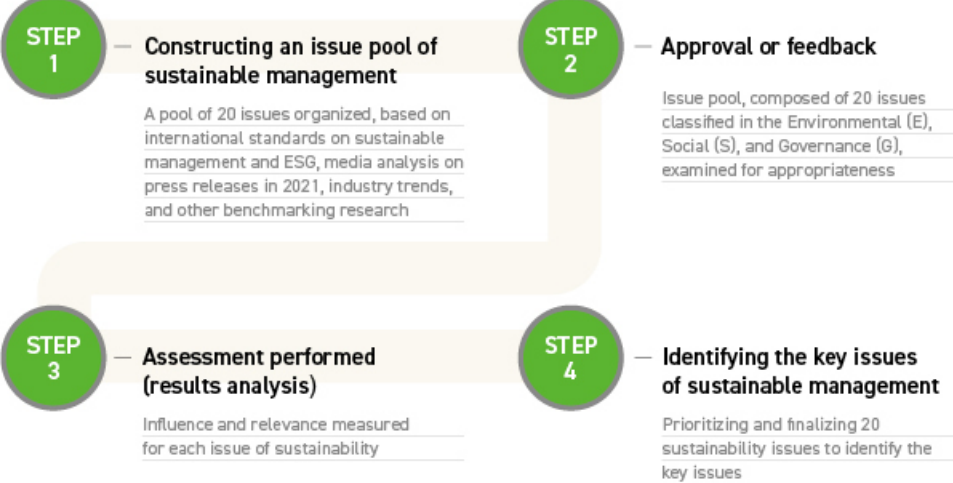
Recruiting and Maintaining employees

Spreading Social Contribution

MATERIALITY ASSESSMENT

A materiality assessment was performed to sort out major issues among a range of sustainable management. The assessment followed standards and methodology provided by GRI Standards, for sustainability reports. For a balanced pool of issues on sustainability influence on management activities of Korea Zinc, relevance with internal management and business performance, and the level of stakeholders' interests have been taken into consideration.

Process for
Selecting the Key
Issues



Overview of
Issue Pool

Sustainability issue pool of 20 issues has been was organized based on global standards (e.g. ISO 26000, UN SDGs, SASB), media analysis, and benchmark research.

No	Sustainability management Issue	Classification	No	Sustainability management Issue	Classification
1	Creating Safe Work Environment	Social	2	Establishing Advanced Governance Structure	Governance
3	Minimizing Environmental Impact	Environmental	4	Responding to Climate Change	Environmental
5	Recruiting and Maintaining employees	Social	6	Spreading Social Contribution	Social
7	Supply Chain Management	Social	8	Management Accountability and Transparency	Governance
9	Strengthening Nonfinancial Risk Management	Governance	10	Mutual Growth and Cooperation	Social
11	Human Rights Management System	Social	12	Advancing Environmental Maintenance System (EMS)	Environmental
13	Diversifying Board of Directors	Governance	14	Strict Management of Intellectual Property	Social
15	Honest Tax Payment	Governance	16	Active Communication among Stakeholders	Social
17	Corresponding with Environmental Regulations and Initiatives	Environmental	18	Guaranteeing Independence of Independent Directors	Governance
19	Effective and Efficient Water Resources Management	Environmental	20	Conserving Biodiversity	Environmental

Materiality
Assessment

Assessment Results

- [ESG Sector]
- Environmental
 - Social
 - Governance

To grasp the significance of 20 Sustainability issues, influence on Korea Zinc management activities and relevance to the business have been measured. Through analysis of relationships with financial performance including sales and profits, branding, and the level of stakeholders' interests, six key sustainable management issues have been identified.



Overview of Key
Issues

Key Sustainability issues in 2021 that have a large impact on Korea Zinc's management and are highly related to business activities are 'Creating Safe Work Environment,' 'Establishing Advanced Governace Structure,' 'Minimizing Environmental Impact,' 'Responding to Climate Change,' 'Recruiting and Maintaining employees,' and 'Spreading Social Contribution.'

Korea Zinc Report focuses on six key sustainability issues in separate chapters.

Stakeholder Boundaries by
Key Issues

Category	Stakeholders					Page	GRI Standards
Key Issue	Shareholders /Investors	Customers	Suppliers	Employees	Local Communities		
Creating a Safe Work Environment	●	●	●	●	○	52 ~ 55	403-1~7, 403-9~10
Establishing an Advanced Governance Structure	●	○	○	●	○	56 ~ 61	N/A*
Minimizing Environmental Impact	●	○	●	○	●	62 ~ 66	301-1
Responding to Climate Change	●	○	○	○	●	67 ~ 71	305-1~2, 305-4~5, 305-7
Recruiting and Maintaining Employees	○	○	○	●	○	72 ~ 76	401-1~2, 404-1~2
Spreading Social Contribution	○	●	○	●	●	77 ~ 81	413-1

* Issue associated with GRI 102 Universal Standards item and is not associated with Topics specific Standards

Creating a Safe Work Environment

Korea Zinc tries the best to construct a safe culture and realize a zero-hazard environment for every person from the executives to front-line workers, to safely carry out the work. The Onsan refinery prioritizes 'Ensuring everyone's health and safety' and ultimately aims to achieve zero-disaster, by adopting new establishing an effective system and improving the existing policies. Korea Zinc will abide by the new intensified regulations such as the Severe Disaster Punishment Act, as well as the safety-related demands of stakeholders.

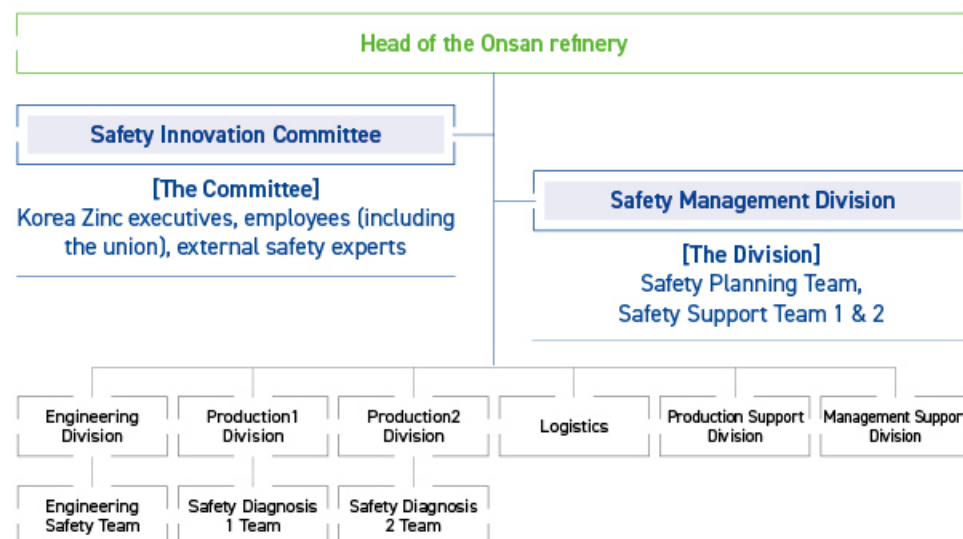
Importance of Creating Safe Work Environment

The refining of nonferrous metal business model of Korea Zinc is always accompanied by risks of accidents during the producing procedure and operation of the facilities. Products are produced at very high temprature using chemicals, which may cause fire and leakage accidents. Falling, fracture, suffocation, jams, and burns are possible risks that lie in operating and inspecting the production facilities. These accidents can be fatal and lead to undesirable results, which is why safety cannot be overemphasized.

Healthy and Safety Management System

Korea Zinc's chief safety and health officer is the head of the refinery, and each division has a safety and health general manager. In order to create a safe work environment and establish a safety culture, the refinery head oversees all activities such as safety management inspection, diagnosis, and improvement in the refinery as well as safety-related investments. The Safety Management Division which is in charge of safety management of Onsan refinery, provides safety management strategies and policies, planning activities, execution management, business support including administration and education, management and evaluation of performances, and apply the Plan-Do-Check-Act (PDCA) cycle to improve safety management. In addition, the safety diagnosis team under the production division is responsible for discovering and removing risks from workplaces and guiding workers, and safety officers from each team are performing safety-related tasks. In July 2021, the Safety Innovation Committee under the head of the refinery was launched to make zero of serious accidents.

Safety Management Structure at Onsan Refinery



Safety and Health Management System Certification

ISO 45001 & KOSHA-MS Certification



The safety and health management capability of Onsan refinery is certified through OHSAS18001 and KOSHA18001. In 2020, the certification has been converted to ISO 45001, a global safety standard, and KOSHA-MS, a safety standard of Korea, thereby operating an improved and advanced level of safety and health management system.

Korea zinc aims to create a safe work environment for all employees and partners by strengthening safety awareness and preventing safety-related risks. Onsan refinery establishes safety management plans and implements them, reporting quarterly to the executives. From 2021 on, it is required that the annual performance and plans for safety and health are reported to the board of directors for approval.

Process Safety Management (PSM)

12 Elements of Process Safety Management

The Serious Accident Punishment Act (SAPA), enacted in 2021, and medium- to large-scale accidents during processing (fire, explosion, leakage, etc.) signaled the significance of safety management. Korea Zinc consistently invests resources and capacity to ensure safety in compliance with the PSM guidelines, for target processes. For others, an equal level of the management system is guaranteed, with system advancement followed.

- 1. Process safety data**
Definition: The most basic data for operating a process
Purpose: To ensure safe operation and work based on systematically managed process safety data (drawings/ documents, etc.)
- 2. Risk assessment**
Definition: Identify and eliminate risk factors
Purpose: To reduce the possibility of risk by reviewing and improving potential risks that may occur during work and operation
- 3. Safe operation guide**
Definition: Detailed procedures for operating the process safely
Purpose: To operate efficiently and safely in various types (normal/abnormal operation, shutdown, startup)
- 4. Equipment inspection and maintenance**
Definition: Inspection/check/maintenance procedure to secure facility safety
Purpose: To document facility management methods/standards, to classify facilities according to importance, and to perform maintenance according to the plan
- 5. Permit to safe work**
Definition: Permission system for identifying/removing risk factors for work
Purpose: To execute/confirm/approve safety measures to protect workers and facilities before dangerous work (fire/ confined space/ electricity)
- 6. Contractor safety management**
Definition: Securing the same level of safety for contractors as Korea Zinc
Purpose: To secure the safety of the contractor's process/work so that the contractor is managed at the same level as the safety standards of the contractee
- 7. Worker training plan**
Definition: All training for safe work performance of workers
Purpose: To prevent process accidents by establishing and implementing an education plan for all personnel related to the PSM system
- 8. Pre-operation inspection guidelines**
Definition: Check and remove risk factors before facility operation
Purpose: To check before operating the facility for safe operation after new facility installation and process change
- 9. Change factor management**
Definition: Prior risk review of changes
Purpose: To safely operate/manage the process by reviewing so that there is no additional risk when changes occur, and checking the necessary procedures/data
- 10. Self-check**
Definition: Self-check on PSM implementation status
Purpose: To continuously improve by self-evaluating/confirming whether each element of the PSM system is being faithfully implemented according to the guidelines
- 11. Investigation of accidents**
Definition: Identify the causes of accidents and establish measures to prevent recurrence
Purpose: To prevent similar/same type accidents by establishing causes/countermeasures by conducting investigations in a timely manner to prevent larger accidents
- 12. Emergency actions**
Definition: Prompt response in case of emergency and protection of life/property
Purpose: To minimize human/material/environmental damage by promptly responding to emergencies

Preventive Measures at Work

Preventing Jams

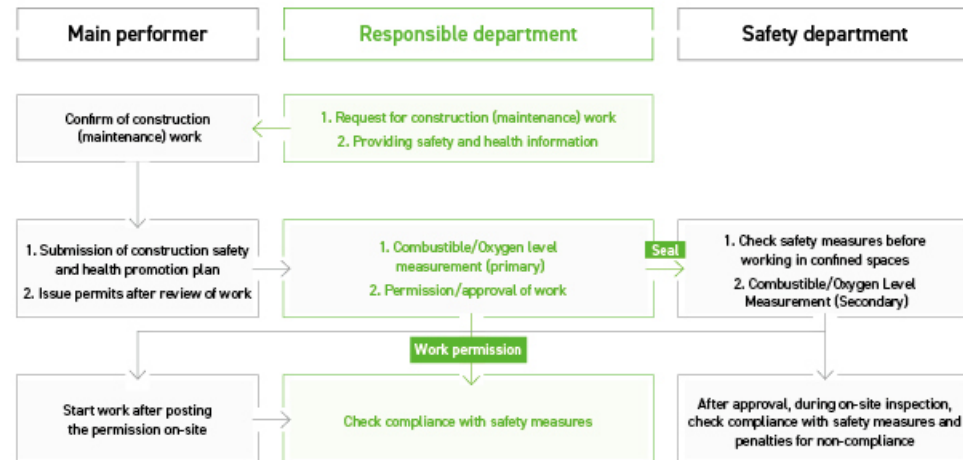
Korea Zinc classifies accident types and conducts various accident prevention activities to prevent accidents that may occur during product production and facility operation.

At industrial sites, 'falling' at construction sites and 'being stuck or jammed' at manufacturing sites accounts for a majority of accidents. To prevent jams, Korea Zinc adopts Lock-Out, Tag-Out (LOTO) procedure, which means installing locks and notice in the machinery, control panels, switch boxes, or valves, and stops the workers from starting the machines by accident during maintenance, cleaning, repair, etc.

Preventing Suffocation

The mortality from suffocation reaches 52.9%, compared to general accidental disasters at 1.2%. To avoid suffocation accidents, safety regulations on confined spaces, roles, and procedures are fully documented. Also, thorough procedures of working in confined spaces are carried out, such as establishing safety plans prior to work, preceding confirmation and approval on safety measures, delivering approval details, training, and supervision.

Process of Work in Confined Spaces



Prevention of Non-routine Work Accidents

In order to prevent safety accidents of sudden facility operation during non-routing work (e.g. maintenance, cleaning), Korea Zinc abides by LOTO regulations for the safety of workers.



Left_ Work safety rules sign attached
Right_ Manipulation prohibition sign
white working on the control panel

Training for Risk Foresight

Korea Zinc provides training to foster ability to proactively remove risk factors and avoid them at the encounter of similar situation, using pre-discovered risk factors and extensive discussions on risk points.

ZERO Serious Accidents

For ZERO serious accidents.

In July 2021, Korea Zinc has established conversion plans to a safety-oriented management system, for zero serious accidents. With a budget total of 354.5 billion KRW, Korea Zinc plans to make a large-scale extensive investment in systematic safety management, via founding Safety Innovation Committee for inspecting, monitoring, and pursuing innovations, along with expanding safety workers, operating 100% open transparent safety report system, building a control center and a Health and Safety Center and equipping with smart safety gears.

Actions	Budget (KRW)	Details
Paradigm shift to safe management	41.2 billion	<ul style="list-style-type: none"> Safe and environmental management as the No.1 priority Sustainable Management Committee and Safety Innovation Committee established Reorganization as a multi-level safety management organization (116 staffs in charge of safety)
Adoption of Smart Safety System	202 billion	<ul style="list-style-type: none"> Construction of central control center (real-time control of operations, safety, environment, and security) Establishment of a Safety and health Center Adoption of Incident Report system
Participatory and Cooperative site-oriented safety culture	101 billion	<ul style="list-style-type: none"> Introduction of 'Safety Talk' System for meetings Strengthening safety education hierarchically, such as the safety leadership program Budget allocation and simplification of procedures
Risk management system for partner companies	10.3 billion	<ul style="list-style-type: none"> Support for safety assistance and management for partner companies Incentive system for achieving a zero-accidents in workplace Tightening entree to the partner companies

Launching Ceremony of the Safety Innovation Committee

The launching ceremony for the Safety Innovation Committee was held on September 7, 2021. The Committee will be responsible for objective management and supervision of the safety management system and mid-to-long-term safety measures, and the overall safety culture. Korea Zinc will try its best to create a refinery without industrial accidents.



Launching ceremony of the Safety Innovation Committee



Support for Shared Growth with Suppliers

Korea Zinc provided business support for shared growth based on mutual trust with its partners. We had a signing ceremony for business support for win-win cooperation on May 9, 2022. Through this, we will contribute to maintaining the safety and health management system by supporting the follow-up management (of the safety and health management system of partners), and provide advisory services in the labor and legal sectors to support the resolution of management risks of partners.



Signing ceremony for business support for win-win cooperation

Establishing an Advanced Governance Structure

Korea Zinc is a KOSPI-listed company that conducted Initial Public Offering (IPO) on July 28th, 1990. It is, thus, a duty and responsibility to realize solid growth and sustainable development, as expected by shareholders, investors, investor institutions, and other stakeholders directly or indirectly influence the company. On such grounds, Korea Zinc seeks to advance the governance structure and supports the Board of Directors to make the best decisions for the best results.

Importance of Governance Structure

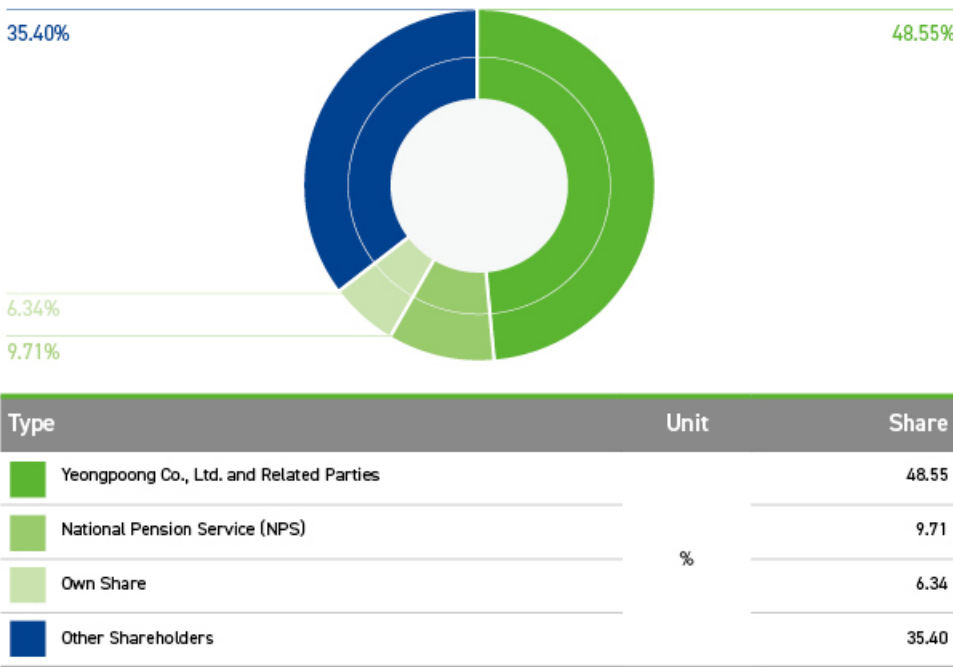
With the spread of ESG, domestic and international credit rating agencies and investors continue to emphasize governance factors when evaluating corporate value, credit and risks. Leading universities and research institutions constantly publish on the significant relationship between corporate governance and management performance. Building and operating a governance structure, based on expertise and checks and balances has become an essential condition for sustainable growth and development.

Korea Zinc Governance Structure

Korea Zinc pursues an advanced governance structure with checks and balances, thereby expanding the number of board members from 9 to 11. In addition, 6 of the 11 board members, more than half (54.5%) have been appointed as independent directors. In appointing the independent directors, Korea Zinc closely examines the expertise and experience of each candidate in the field and operates an audit committee and independent director recommendation committee to conduct professional inspections.

Equity Structure

According to the articles of incorporation of Korea Zinc, the total number of possibilities is 48,000,000 shares, and the total number of shares issued by December 2021 is 18,870,000 common stocks. Korea Zinc did not issue preferred stocks other than common stocks.



The Board of Directors

As of March 2022

Organization	Function	Members	Internal director	Outside director
Board of Directors	Highest decision-making body excluding shareholders meeting	11 Members	Chang G. Choi*, Yun B. Choi, Jin S. Roh, Soon H. Baek, Hyung J. Jang	Cheol S. Han, Yong R. Sung, Eui H. Kim, Do H. Kim, Bo Y. Kim, Min H. Lee
Audit Committee	Strengthening of independence of the board, enhancing management transparency for corporate value and shareholder rights	3 members (all independent directors)	—	Yong R. Sung**, Cheol S. Han, Do H. Kim
Independent Director Recommendation Committee	Securing fairness and independence in identifying and recommending independent directors	3 members (1 internal, 2 independent directors)	Chang G. Choi**	Yong R. Sung, Eui H. Kim

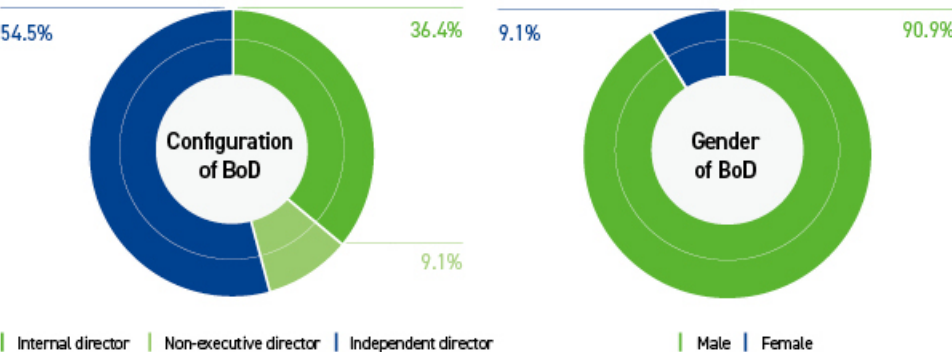
* Chairman of the Board / **Chairperson

Current Board

As of March 2022

Type	Name	Position	Gender	Appointed Date (Initial Appointed Date)	Expertise
Internal director	Chang G. Choi	Chairman of Korea Zinc	Male	March 24, 2021 (February 2, 1984)	Nonferrous metal expert (purchasing raw materials)
	Yun B. Choi	Vice Chairman of Korea Zinc	Male	March 23, 2022 (May 1, 2007)	Nonferrous metal expert (overseas resource development)
	Jin S. Roh	CEO of Korea Zinc	Male	March 24, 2021 (March 24, 2021)	Nonferrous metal expert
	Soon H. Baek	Head of Onsan refinery	Male	March 24, 2021 (March 24, 2021)	Nonferrous metal expert (refining)
Non-executive director	Hyung J. Jang	Chairman of Youngpoong	Male	March 23, 2022 (March 12, 1993)	Nonferrous metal expert
Independent director	Cheol S. Han	Hwawoo Law Firm Advisor	Male	March 24, 2021 (March 24, 2017)	Fair trade expert
	Yong R. Sung	Pacific Law Firm Advisor	Male	March 23, 2022 (March 20, 2020)	Administrative (regulatory/policy) expert
	Eui H. Kim	Attorney at Kim & Chang Law Firm	Male	March 24, 2021 (March 22, 2019)	Legislation expert
	Do H. Kim	Professor, Kookmin University, College of Business	Male	March 23, 2022 (March 20, 2020)	Business Administration expert
	Bo Y. Kim	Professor, Hanyang University, College of Business	Female	March 24, 2021 (March 24, 2021)	International Management Specialist
	Min H. Lee	Director of Yulchon Law Firm's ESG Research Center	Male	March 24, 2021 (March 23, 2022)	ESG expert

The BoD Composition and Gender Representation



The Board of Directors

2021 Board Meetings

In accordance with the regulations, the Korea Zinc regular Board of Directors is held four times a year, and a temporary board can be held in case of need for review and discussion by the board. In 2021, a total of 14 board meetings were held to approve, discuss, and handle 25 agendas, with an independent director attendance rate of 96.4%.

No	Type	Date	Agenda	Status	Attendance Rate	
					Internal director	Independent director
1	Temporary	Jan 26	Hyzon Motors' investment in convertible bonds	Accepted	100%	100%
2	Regular	Feb 8	Report on the Operational Status of the Internal Accounting Management System	-	100%	100%
			The 47 th Statement of Financial Statements and annexed detailed statements	Accepted		
3	Regular	Feb 22	The convocation of the 47 th shareholders' meeting	Accepted	100%	100%
			The 47 th profit dividend	Accepted		
			Changes to the articles of incorporation	Accepted		
			Recommendation of candidates for director	Accepted		
			Recommendation of candidates for audit committee member	Accepted		
			The amount for director remuneration limit	Accepted		
4	Regular	Mar 24	Appointment of CEO and other positions	Accepted	100%	100%
			Approval of the director's competition	Accepted		
			Appointment of a member of the independent director recommendation committee	Accepted		
5	Regular	May 13	Determination of the amount of remuneration for directors and re-delegation of payment methods	Accepted	100%	100%
			Appointment of Executive Director	Accepted		
6	Regular	May 13	Report on key management and settlement of accounts for the first quarter of 2022	-	100%	100%
7	Temporary	May 28	The disposal of Clean Korea Co., Ltd	Accepted	100%	100%
8	Temporary	Jun 29	Appointment of executive director and other positions	Accepted	100%	100%
9	Temporary	Jul 5	Disaster status and safety measures report	-	100%	100%
			Report on battery material business promotion plan	-		
10	Temporary	Aug 26	Report on key management and settlement of accounts for the second quarter of 2022	-	100%	100%
11	Temporary	Sep 14	Appointment of executive director and other positions	Accepted	100%	100%
12	Temporary	Oct 29	Kemco Corporation's fund loan	Accepted	100%	83.3%
13	Regular	Nov 11	Report on key management and settlement of accounts for the third quarter of 2022	-	100%	100%
14	Temporary	Dec 21	Appointment of executive director and other positions	Accepted	100%	83.3%
15	Temporary	Dec 29	Sales and purchase transactions with major domestic affiliates	Accepted	100%	83.3%

2021 Board Committees Meetings

Independent Director Recommendation Committee

Audit Committee

Board Remuneration

2021 Remuneration Payment of the Board

(Unit: people, thousand KRW)

No	Date	Agenda	Status	Attendance rate
1	Feb 22	Recommendations for candidates for independent directors • Candidates for Independent Directors: Cheol S. Han, Eui H. Kim, Bo Y. Kim	Accepted	100%
2	Mar 24	The appointment of the chairman of the Independent Director Recommendation Committee • Chairman of the Independent Director Recommendation Committee: Chang G. Choi	Accepted	100%

No	Date	Agenda	Status	Attendance rate
1	Feb 22	The final submission of the 2020 audit report • 2020 consolidated and separate financial statements • Audit report • Evaluation Report of Audit Committee on Internal Accounting Management System	Accepted	100%
2	Aug 26	Report on major management performance in the first half of 2021 • Major management performance in the first half of 2021 • Major disclosure status in the first half of 2021	Reported	100%
3	Nov 11	Appointment of an external auditor • External auditor: Samjong KPMG LLC. • Appointment period: 3 years (1 January 2022 to 31 December 2024)	Accepted	100%

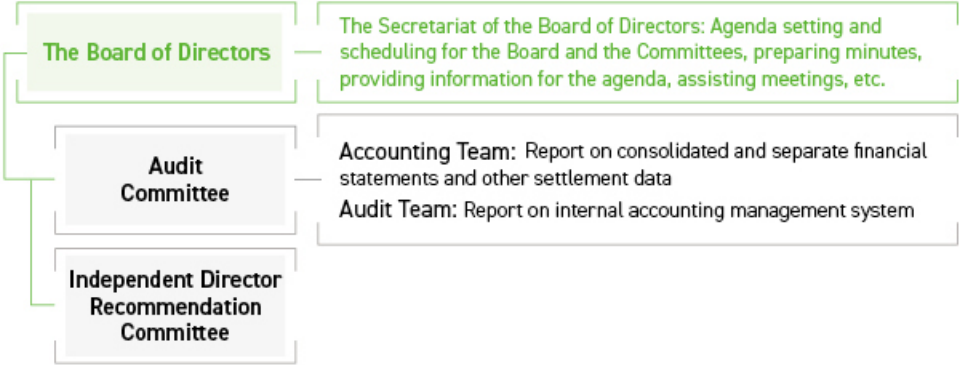
The remuneration and its limit for the Board of Directors are provided after the approval from the shareholder meeting. The remuneration limit for the board, as approved by the general shareholder meeting in March 2021, is 7 billion KRW, with the actual payment amounting to 4.26472 billion KRW. For the effectiveness and efficiency of the Board of Directors, the highest decision-making body which decides management strategy and direction of business, Korea Zinc objectively evaluates the activity and provides reasonable compensations accordingly.

Type	People	Amount	The average remuneration per person
Limit of directors' remuneration approved at the general shareholders' meeting	11	7,000,000	-
Total amount of director's remuneration paid	11	4,264,720	387,702
Total amount of registered director's remuneration paid	5	3,885,220	777,044
Total amount of independent director's remuneration paid	3	181,500	60,500
Total amount of audit committee members' remuneration paid	3	198,000	66,000



Establishing an Advanced Governance System	
Operating System	
CEO Succession Policy	
Enhancing Board Diversity	
Principles and Standards for Improving Board Diversity	
Recommendations for Director of Korea Zinc	

As the Board of Directors, the highest decision-making body of Korea Zinc, focuses on management activities, and affiliated committees and departments are designated for support. The secretariat of BoD supports scheduling work and information sharing for the board and the independent director recommendation committee, while the accounting team and the audit team report the settlement of accounts and internal accounting management system for the audit committee.



As of December 2021

The Board of Directors of Korea Zinc discussed the CEO succession process in December 2021. Korea Zinc CEO candidates are selected based on comprehensive understanding, experience, and management skills of smelting business. After the recommendation of the Board of Directors they are appointed as internal directors according to shareholders' opinions and are finally appointed as CEO after further verification of expertise and leadership. If the CEO is unable to perform his/her duties, the acting CEO shall perform his/her duties in accordance with the articles of association and the regulations of the Board of Directors.

The Board of Directors at Korea Zinc has established principles for enhancing the diversity of the board, so that needs of the stakeholders including shareholders and investors are considered widely and reflected in the decision-making process for management. In addition, a female independent director was appointed in March 2021, promoting gender diversity on the board.

1. Korea Zinc does not impose nationality restrictions on the candidates for registered and independent directors, for a global advanced governance structure.
2. Korea Zinc does not impose gender restrictions on the candidates for registered and independent directors, to enhance the diversity of the Board of Directors.
3. Korea Zinc strictly eliminates school or regional connections and prioritizes work experience and expertise when hunting candidates for registered and independent directors.
4. Korea Zinc takes a comprehensive approach from the stages of discovering candidates, considering various diversity elements such as race, religion, and ethnicity.

Korea Zinc utilizes various channels such as major shareholders, executives, and professional panels to ensure independent operation of the Board and enhance corporate values.

The Expertise of the Board

Audit Committee Training

The Board of Directors of Korea Zinc consists of those with competence and experience, making the best judgment in management activities. This is maintained by the principle of diversifying the expertise field of each director. The current board directors possess competence in various areas ranging from the nonferrous metal industry to financial accounting, law, regulations, policy, international business, and human resources. Such expertise is sustained through consistent education and training. Internal training is regularly provided for registered directors, and implementation of training programs for independent directors is being reviewed.

Date	Institution	Training content
July 22	Korea Listed Companies Association	Best practices for the application of integrated internal accounting management system
December 2	Samjong KPMG LLC.	A case study on the activities of the Audit Committee

Strengthening the Independence of Independent Directors

Criteria for the Independence of the Independent Director

In order to ensure the independence of independent directors, Korea Zinc establishes self-developed criteria that meet global standards for independence, beyond regulated by the Commercial Act and the Financial Company Governance Act. The Independent Director Recommendation Committee within the board identifies the pool of candidates for independent directors, screens them based on competence, experience, independence, etc., reports the candidates to the board, and makes the final decision through shareholder meetings.

Based on independence criteria for the Korea Zinc Board of Directors, the independent director is considered independent if the following conditions are met.

- The independent director has not served as an executive of a company within the past five years
- Except as permitted by the SEC Rule 4200 Definitions*, independent directors or immediate family members of independent directors are not being compensated by the company or subsidiaries for more than \$60,000 per year
- The immediate family members of an independent director have not been an executive of a company or subsidiary for the past three years
- The independent director is not an advisory or consultant to the company or executives
- The independent director is not an employee of a corporation which concluded a contract for major consulting or technology partnership
- The independent director did not serve at the company's external audit agency within the last three years
- The independent director is not an employee of a corporation whose total transaction with the company during the last three business years is 10% or more of the total assets or operating income
- The independent director does not belong to a corporation which concluded a single transaction equivalent to at least 10% of the total sales during the recent business year
- No interest in other matters determined by the Board of Directors

* Payments arising solely from investments in company securities, or under the discretionary charitable donations matching program

Support for Independent Directors

The Secretariat of the Board fully supports the Board of Directors and independent directors of the Committees to perform their duties faithfully. The Secretariat of the Board of Directors provides support necessary for the performance of the duties of independent directors, such as introduction of the corporation to new independent directors, prior report of the agendas of Directors and management information for decision, and quarterly report on major business status, business environment, and management issues. In addition, we provide opportunities for personal exchanges and information sharing between independent directors and internal directors through holding a board workshop at least once a year.

Minimizing Environmental Impact

Korea Zinc aims to minimize the negative environmental impact produced during production and business operation. The eco-friendly management is realized via a standardized environmental impact management system, as well as activities such as improvement of environment facilities and equipments, minimizing pollutant emission, consistent environmental improvement, evaluation of environmental impacts, and development of eco-friendly technologies. In addition, environmental conservation activities around the work site are consistently carried out.

The Importance of Environmental Management

The United Nations Environment Programme (UNEP) has continuously warned of the humanitarian crisis caused by environmental pollution in its Global Environmental Outlook Report. The report reveals that more than 2 million people yearly die from air pollution, Antarctica is melting at an unprecedented rate, and the Amazon forest, called the Earth's lungs, is being destroyed, pointing out that irreparable environmental destruction is being carried out by humans. Countries and international organizations acknowledge the gravity of environmental pollution and are shifting economic paradigms toward recovering the environment. Correspondingly, companies are required to consider environmental impact in producing products and services, and such impact plays a vital role in product sales, export, and import. Companies are striving to establish environmental management strategies, minimize the impact, and create environmental value.

Korea Zinc's Environmental Management Organization

Departmental functions and roles



Environment Management Team

Establishing environmental management strategies and policies, establishing and executing environmental investment plans, planning and implementing environmental improvement activities, managing environmental management performance, etc.



Energy Management Team

Supervision of energy use and greenhouse gas emissions, establishing energy greenhouse gas reduction plans, and development of plans for expansion of renewable energy, etc.



Water Resources Team

Supervision of water resource use and treatment, establishing water conservation, reuse and reuse plans, etc.



Technology Team

Evaluating environmental products, processes, and technologies, performing environmental impact assessment and analyzing its results, and managing patents in the environmental sector, etc.



General Affairs Team (Onsan)

Planning, implementation, etc. of biodiversity protection and forest conservation near Onsan refinery.



Compliance Management Team

Identifying trends in the enactment and revision of domestic and foreign environmental laws, resolving environmental disputes in business activities, etc.



ESG Management Team

Collecting and managing qualitative & quantitative data in the environmental sector, and disclosing environmental information through sustainability report.



Communication Team

Planning social contribution activities for preserving and protecting the environment, etc.

Managing Environmental Impact

Environmental Investment, Past Five Years

(Unit: million KRW)

Raw Materials Imports

Zinc and Lead Concentrate Imported in 2021

Since 2011, every year, Korea Zinc has set aside at least 5% of its total investment for environmental investments. The investment in repairing and improving the old infrastructure and building new ones has contributed to reducing environmental impact and improving air and water pollution. Within the past 5 years, 63.64 billion KRW has been executed for environmental investment. In 2021, 9.19 billion KRW, which accounts for 14.4% of the total investment within the past five years, was invested for the environment.

Year	Air	Water	Chemicals	Total
2017	5,867	2,000	-	7,867
2018	3,348	2,000	-	5,348
2019	9,644	4,000	3,900	17,544
2020	18,686	4,000	1,000	23,686
2021	1,120	847	7,226	9,193

Ore concentrate, used for producing zinc, lead, copper, gold, etc., is imported from various countries, and only concentrate that meets the environmental standards of Korea Zinc is imported.

Zinc

Nations	Amount(MT)	Ratio
Australia	300,500	31%
Peru	172,000	18%
Mexico	146,000	15%
United States	113,000	12%
Bolivia	64,000	7%
Canada	36,000	4%
Chile	20,000	2%
Republic of South Africa	17,000	2%
Argentina	9,700	1%
Spain	9,400	1%
Turkey	6,100	1%
Others	73,000	8%
Sum Total	966,700	100%

Lead

Nations	Amount(MT)	Ratio
Peru	161,000	25%
Australia	140,000	22%
Mexico	93,000	14%
United States	82,000	13%
Bolivia	73,000	11%
Russia	20,000	3%
Honduras	15,000	2%
Moroco	10,000	2%
Kosovo	9,500	1%
Serbia	9,400	1%
Republic of South Africa	7,600	1%
Spain	6,500	1%
Greece	6,400	1%
Turkey	5,600	1%
Europe	2,400	0%
Korea	1,600	0%
Bosnia	900	0%
Chile	500	0%
Sum Total	644,400	100%

Managing Air Pollutant

In order to minimize and systematically manage environmental pollutants emitted by business activities, Korea Zinc monitors emissions through integrated monitoring system as well as installing various air pollutant prevention facilities. Air pollutants such as sulfur oxide (SOx) and nitrogen oxide (NOx) emitted during production are effectively treated through Selective Non-Catalytic Reduction (SNCR) and ozone oxidation, and Tele-Monitoring System (TMS) installed in the Onsan refinery accurately measures air pollutant emissions.

To reduce air pollutant emissions, Korea Zinc will install additional pollution prevention facilities and continue to improve its process.

Air Pollutant Emitted for the Past Three Years

(Unit: kg)

Type	2019	2020	2021
Dust	92,237	91,766	93,332
NOx	1,142,980	766,675	1,042,271
SOx	2,236,366	1,261,335	1,091,457

Specified hazardous air pollutant emission Concentrations in 2021

(Lead, Nickel, Cadmium, Chromium units: mg/m³, Fluoride, and Hydrogen chloride units: ppm)

Type	Lead	Nickel	Fluoride	Hydrogen chloride	Cadmium	Chromium
Allowable discharge concentration	0.8	2.0	2.0	4.0	0.2	0.4
Average emission concentration	0.11	0.013	0.37	0.54	0.007	0.012

Managing Water Resources

In order to save water resources and prevent pollution, Korea Zinc establishes a water reduction plan every year to reduce the use of water and properly treat waste water according to the water quality standards. The water used for production is supplied as industrial water through water intake facilities in the industrial complex and is used for production and cooling tower replenishment. Each process treats waste water with a Reserve Osmotic (RO) system and the treated wastewater is reused as gray water. In 2021, water reuse is 947m³, which is about 7% of the total water usage. The water used in the process is treated physically and chemically and managed to meet the water quality standards below 80% of the legal standard and discharged to the Onsan Water Quality Improvement Office. In the future, Korea Zinc will continue to make efforts to reduce the final discharge by expanding facilities that can reduce the amount of industrial water used and continuously discovering relevant activities.

Water Usage

(Unit: m³)

Type	2019	2020	2021
Water usage (Industrial water)	12,316	12,156	13,596

Waste Water Usage

(Unit: m³)

Type	2019	2020	2021
Water reuse	961	1,100	947
Water discharge	2,472	2,460	2,566
Total amount	3,433	3,560	3,513

Waste Management

Korea Zinc applies the principle of thorough waste disposal and recycling to all work sites and processes waste systematically to minimize environmental impacts. All wastes are managed by type through the Waste Legal Treatment System (Allbaro). Korea Zinc will continue to promote proper disposal of waste as well as increased self-treatment rate and recycling rate of generated waste, and waste reduction to create a cleaner environment.

Type	2019	2020	2021
Waste	General Waste	40,691	34,281
	Designated Waste	63,960	70,641
By product	Slag	753,615	708,647

(Unit: tonnes)

Managing Chemicals

The 111 chemicals used by Korea Zinc (including the same substances of different concentrations) must be disclosed in accordance with the Chemicals Control Act. 82 chemicals are managed in detailed categories such as hazardous chemicals, hazardous factors, hazardous substances, and toxic gases according to the Chemicals Control Act, Occupational Safety and Health Act, Act on the Safety Control of Hazardous Substances, and High Pressure Gas Safety Control Act, and the amount of carry-in, usage, and sales per year are reported. All related information is disclosed through the Chemical Substance Comprehensive Information System of the Chemical Safety Institute under the Ministry of Environment. Chemicals emitted from the manufacturing process are reported to the Ministry of Environment, and up to 28 chemicals are reported in detail. In addition, emissions related to air, water, soil, etc. are classified according to final treatment regions. The environment-related indicators are monitored in real-time, and the measured data are reported to the Ministry of Environment. According to Article 23 of the Chemicals Control Act, Korea Zinc notifies the residents of chemical accident prevention and management plans once a year, regarding three (hydrogen fluoride, hydrochloric acid, and sulfuric acid) out of 97 chemicals regulated by the Ministry. The plan explains the danger of chemical accident and states emergency instruction. Korea Zinc will continue to strictly manage chemicals in accordance with the Chemical Substance Management Act and relevant procedures and minimize environmental impacts on the business sites and local community.

Material Safety and Health

According to Article 110 of the Occupational Safety and Health Act, the Material Safety Data Sheet (MSDS) is listed on the website of Korea Zinc, informing of possible harmfulness and danger. Material safety and health data include hazards/dangers of the product, element information, emergency measures, handling measures in the event of an explosion, fire, or leakage, information on stability, reactivity and toxicity, ecological information, and transportation precautions.

Composition of Material Safety and Health Data Composition



ISSUE 4

Responding to Climate Change

Korea Zinc's headquarters and the Onsan refinery closely cooperate in managing energy use and greenhouse gas emissions. Those responsible for energy and greenhouse gases manage greenhouse gas at the work site and monitor CO₂ emissions and energy use for each sector. Every month, energy management meetings are held with the technical department and the CEO, sharing the "Energy Performance Report" with details on energy conservation activities and related technological developments.

Why Responding to Climate Change Is Important

Climate change, due to the increase in surface temperature caused by greenhouse gas emissions, has created extensive damage to human life and emerged as a global environmental problem. The international society has confirmed that frequent natural disasters involving abnormal weather can be attributed to an increase in GHG emissions due to the use of fossil fuels, and are strengthening efforts to reduce the emissions. The Korean government, also, has established a feasible and concrete policy to reduce GHG emissions, enacting related laws. The industrial field also recognizes climate change as a task to be dealt with for sustainable growth of a future generation, thereby taking measures including energy management and eco-friendly innovations. In turn, various international organizations are launching climate change response initiatives and urging companies to participate.

2050 Declaration of Carbon Neutrality

Korea Zinc participated in the "Nonferrous Metal Carbon Neutrality Committee" launched by the Ministry of Industry to promote carbon neutrality in 2050, signing the "2050 Carbon Neutrality Challenge Joint Declaration" in March 2021 as a member company. Korea Zinc, Korea's leading nonferrous metal company has set agendas to improve energy efficiency, expand the use of renewable energy, and fuel conversion by 2030, and longer-term tasks of developing hydrogen energy, carbon capture, and conversion technologies to be applied on site.

Functions and Plans of Nonferrous Metal Carbon Neutrality Committee



Nonferrous Metal Carbon Neutrality Committee,
2050 Carbon Neutrality Challenge
Joint Declaration
(March 10th, 2021)

Managing Mine Waste

Operating a mine overseas, Korea Zinc strictly applies mine waste management standards to minimize the possible negative environmental impact on organisms, groundwater, surface water, and soil.

Korea Zinc constantly monitors mine waste facilities and processes according to standards of the International Council Mining & Metals (ICMM), UN Environment Program (UNEP), and Global Industry Standard for Tails Management (GISTM),, exerting the best efforts on ensuring safety and environmental conservation in waste disposal.

Standards for Mine Waste Management

- The facilities for waste treatment comply with various regulations and maintenance of such facilities will be improved continuously. Planning, designing, constructing, operating, dismantling, and closing treatment facilities for mine waste are governed under the following principles:
 - The structure must be stable
 - Solids and water must be managed within designated, approved areas
 - Specifications of facilities and installations must comply with the regulations of the country in which the mine is located
 - Facilities and installations must comply with relevant standards, internal policies, best practices of the industry, and technical guidelines from the region or country in which the facility is located
- Korea Zinc strives to be equipped with a comprehensive system that includes the following, to safely operate and monitor mineral waste management facilities:
 - Monitoring optical dams, bridges, natural slopes, and water levels using surveillance systems using GPS, piezometers, sloping meters, pressure gauges, and remote sensing.
 - A frequent inspection conducted by trained workers and professional technical staff
 - Regular and official safety inspections conducted by external authorized engineers and disclosure of inspection results
 - Conduct a regular review of facilities and mining waste related projects by a group of internal practitioners
 - Regular review of facilities and mineral waste projects by the internal working group

Mine Closure

Korea Zinc establishes and implements a mine closure plan to minimize environmental impacts, based on thorough review on standards provided in Integrated Mine Closure Good Practice Guide by ICMM, requirements of local community, and relevant regulations of the country and region.

Basic Goals

- [Safety]** Securing safety for humans, wildlife, and the global environment
- [Stability]** Preparing for earthquake and flood, securing stability against load and erosion of natural deposits
- [Sustainability]** Recognition and inspection of significant impact on economic, environmental, and social dynamics



Global Climate Change Response Trends

Climate Change Response of Korea Zinc

Intergovernmental Panel on Climate Change (IPCC) has made fair warnings in the sixth report published in 2021, that 2040 will be the year when the average temperature of the Earth will rise by 1.5°C, compared to pre-industrial times, and increased extreme weather events such as heat waves, heavy rain, and droughts will follow. To address climate change, countries around the world have agreed upon the Paris Declaration at UNFCCC, 2015, to restrain the temperature increase to less than 2°C, and limiting to 1.5°C in reality.

The domestic nonferrous metal industry accounts for about 1.3% of the country's total GHG emissions and 2.3% of the industry. Although the proportion of emissions is not large, reduction of greenhouse gases is a very important management issue for nonferrous metal companies as the emission is continuously growing. Korea Zinc, Korea's leading nonferrous metal refinery, participated in the "Nonferrous Metal Carbon Neutrality Committee" launched in March 2021 to deal with the climate change problem. In September, Korea Zinc joined RE100, a global initiative, to convert 100% of business electricity to renewable energy by 2050. Starting with the membership of the Nonferrous Metal Carbon Neutrality Committee and RE100, Korea Zinc plans to focus all its efforts to strengthen sustainable management including carbon neutrality and circular economy, beyond an expansion of renewable energy.

As a method of implementing RE100, Korea Zinc will thoroughly review green premium fees, Third-party Power Purchase Agreement (PPA), self-generation, Renewable Energy Certificate (REC) purchasing, and equity investment to design and promote the best way to convert 100% renewable energy by 2050.

Overview of Method of Implementing RE100

Type	Method
Green Premium	A method in which an electricity consumer (company) purchases renewable energy electricity by paying a green premium separate from the existing electricity bill to Korea Electric Power Corp
Renewable Energy Certificate (REC) purchasing	A method in which an electricity consumer (company) Purchase Renewable Energy Certificates(REC) directly
Third-party Power Purchase Agreement	A method of signing a power transaction contract (PPA) between a renewable energy generation business operator and an electric consumer company through Korea Electric Power Corporation Intermediary
Equity Investment	A method in which electricity consumers (company) invest directly in renewable energy generation business
Self-generation	A method in which electricity consumers (company) install renewable energy facilities for their own use and directly use the power produced



TCFD-based Korea Zinc Report on Climate Change Response

TCFD Recommendations

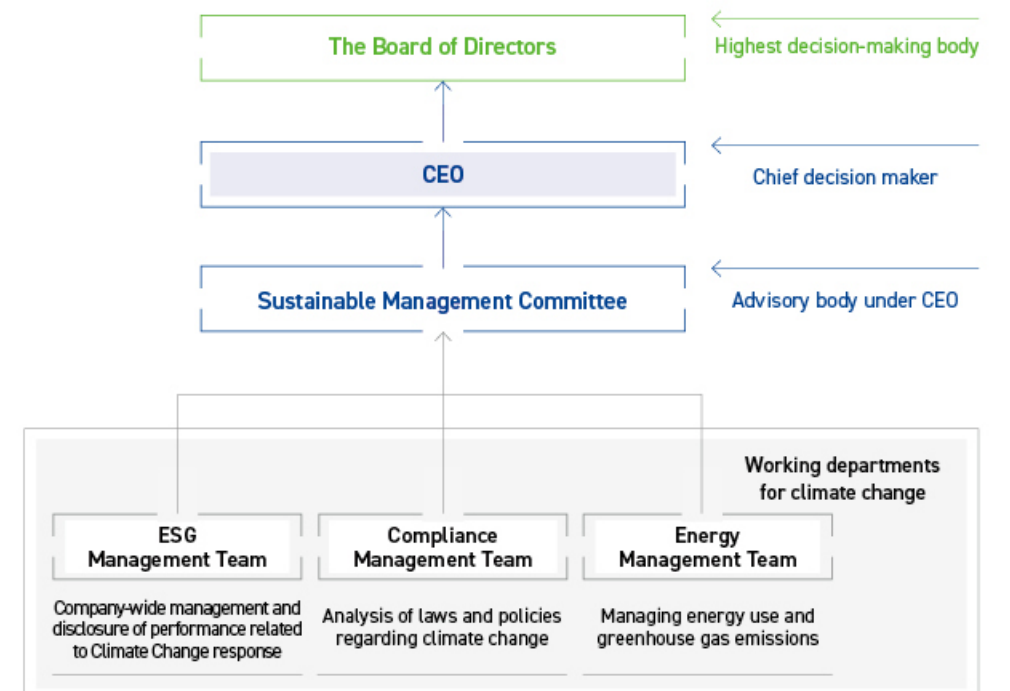
The Task Force on Climate-Related Financial Disclosures (TCFD) is a global climate change consultative body established in 2015 by the Financial Stability Board (FSB). TCFD issued a TCFD recommendation in 2017 that explains consistent principles and standards for disclosing financial information related to climate change. Korea Zinc supports the TCFD for climate change and abides by the governance, strategy, risk management, and objectives as in the recommendation in reporting climate change response systems, goals, activities, and performance.



Climate Change Response Governance

The Korea Zinc Sustainable Management Committee, launched in 2021 directly under the CEO, generally manages climate change response. The Sustainable Management Committee collects information on the strategy, performance, and plans for climate change response and reports regularly to the CEO, occasionally holding board meetings for decisions related to important business activity. In doing so, the Committee gathers information on energy use and GHG emission from the Energy Management team, law and regulation from the Compliance Management Team, and ESG activities and performance from the ESG Management Team.

Korea Zinc Climate Change Response and Decision Making System



Climate Change Response Strategy

As Korea Zinc produces nonferrous metal products, systematic management is essential since the risks from climate change are critical to business, products, and financial status. Korea Zinc classifies climate change risks into transition risks and physical risks, in accordance with the criteria in the TCFD recommendation.

Climate Change Risk Classification

Type	Definition	Form
Transition Risk	Risks arising from the transition to a low-carbon economy	Policies, laws, technologies, markets, reputations, etc
Physical Risk	Risks arising from the physical effects of climate change	Acute (frequency and intensity changes of abnormal weather events) and chronic (long-term changes in climate patterns)

Financial Impact due to Climate Change Risks

Climate change risks are expected to negatively affect the actual profit and loss of Korea Zinc and its financial position. Korea Zinc aims to use climate change risk as a business opportunity to create new value by promoting Troika Drive (renewable energy and hydrogen business, resource circulation business, secondary battery material business).

Type	Transition Risk		Physical Risk
	Short-Term	Mid- to Long-term	Mid- to Long-term
Profit and Loss	Increased cost of emission purchase (In case of an increase in emission purchase or increase in emissions)	Increased purchase and investment costs for renewable energy leading decrease in operating profit and net profit	Expenditure in compensation and recovery (in case of property damage)
	Increased investment costs (Technical development, facility improvement, infrastructure, etc)		Increased operating cost of refineries due to water disaster, abnormal high temperatures, etc
Impact on financial status	Increased greenhouse gas emissions and liabilities	Increase in debt ratio	Damage to physical assets

Climate Change Risk Management

To strategically prepare for business and financial risks caused by climate change risks, Korea Zinc incorporates them as non-financial risks in the integrated risk management system. This involves identifying and analyzing the financial impact of climate change risks that may affect business activities. The analysis results are used to establish directions, strategies, and tasks in responding to climate change, as well as evidence for securing investment and financial resources for climate mitigation and adaptation.



Management Indicators

Greenhouse Gas Emissions

Korea Zinc uses as indicators, the level of greenhouse gas emissions, energy use, and renewable energy use at the Onsan refinery, for systematic management of climate change risks and opportunities.

Classification		Unit	2019	2020	2021	Y-o-Y
Total Emission Amount			3,845,244	3,534,550	3,553,283	▲ 18,733
Emission Amount	Scope1	tCO ₂ eq	2,215,475	1,891,934	2,342,812	▲ 450,878
	Scope2		1,629,769	1,642,615	1,210,471	▼ 432,144
Emission Intensity		tCO ₂ eq/Revenue (100 million KRW)	57.4	46.6	35.6	▼ 11.0

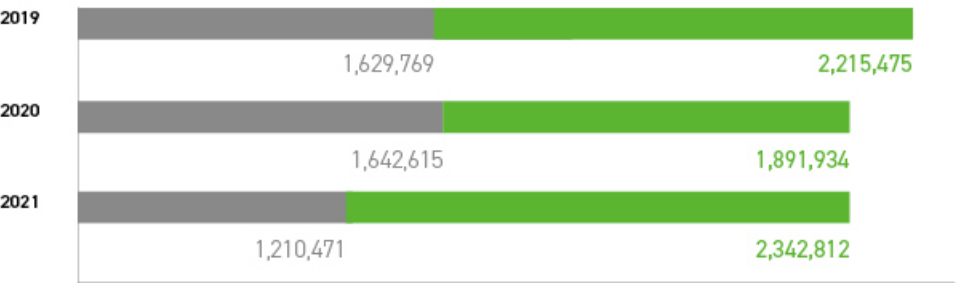
Energy Use

Classification		Unit	2019	2020	2021	Y-o-Y
Total Energy Consumption			53,537	50,347	50,368	▲ 21
Direct Energy	Fuel	TJ	19,981	16,527	25,069	▲ 8,542
	Renewable		0.55	0.76	0.73	▼ 0.03
Indirect Energy		Electricity	33,557	33,821	25,300	▼ 8,521
Energy Intensity		TJ/Revenue (100 million KRW)	0.8	0.7	0.5	▼ 0.2

Renewable Energy Goals

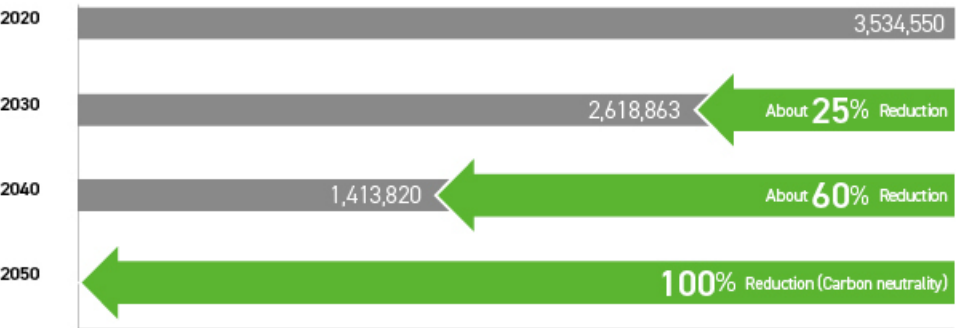
Korea Zinc has set a goal of converting 100% of its energy used in businesses to renewable energy by 2050, to realize carbon neutrality. For this goal, Korea Zinc plans to establish a carbon-neutral and renewable energy conversion plan, based on the methodology to reduce greenhouse gas reduction, proposed by the Science-based target Initiative (SBTi).

Greenhouse Gas Emissions (2019~2021)



* The increase in Scope1 greenhouse gas emissions in 2021 is due to the production of LNG power plants' own power for energy independence

Carbon Neutrality Roadmap (Base Year: 2020)



* The target of greenhouse gas reduction may be changed depending on greenhouse gas emissions and technology development

(Unit : tCO₂eq)

Recruiting and Maintaining employees

Korea Zinc manages employees on the principle of cultivating competence and expertise to lead challenges and innovations, recognition, and reasonable compensation for performance. For healthy and sustainable growth of Korea Zinc, we strive to secure talented people with high growth potential and support them to realize the values and goals they pursue through their work.

Importance of Securing and Maintaining Talent

The driving force behind a company's growth is recruiting talented individuals with growth potential, by creating an environment where the individuals maximize their potentials to contribute to the company's management goals. Research has shown that about 30% of new employees change work before one year of joining the company. Loss of potential talented individuals is one problem, but the bigger problem lies in that company suffers from loss from recruiting and educational investment, hiring fees for alternatives, and other disruptions at work. Therefore, recruiting and securing employees has become an important management issue.

Efforts to Secure and Maintain Human Resources

Metal must be heated to a certain temperature to be made highly pure, and is sometimes combined with other materials to create new value. Like this refining process, enthusiastic engagement, innovation seeking new values, and flexibility to combine them in various ways are the talents pursued by Korea Zinc. Korea Zinc operates a curriculum that allows all executives and employees to develop expertise and strives to create an environment where they can focus on their work and supports the realization of work-life balance through various family-friendly systems. Korea Zinc will spare no investment in securing, fostering, and maintaining the best human resources.

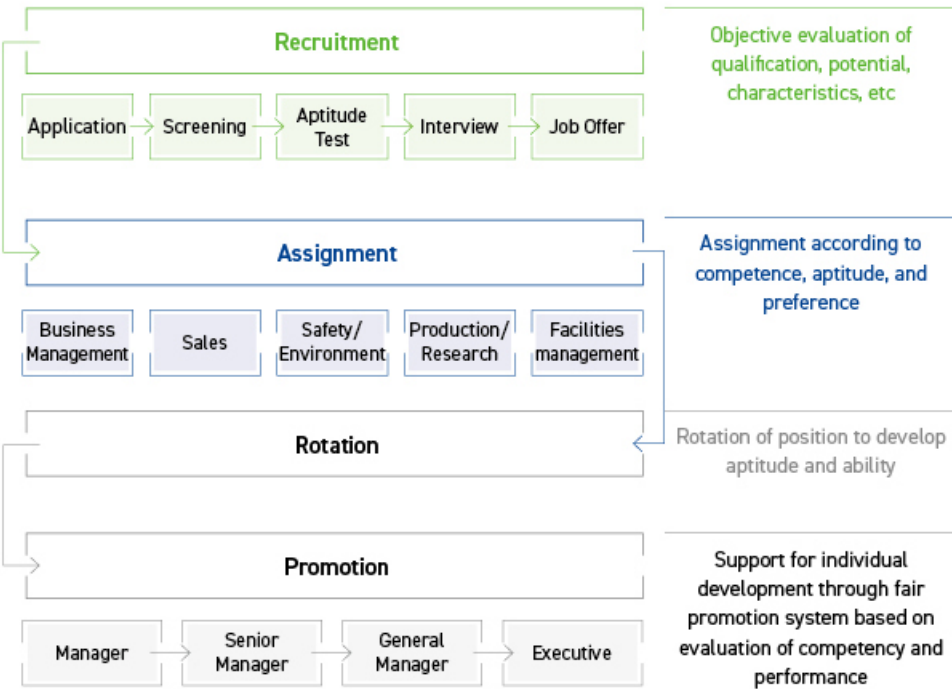
Korea Zinc's People



Securing Human Resources

HR Management Process

Recruiting leaders for the growth and development of Korea Zinc is competency-based. Through systematic interviews and multi-level competency-based recruiting, Korea Zinc evaluates applicants from various dimensions, to identify the right person. Apart from open recruiting, Korea Zinc also adequately utilizes on-demand recruitment, such as internship or experienced recruitment, to secure talents. An employment policy that supports socially vulnerable individuals such as veterans and the disabled are also adopted.



Fostering Human Resources

'Company's competitiveness arises from its people' being the motto for HR management, Korea Zinc aims to recruit talented individuals and to foster experts with strong core competency, by an objective and reasonable management system. We spare no effort to support employees develop their careers and expertise and grow as key talents based on balanced development and job rotation, by providing various training programs on management, work, leadership, global competence, etc.



Capacity Building Program

We operate various capacity building programs to improve the growth and development of executives and employees of Korea Zinc and to enhance the expertise of the work in charge.

Education for the Promoted

For the promoted and the appointed to effectively carry out a new role at the new position, an educational program is provided

Training for New Employees



Online new employee training

We provide systematic training for new employees so that new employees could adapt well to the organization and demonstrate their capabilities. In training, programs are organized through strengthening communication and network among new employees, team building, leadership, business manners, and training by department, and new training contents are reflected through annual curriculum evaluation.

Mentoring

We are implementing a mentoring system to strengthen the bond between new employees and senior employees through natural exchanges and to support new employees' rapid adaptation to the organization. It forms a virtuous cycle as mentees receive support from their seniors in various aspects from work to daily life in the company, while mentors can foster their leadership through relationships with their mentees. In addition, it contributes to generational understanding and horizontal organizational culture.



Online Language Education

In order to improve employees' global business language skills, Korea Zinc provides online and offline language learning programs to employees. Executives and employees who want to use the language learning program can freely select and apply for the course they want.

Support for Reemployment

Based on Article 21-3 of the Elderly Employment Act, Korea Zinc operates a curriculum every year to support lifelong career development for the retired, as a part of the mandatory reemployment support service. The 2021 education was held on July 5th and 6th, for 26 retiring individuals.

Legal and Ethical Education

Legal and ethics education is held on a yearly basis for all employees, on prevention of sexual harassment and bullying, improving awareness of the disabled, protection of private information, and ethical management.

Legal and Ethical Education Completion Rate in 2021

Category	Date	The number of people	the number of people completed work	Completion rate
Prevention of sexual harassment	July 5 ~ September 17	1,467	1,467	100
Prevention of bullying at work		1,467	1,467	100
Improving awareness of the disabled		1,467	1,467	100
Protection of private information		746	746	100
Ethical management		1,467	1,467	100

(Unit: people, %)

Labor-Management Relations

For the development of both Korea Zinc and the employees, healthy labor-management relation is mandatory. Korea Zinc attempts to establish a cooperative relationship through opinion exchange and discussions at the labor-management council for crucial issues or agendas in management. Management strategy is clearly communicated via the portal system, KZ PEOPLE magazine, executives' emails, etc.

Under the Union and Labor Relations Adjustment Act, employees of Korea Zinc eligible to join the union can freely form a labor union or join an existing one.

Type	The total number of people	Union members	Participation rate
Labor Unions of 2021	1,550	1,004	64.7

(Unit: people, %)

Realizing Great Work Place (GWP)

Office Renovating



Korea Zinc has remodeled its office so that all executives and employees can work in a pleasant environment. In addition to remodeling the space, the entire office furniture (motion desk, chair, storage space, etc.) is replaced with the latest model to help executives and employees immerse themselves in their work in a pleasant working environment.

In addition, we expand and remodel the conference room by reflecting the opinions of our employees, and establish the latest remote system to provide an environment where collaboration is possible at all times regardless of domestic and foreign workplaces.

Satisfaction Survey for Employees



For a happier workplace, Korea Zinc has performed a satisfaction survey for all executives and employees starting from January 2021. All employees enter their level of satisfaction and happiness, scaled from 1 to 10, at the end of each day. Based on an analysis of the relationship between the score and work, Korea Zinc seeks to improve the work environment and organizational culture.

Group Insurance and Retirement Pensions

Korea Zinc has subscribed to group insurance and retirement pension for employees in preparation for possible accidents and for stable life after retirement.

Group Insurance	Retirement Pension Overview		
	Form	Scale	Number of subscribers
Support for compensation in the event of an accident, disease, or death occurred during work	DB	1,898	1,227
	DC	10	131
	Total	1,908	1,358

※ As of December 2021, based on the retirement pension list for those who have worked for more than one year

(Unit: 100 million KRW, people)

ISSUE 6

Spreading Social Contribution

Through social contribution, Korea Zinc aims to create "a happy world for all". As the company's management extends beyond contributing to the national economy, Korea Zinc practices various sponsorship and volunteer activities to fulfill Corporate Social Responsibilities (CSR).

Significance of Social Contribution

CSR activities mainly revolve around donating profits from business, volunteer work for the socially disadvantaged, or environmental conservation. Since companies can get involved in dealing with social and environmental problems, and CSR activities can leave a positive impression, companies are increasingly incorporating CSR activities in management strategies and expanding budget for them.

Social and environmental problems differ according to generations, situations, or social values. Therefore, the social contribution should consider social needs and be systematically pursued from the planning stage.

Korea Zinc Social Contribution Management

For the socially essential contribution, Korea Zinc designates Communication Team at the headquarters in Seoul and the General Affairs Team at Onsan refinery. The two teams carry out regular work meetings to discuss social contribution activities and analyze performances to draw out implications for improvement.

Social Contribution Areas



Support for Work-Life Balance

Korea Zinc's biggest asset is its employees, and employees' most valuable asset is family. Korea Zinc operates various programs and policies for family time.

Flexwork

Korea Zinc offers four types of Flexwork to enhance work engagement and improve productivity: staggered schedule, flexible time, remote work, and discretionary work. Employees are free to select or change the type of Flexwork. Detailed instruction for each type is provided to the employees.

Staggered Schedule	Autonomously adjusting work hours, on the condition of working 8 hours a day
Flexible Time	Autonomously scheduling work hours, keeping the week's average working hours under legal working hours
Remote Work	Working on-site or business trips etc., without going to the office
Discretionary	Legal working hours acknowledged for completing the project etc., without general application of working hours

Family-Friendly Policies

Maternity leave, parental leave, leave for miscarriage or stillbirth, and shortened work hours for childcare are offered as part of family-friendly policies, which is also available for male employees to actively participate in childbirth and childcare.

Scholarship Support

If the employees themselves wish, Korea Zinc supports some of the employees' graduate school tuition to help them develop themselves and improve their capabilities, and provides tuition for their children from kindergarten to university. In addition, we provide early employment training expenses to the children of executives and employees who do not go to college so that welfare benefits are not alienated.

Medical Expenses

Korea Zinc actively supports daily health care of families and health recovery from injuries and illnesses by providing medical expenses to employees and their family members - spouse and children -, as well as providing comprehensive checkups biannually to the employees and their spouses who are over the age of 30.

Support for Leisure Life

Korea Zinc provides discounts on membership of affiliated resort facilities and supports free use of summer resorts so that employees and their families can refresh comfortably. In addition, we operate various leisure life support systems to help executives and employees lead a happy family life by providing a weekend farm site (3,001.65m²) for 200 employees per year to grow fruits and vegetables with their families.

Company Housing and Dormitory

To help employees engage in work with lessened housing burdens, Korea Zinc operates a company house and dormitory. The Onsan refinery company house is a residential-commercial complex, accommodating a total of 762 households with convenience facilities such as a gym, childcare, and welfare centers.



Apartments provided for employees by Korea Zinc

In Seoul, 25 company housing is provided in Gangseo-gu and Nowon-gu. As of 2021, the company house is used at 84.6%.

Self-improvement programs including pottery and yoga classes are provided for employees living at the company house.

Activities

Cool Boxes for the Summer

In order to practice and spread social contribution in 2021, Korea Zinc conducted various activities such as local welfare and scholarship support for the vulnerable.



On July 7th 2021, Korea Zinc visited the Seoul Volunteer Center of the Korea Red Cross, to participate in sharing cool boxes. The Cool box consists of seasonal food, Kimchi, fruits, Samgyetang, and a mini dehumidifier. Cool boxes were delivered to 147 households.

Support for Regional Welfare of Ulsan

On July 28th 2021, a donation of 500 million KRW was made for regional welfare business in Ulsan, in which the Onsan refinery is located, including support for the disadvantaged as well as improving welfare facilities.



On August 5th, 2021, Korea Zinc held a "Samgyetang Sharing Event of Love" with the Ulsan branch of the Korean Red Cross for 400 vulnerable households in the community.

Sharing Samgyetang of Love

Donation to the Ulsan Regional School Development Fund



On September 16th, 2021, Korea Zinc delivered 145 million KRW to the Ulsan Metropolitan Office of Education. Since 2008, Korea Zinc has donated a total of 1.12 billion KRW for 14 years. Donations are used for student welfare, student activities, educational equipment and books, and academic activities.

The Fruit of Love, Donation of Neighbor's Love



For a beautiful world, Korea Zinc made a donation of 3 billion KRW to the Community Chest of Korea on December 10th 2021. The donation was used for businesses in basic life, educational independence, and healthcare improvements, for less advantaged neighbors like children, teenagers, the elderly, or families in crisis.

Celebrating Chuseok, Sharing Songpyeon, 2021



In celebration of Chuseok, Korea Zinc shared songpyeon and fruits with the Korean Red Cross, to help the vulnerable.

Sponsoring Culture and Arts

Support for Children of Prisoners

A child-friendly family meeting room at Yeosu Prison supported by Korea Zinc

Korea Zinc donated 25 million KRW to the National Museum of Modern and Contemporary Arts in 2021, to support artists and their projects as companies' support has decreased by nearly 15% compared to 2020 due to COVID-19. As a global nonferrous metal company, Korea Zinc also sponsors the "Metal Crafts of the Year" award.



Since 2015, Korea Zinc has supported activities to assist children of prisoners in prison or detention centers, as an effort to create a safe world. Providing aid to the children creates a positive effect of motivating the prisoners to return to society and of deterring the children from being swayed toward bad behavior.

In fact, after sponsoring activities of Korea Zinc, family reception rooms were created at Yeosu Prison in 2017, Cheongju Women's Prison in 2018, Gunsan and Suwon Prison in 2019, and the Ministry of Justice allowed inmates to wear plain clothes instead of prison uniforms. As a response, Korea Zinc has expanded its support to college students, which created a positive cycle where the beneficiary college student conceived mentor roles to other children.

Supporting Prisoners' Children

1. Growth support (allocation, academy expenses, etc)	2. Clubs and activity expenses
3. COVID-19 emergency response	4. Research, seminar, awareness improvement
5. Child-friendly reception room	6. Purchasing plain clothes, etc.

Performance and Plan

2021 Grand Prize for Social Contribution

In recognition of its contribution to various child welfare sharing projects since 2011, Korea Zinc awarded the grand prize in the community contribution category at the 2021 Social Contribution Enterprise Awards hosted by the Korea Economic Daily.



"2021 Social Contribution Companies Grand Prize" hosted by the Korea Economic Daily

Joined the Red Cross Honors Company

As of December 2021, the cumulative donation for the Korean Red Cross recorded 1.08 billion KRW, and Korea Zinc joined the Red Cross Honor Company (RCHC), a group for those who made large donations to the Korean Red Cross.

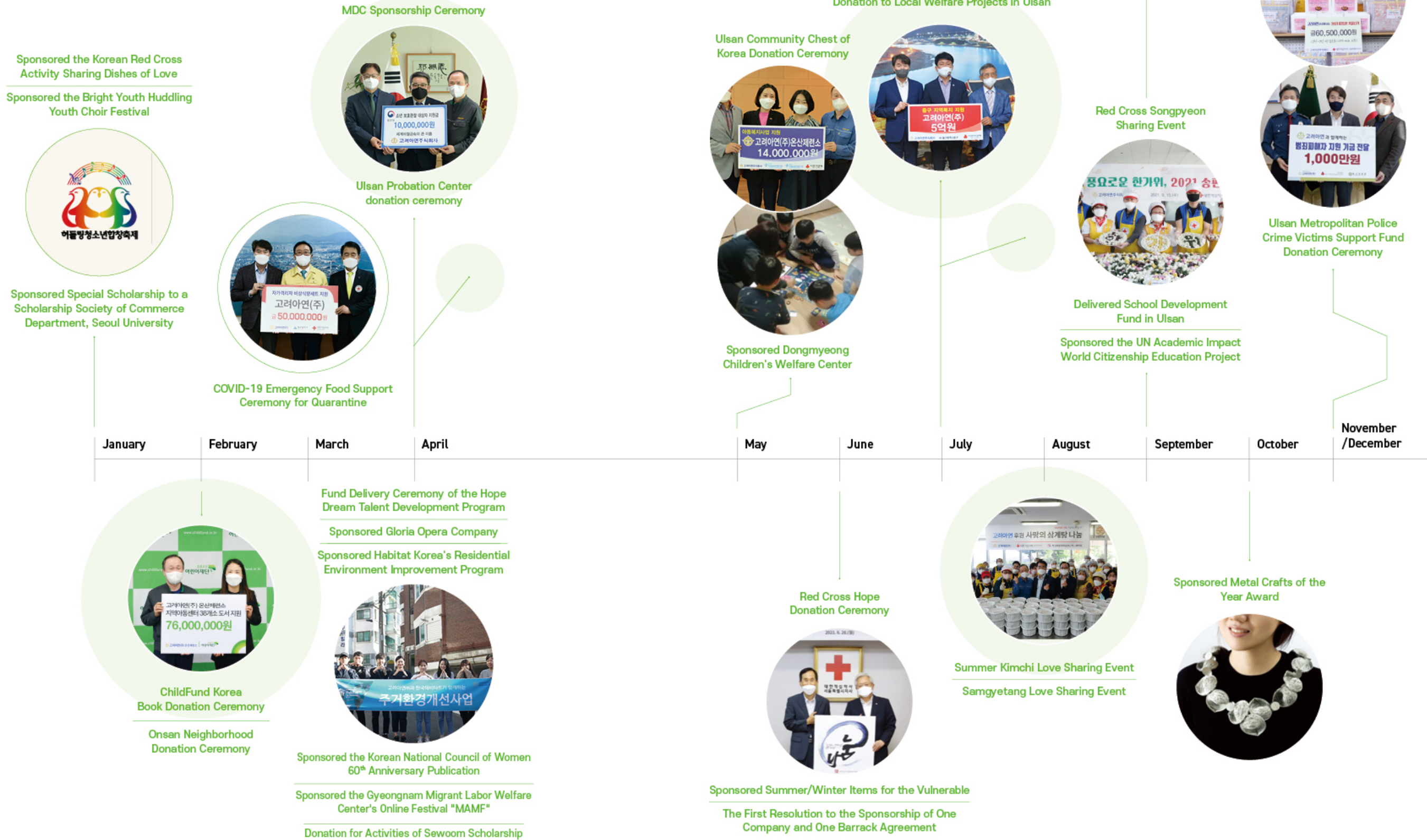


Korea Zinc joined the Red Cross Honors Company of Korean Red Cross(RCHC)

Korea Zinc will exert the best and most sincere efforts to help solve social and environmental problems through social contribution activities and to create a joyful world for everyone. In 2022, now with COVID-19 restrictions relieved, more in-person social contribution activities are expected to be resumed and expanded.

2021 Calendar of Korea Zinc Social Contribution

2021 was not an easy year. Neighbors' support was more valuable than ever. Thanks to all, Korea Zinc could share the love with so many neighbors. It was a year happy together.



Appendix

KOREA ZINC SUSTAINABILITY REPORT 2021

- Sustainability Data
- Consolidated Financial Statement
- Independent Auditor's Report
- Greenhouse Gas Verification Report
- Third-party Assurance Statement
- GRI & SASB & TCFD Index
- Memberships and Associations

Appendix | SUSTAINABILITY DATA

Disclosure Criteria and Principles

The sustainability performance of Korea Zinc subject to disclosure consists of quantitative indicators in the areas of the Economic, Environmental, Social, and Governance. Performance data for a 3-year period from 2019-2021 will show the annual trends of each indicator. Major indicators of economic, environmental, social, and governance sectors of the disclosure were selected based on GRI Standards for guiding Sustainability Report and AA1000AS, a protocol for report verification.



[Global Reporting Initiative] GRI Standards: GRI standards provide baseline criteria of topic and disclosure for aspects of economic, environmental, and social, in reporting sustainable management performance.



[AccountAbility] AA1000: AA1000 series sets verification criteria for sustainable management report, by identifying sustainable management issues and corresponding criteria and principles. More than 70% of sustainable management reports in Korea use AA1000AS (Assurance Standard) as a post-validation standard.

| Economic Sector

[1] Financial Status

Korea Zinc maintains a stable financial standard based on its excellent profit-making ability.

Type	Unit	2019	2020	2021
Total Assets		7,841	8,500	9,964
Total liabilities	billion KRW	1,002	1,413	2,229
Total Capital		6,838	7,087	7,734

[2] Financial Performance

Korea Zinc has achieved its best performance since its foundation, despite market difficulties from COVID-19.

Type	Unit	2019	2020	2021
Sales		6,695	7,582	9,977
Operating Profit	billion KRW	805	897	1,096
Net Income		639	575	811

[3] Financial Ratio

Korea Zinc strives to improve financial soundness based on financial structure.

Type	Unit	2019	2020	2021
Operating Profit Ratio		15.2	13.8	12.9
Capital Adequacy Ratio		91.4	88.6	86.1
Return on Equity	%	8.9	11.9	10.5
Debt Ratio		9.4	12.8	16.2

[4] Production Performance

Korea Zinc has an annual production capacity of 650,000 tonnes of Zinc, 430,000 tonnes of Lead, 12 tonnes of Gold, 2,500 tonnes of Silver, and 1.5 million tonnes of Sulfuric acid.

Category	Unit	Capacity	Production in 2021
Base metals	Zinc	650,000	640,372
	Lead	430,000	426,415
precious metals	Gold	12	13.7
	Silver	2,500	2,202
Sulfuric acid		1,500,000	1,298,192

[5] Proportion of main products sales

In 2021, the proportion of sales by product is 48.65% of base metals, 41.87% of precious metals, and 9.48% of other products.

Type	Unit	Sales proportion in 2021
Base metals	Zinc	31.84
	Lead	16.81
precious metals	Gold	12.83
	Silver	29.04
Sulfuric acid		9.48

[6] Export and Domestic Sales Ratio

Based on its export diversification strategy, Korea Zinc has established around 7:3 export and domestic ratio, to become a major exporter of basic materials for global business. Quality products of Korea Zinc are recognized worldwide and contribute to the national economy.

Type	Unit	2019	2020	2021
Sales (domestic)	million KRW	16,538	17,018	24,945
	%	31.7	30.1	34.8
Sales (export)	million KRW	35,650	39,503	46,680
	%	68.3	69.9	65.2

[7] R&D Expenses

Korea Zinc plans to expand investment in R&D to maintain distinguished technological competitiveness.

Type	Unit	2019	2020	2021
R&D Expenses	million KRW	1,411	2,432	4,730
R&D Expenses / Sales	%	0.03	0.04	0.07

[8] Tax Paid

As of 2021, the pre-tax profit was 1,139.1 billion KRW, and the nominal tax amounted to 328 billion KRW. But the real tax amount was 272.8 billion KRW. The differences are caused by deferred tax changes, non-taxable income effects, tax deduction/reduction effects, and unrealized profit and loss.

Type	Unit	2020	2021	Average
Pre-tax profit	100 million KRW	8,124	11,391	-
Nominal tax amount		2,376	3,280	-
Nominal tax rate	%	29.2	28.8	29.0
Real tax amount	100 million KRW	2,657	2,728	-
Real tax rate	%	32.7	24.0	28.4

Corporate tax by country	Unit	Sales	Operating profit	Corporate tax
Korea		80,627	9,850	2,867
Australia	million KRW	9,060	799	271
Vietnam		322	2.7	0
Thailand		11	(0.6)	0.01

| Environmental Sector

Environmental data are reported in the scope of Onsan refinery

[1] Environmental Investment

In order to reduce environmental impact and improve air and water quality, Korea Zinc assigns more than 5% of total investment as environmental investment, in improving old facilities and installing new ones.

Type	Unit	2019	2020	2021
Air		9,644	18,686	1,120
Water	million KRW	4,000	4,000	847
Chemicals		3,900	1,000	7,226
Total		17,544	23,686	9,193

[2] Air Pollutant Management

Korea Zinc operates a comprehensive monitoring system to minimize pollutant emitted during facility operation.

Type	Unit	2019	2020	2021
Dust	kg	92,237	91,766	93,332
NOx		1,143	767	1,042
SOx	tonnes	2,236	1,261	1,091

Type	Unit	Allowed emission concentration	Emission concentration
Lead		0.8	0.11
Nickel	mg/m ³	2.0	0.013
Cadmium		0.2	0.007
Chromium		0.4	0.012
Hydrogen Chloride	ppm	4.0	0.54
Fluorine		2.0	0.37

[3] Energy Use

Through the RE100 declaration in 2021, Korea Zinc plans to convert energy used to 100% renewable energy by 2050.

Type	Unit	2019	2020	2021
Electricity		33,557	33,821	25,300
Fuel	TJ	19,981	16,528	25,069
Total		53,537	50,347	50,368

* The difference between the figures of each and the sum is due to rounding

[4] Greenhouse Gas Emissions

Korea Zinc put effort to reduce greenhouse gases. Starting with the voluntary agreement to reduce greenhouse gas emissions in 2003, we are actively participating in the energy reduction and greenhouse gas management, namely the 2008 greenhouse gas inventory, 2014 energy and greenhouse gas target management system, 2015 emission trading system, and 2021 carbon neutrality declaration.

Type	Unit	2019	2020	2021
Scope1		2,215,475	1,891,934	2,342,812
Scope2	tCO ₂ eq	1,629,769	1,642,615	1,210,471
Total		3,845,244	3,534,550	3,553,283

* The difference between the figures of each and the sum is due to rounding

[5] Water Resource Management

Activities to save water resources and prevent contamination include reducing industrial water, quality control of discharge water, and recycling wastewater.

Type	Unit	2019	2020	2021
Water usage		12,316	12,156	13,596
Wastewater throughput	Reused water	961	1,100	947
	Discharged water	2,472	2,460	2,566
	Total	3,433	3,560	3,513

[6] Waste Management

To minimize the environmental impact caused by waste, Korea Zinc strictly applies the principle of waste disposal and recycling to all business sites and treats waste systematically.

Type	Unit	2019	2020	2021
General waste		40,691	34,281	36,123
Designated waste	tonnes	63,960	70,641	51,263
Slag generated		753,615	708,647	732,432

[7] Violation of Environmental Laws

From 2019 to 2021, Korea Zinc has no violation of environmental laws.

Type	Unit	2019	2020	2021
Violation of environmental laws	case	0	0	0

| The Social Sector

Occupational safety and health data of Korea Zinc and suppliers are reported in scope of Onsan refinery.

[1] Employees

As of 2021, the total number of employees of Korea Zinc is 1,550 people, consisting of regular and non-regular workers (contract workers) under direct employment contracts. Due to the characteristics of the industry, there are more male than female workers, and we are trying to secure diversity among employees.

Type	Unit	2019	2020	2021
Total employees		1,417	1,455	1,550
Employment type	Permanent	1,385	1,401	1,454
	Non-regular	32	54	96
Age	Under 30	90	133	242
	30 to 50	947	963	970
	Over 50	380	359	338
Gender	Male	1,364	1,395	1,485
	Female	53	60	65
Nationality	Citizen	1,415	1,453	1,548
	Foreigner	2	2	2
Persons with disabilities		25	27	25

[2] Recruitment and Retirement

The criteria for managing employment and turnover are regular and non-regular workers who have signed employment contracts with Korea Zinc, grouped by age, work site, and gender.

Type	Unit	2019	2020	2021
Total new hires		42	67	187
Gender	Male	39	61	174
	Female	3	6	13
Age	Under 30	21	47	144
	30 to 50	21	20	42
	Over 50	0	0	1
Worksite	headquarters	4	3	14
	Onsan Refinery	38	64	173

Type	Unit	2019	2020	2021
Total retirees		31	39	76
Gender	Male	30	37	71
	Female	1	2	5
Age	Under 30	6	11	27
	30 to 50	9	14	26
	Over 50	16	14	23
Worksite	headquarters	6	2	4
	Onsan Refinery	25	37	72

[3] Union Membership

Korea Zinc respects the freedom of association and collective bargaining as stipulated in the Korean Constitution and the Trade Union and Labor Relations Adjustment Act, and guarantees workers' freedom to form unions and related organizations.

Type	Unit	2019	2020	2021
Eligible for union membership	people	1,417	1,455	1,550
Union members		989	979	1,004
Union membership rate	%	69.8	67.3	64.7

[4] Maternity Leave and Parental Leave

Korea Zinc actively supports maternal protection and work-family balance. All employees are free to use maternity and parental leave, and we offer employees to take maternity leave, spouse maternity leave, parental leave benefits, and shorter working hours for childcare.

Type	Unit	2019	2020	2021
Use of maternity leave	people	2	5	3
Return rate after childbirth	%	100	100	100
Use of parental leave		4	5	9
Female	people	3	2	7
Male		1	3	2
Return rate after parental leave	%	80	100	100
Job retention rate		75	100	100

[5] Employee satisfaction survey

Korea Zinc conducts a daily employee satisfaction survey to understand the level of satisfaction with work and company life. The results are used to improve the organizational culture and work environment.

Type	Unit	2019	2020	2021
Employee satisfaction	scores	-	-	5

* The employee satisfaction index survey is designed on a 10 point scale and conducted from January 14th, 2021.

[6] Capacity Building of Employees

The employees are the driving force and biggest asset to Korea Zinc. Various education and training courses are provided for building capacity.

Type	Unit	2019	2020	2021
Total education expenses	million KRW	422.4	322.8	436.3
Total education hours		67.9	82.3	61.5
Education hours per employee	hours	9.9	17.2	6.6

[7] Occupational Safety and Health

During the production and the operation and inspection of facilities always lies a risk of serious accidents such as falls, burns, electric shock, asphyxiation, fractures, and entrapment. Korea Zinc strictly complies with the Occupational Safety and Health Act and works to create a safe workplace and protect employees.

Type	Unit	2019	2020	2021
Fatality	people	0	0	2
Disaster rate		0.16	0.08	0.54
LTIFR*	%	0.66	0.32	1.98
OIFR**		0	0	0

* Lost Time Injuries Frequency Rate: The incidence of work loss injuries per million hours
** Occupational Illness Frequency Rate: Occupational Disease Rate

[8] Remuneration Differences between CEOs and Employees

As part of establishing performance-based remuneration standards, Korea Zinc regularly checks the pay gap between CEOs and employees.

Type	Unit	2021	Note
CEO Remuneration		756	-
Average employee remuneration	million KRW	86	8.8 times
Median employee remuneration		83	9.1 times

[9] Social Contribution

Korea Zinc promotes effective social contribution activities based on sharing management strategies, to contribute to solving environmental and social problems, and to social development.

Type	Unit	2019	2020	2021
Cost of Social Contribution	100 million KRW	61.0	66.2	67.9

[10] Association and Group Activities

For healthy growth of the industrial ecosystem beyond the development of the nonferrous metal industry, Korea Zinc has joined various associations and organizations. As of 2021, Korea Zinc has joined 46 associations and organizations worldwide, spending a total of 825.5 million KRW for membership.

Type	Unit	2021
International Zinc Association (IZA)		340,285
International Lead Association (ILA)		118,970
Ulsan Chamber of Commerce		100,000
Korea Business Council for Sustainable Development (KBCSD)		65,000
Korean Nonferrous Metal Association		57,720
Energy and Mineral Resource Development Association of Korea (EMRD)	thousand KRW	30,000
International Antimony Association (I2A)		27,370
Onsan Industrial Estate Association		24,156
Seoul Chamber of Commerce		18,560
Korea Listed Companies Association		12,200

* According to internal standards, only associations and organizations that execute subscription fees and membership fees of KRW 10,000,000 or more are disclosed

[11] Infringement and Leakage of Personal Information

There have been no personal information leakage incidents and accidents during the past three years.

Type	Unit	2019	2020	2021
Personal Information leakage	case	0	0	0

[12] Financial Support for Partner Companies

For stable management of partners, Korea Zinc has created a shared growth fund through financial institutions to support interest expenses of loans.

Type	Unit	2019	2020	2021
Share Growth Fund Amount	100 million KRW	400	400	400

[13] Subcontractor Report and Dispute

Korea Zinc communicates regularly with the partners through the Mutual Cooperation Team to listen the opinions and suggestions on work problems & improvement. In case of difficulty in direct communication, we also support delivery through the website.

Type	Unit	2019	2020	2021
Report	number	0	0	0
Dispute		0	0	0

[14] Safety and Health of Business Partners

The same safety standards applies to partner companies and their employees. We will do our best to ensure safe work for partners.

Type		Unit	2019	2020	2021
The main contractor	Total employees	people	1,269	1,300	1,470
	Number of casualties		2	1	8
	Accident Rate	%	0.16	0.08	0.54
Partner company	Total employees	people	1,610	1,830	2,050
	Number of casualties		17	17	15
	Accident rate	%	1.06	0.93	0.73
Subcontract total	Total employees		2,879	3,130	3,520
	Fatality	people	1	1	1
	Number of casualties		19	18	23
	Accident rate	%	0.66	0.58	0.65

[15] A Retirement Pension

Korea Zinc operates a defined benefit type (DB) and a defined contribution type (DC) retirement pension system.

Type	Unit	2019	2020	2021
The number of subscribers	people	1,289	1,290	1,358
Operating amount	100 million KRW	1,551	1,746	1,908

Governance (G) Sector

[1] Independent Directors within the Board Directors

The Board of Directors of Korea Zinc consists of a total of 11 directors. Out of 11 directors, 6 are independent directors (54.5%) more than the majority.

Type	Unit	2019	2020	2021
Total registered directors	people	9	9	11
Number of independent directors		5	5	6
Percentage of independent directors	%	55.6	55.6	54.5

[2] Separation of the Chairman of the Board and the CEO

For the independence of the Board of Directors, Korea Zinc separated the chairman from the CEO in 2021.

[3] Females on the Board of Directors

Korea Zinc appointed one female independent director in 2021 to enhance diversity in the Board of Directors, as recommended by best governance standards.

Type	Unit	2019	2020	2021
Number of female directors	people	0	0	1
The proportion of female directors	%	0.0	0.0	9.1

[4] The Board of Directors' Meetings

In accordance with the regulations, the regular and temporary Board of Directors of Korea Zinc is held. In 2021, a total of 14 board meetings were held to deliberate and and deal with the 25 agendas.

Type	Unit	2019	2020	2021
Board of Directors	Regular	6	6	5
	Temporary	9	7	9
Total meetings held		15	13	14
Number of agendas	number	23	24	25

[5] Board Attendance Rate

Considering the importance of the board meetings to check, discuss, and decide on important issues related to management, the directors are required, in principle, to attend the meetings except for inevitable circumstances such as health problems and overseas business trips.

Type	Unit	2019	2020	2021
Internal director	%	96.4	100	100
Independent director		98.6	98.5	96.4

[6] Audit Committee

In 2021, the audit committee was held three times to deal with issues such as the consolidated and separate financial statements, the status of the internal accounting management system, and the appointment of external auditors.

Type	Unit	2019	2020	2021
Total meetings held	times	3	3	3
Attendance rate	%	100	100	100

[7] Independent Director Candidate Recommendation Committee

In 2021 Independent Director Candidate Recommendation Committee was held twice, and the attendance rate was 100%.

Type	Unit	2019	2020	2021
Total meetings held	times	1	1	2
Attendance rate	%	100	100	100

[8] Board Remuneration

The remuneration of the directors of Korea Zinc is reasonably determined based on the evaluation of the decision-making activities.

Type	Unit	2019	2020	2021
Remuneration cap		70.0	70.0	70.0
Total remuneration	100 million KRW	38.5	40.6	42.6
Average remuneration per director		4.3	4.5	3.9

[9] Executive Liability Insurance Status

Litigation against management is expected to increase due to the increase of foreign shareholders, the expansion of shareholder activism, and the strengthened responsibilities of independent and non-executive directors. Korea Zinc has signed up liability insurance for all board members to ensure free management activities and reduce excessive legal responsibility. Through executive liability insurance, Korea Zinc could compensate for legal liability for economic damage caused to shareholders and third parties due to unfair acts such as violation of obligations and negligence of registered and executive officers.

[10] Shareholder Return

Korea Zinc conducts dividends every year based on investment, cash flow, and financial structure, to enhance shareholder value and shareholder return. As dividend policies reflect volatility in management performance, we aim to increase dividend visibility stability.

Dividend basis	Maintain a 30% or more separate dividend payout ratio at the end of the year		
Form	Cash dividend	Time	Settlement dividend

Korea Zinc has been practicing shareholder return through dividend payments for 34 years since 1988. In 2021, the dividend per share increased by 5,000 KRW than the previous year, reaching the largest at 20,000 KRW. We will continue to make dividends to enhance shareholder value.

Type	Unit	2019	2020	2021
Stock Type	shares	Common share	Common share	Common share
Cash dividend	Face value	5,000	5,000	5,000
	Dividend per share	KRW 14,000	15,000	20,000
	Total dividend	100 million KRW 2,474	2,651	3,545
	Market dividend rate	3.26	3.63	3.75
Dividend propensity	Consolidated	% 38.7	46.3	43.6
	Separated	43.6	47.3	46.7

* Dividend propensity (consolidation) is the percentage of total dividends on net income from the parent's owner's equity, and the market dividend rate is the percentage of dividends per share on the arithmetic average price formed in the past week before the closing date of the dividend.

[11] ESG Decision-making Strengthened

Korea Zinc established the Sustainable Management Committee in November 2021 and appointed ESG expert,

Lee Min h. Lee as an independent director in March 2022 to empower of the Environmental (E), Social (S), and Governance (G) sectors and for sustainable management.



* Appointment ceremony of the chairperson of Sustainability Management Division

[12] Invest Relations (IR) Activities

Korea Zinc participates in conferences hosted by domestic and foreign securities firms by discussing and listening to investors' interests. Korea Zinc provides information on performance and major issues in the form of NDR (Non-Deal Roadshow).

Period	2021 IR Activities	
	[1 st] February 9 th - 10 th	[2 nd] April 29 th - 30 th
Target	Domestic institutional investors	
Type	NDR(Non-Deal Roadshow)	
Content	2020 Performance and 2021 Business Plan	2021 Q1 Management Performance

[13] Korea Corporate Governance Service ESG Rating

For the systematic promotion of sustainable management, Korea Zinc launched the Sustainable Management Committee in 2021 and established the Sustainable Management Division and ESG Management Team. With strategic and systematic sustainable management activities, Korea Zinc will continuously improve the ESG ratings.

Type	2019	2020	2021
Environmental	B	B+	B+
Social	B	C	C
Governance	B	B+	B+
Comprehensive	B	B	B

Appendix

CONSOLIDATED FINANCIAL STATEMENT

Consolidated Balance Sheet

(Unit: KRW)

(48th term) December 31, 2021

(47th term) December 31, 2020

(46th term) December 31, 2019

Category	48 th term	47 th term	46 th term
Assets			
Current assets	5,689,044,210,643	4,912,869,202,998	4,597,942,700,017
cash and cash equivalents	466,465,326,011	425,567,595,232	689,518,057,370
Short term financial instruments	184,723,094,762	285,538,802,045	276,940,977,367
Account receivables & other receivables	611,103,946,090	447,554,353,453	384,481,303,898
Short term investment assets	1,393,377,994,326	1,455,214,350,232	1,654,765,343,135
Derivatives financial assets	58,823,991,403	7,521,174,561	68,444,789
Other current assets	65,440,973,982	41,439,199,763	36,435,020,846
Inventories	2,909,108,884,069	2,250,033,727,712	1,555,733,552,612
Non-current assets	4,275,004,424,006	3,586,776,374,652	3,242,618,521,482
Long term financial instruments	441,265,149	18,709,932	169,049,428
long term account receivable & other receivable	24,656,998,320	18,598,129,590	18,539,906,411
Long term investment assets	436,578,735,174	188,399,145,462	165,345,876,137
Long term derivatives financial assets	12,682,228,631	5,901,752,052	
Tangible assets	3,458,986,060,811	3,194,054,886,097	2,900,677,492,789
Property assets	13,353,529,572	16,365,507,602	17,449,522,900
Intangible assets	123,332,181,049	90,898,558,956	93,735,746,833
Right of use assets	23,219,352,198	23,688,290,767	3,884,975,302
Investments in associates or joint ventures	138,036,459,158	21,267,709,927	21,984,779,636
Deferred income tax assets	23,226,937,243	19,368,637,353	19,909,609,520
Other non-current assets	4,361,442,092		
Net defined benefit assets	16,129,234,609	8,215,046,914	921,562,526
Total assets	9,964,048,634,649	8,499,645,577,650	7,840,561,221,499
Liabilities			
current liabilities	1,770,527,531,625	1,118,415,592,360	704,279,137,809
Trade and other current payables	1,168,161,012,999	801,010,462,175	482,064,747,589
Short-term borrowings	295,537,449,491	115,420,078,569	30,592,680,077
Current long-term borrowings	954,387,300	916,108,800	1,244,062,280

Consolidated comprehensive income statements

(48th term) December 31, 2021(47th term) December 31, 2020(46th term) December 31, 2019

(Unit: KRW)

Category	48 th term	47 th term	46 th term
Sales	9,976,776,443,636	7,581,926,858,435	6,694,810,889,702
Cost of sales	8,720,477,711,619	6,546,773,440,472	5,743,570,626,840
Gross profit	1,256,298,732,017	1,035,153,417,963	951,240,262,862
Selling, general and administration	160,152,388,324	137,765,648,760	145,911,425,970
Operating income(loss)	1,096,146,343,693	897,387,769,203	805,328,836,892
Other income(expense)	(6,207,814,963)	(2,594,620,902)	(2,809,527,965)
Other income	119,587,050,902	112,290,726,661	63,859,921,158
Other expense	(125,794,865,865)	(114,885,347,563)	(66,669,449,123)
financial income(cost)	46,318,932,457	(81,845,230,004)	68,332,405,474
Financial income	219,715,037,585	85,482,169,593	102,740,296,283
Financial cost	(173,396,105,128)	(167,327,399,597)	(34,407,890,809)
Profit and loss of equity method	2,822,686,496	(534,770,260)	1,550,479,752
Profit of equity method	4,680,035,267	293,144,004	1,597,460,731
Loss of equity method	(1,857,348,771)	(827,914,264)	(46,980,979)
Net income before income tax expense	1,139,080,147,683	812,413,148,037	872,402,194,153
Corporate tax expense	327,974,118,539	237,584,477,205	233,788,842,334
Net profit	811,106,029,144	574,828,670,832	638,613,351,819
Net profit of controlling shareholder	806,794,888,407	572,955,740,914	632,926,486,346
Net profit of non-controlling shareholder	4,311,140,737	1,872,929,918	5,686,865,473
Other comprehensive income	96,472,326,395	(70,912,929,692)	20,943,971,474
Items subsequently reclassified as profit or loss	87,871,952,021	(75,443,448,472)	38,029,013,154
Profit(or Loss) on valuation financial assets at fair value through other comprehensive income	(174,094,779)	3,109,320	573,642,101
Loss on valuation of investment stock using the equity method	(545,101,207)	(25,714,271)	16,928,131
Derivatives valuation gain(loss)	(632,338,674)	476,559,232	
gain or loss on overseas operations translation	89,223,486,681	(75,897,402,753)	37,438,442,922
Items not subsequently reclassified as profit of loss	8,600,374,374	4,530,518,780	(17,085,041,680)
Profit(or Loss) on valuation financial assets at fair value through other comprehensive income	5,713,074,744	6,199,957,320	(7,270,182,177)
Remeasurement of the net defined benefit liability	3,040,434,208	(1,596,195,862)	(9,741,306,898)
Cumulative effect of the equity method	(153,134,578)	(73,242,678)	(73,552,605)
Total comprehensive income	907,578,355,539	503,915,741,140	659,557,323,293
Comprehensive income for controlling shareholders	902,253,050,975	501,794,342,616	659,251,669,882

(Unit: KRW)

Category	48 th term	47 th term	46 th term
Debentures of current portion	7,475,460,087		
Current tax liabilities	195,200,955,613	141,915,577,909	157,731,314,169
Derivative financial liabilities	84,129,958,719	20,871,176,255	919,974,936
Provision for liabilities	1,230,087,537	4,445,129,695	18,633,127,607
Other current liabilities	17,838,219,879	33,837,058,957	13,093,231,151
Non-current liabilities	459,286,640,200	294,201,298,978	297,890,188,281
Long-term purchase liabilities and other liabilities	36,714,331,662	22,638,095,220	9,259,246,196
Long-term borrowings	126,084,743,272	4,719,649,600	5,969,177,540
Debentures	1,095,278,942		
Net defined benefit liability	1,376,813,244		
Deferred income tax liabilities	266,320,217,418	243,695,928,928	258,533,381,838
Long-term derivatives financial liabilities	1,928,974,207		
Provisional liabilities	25,766,281,455	23,147,625,230	24,128,382,707
Total liabilities	2,229,814,171,825	1,412,616,891,338	1,002,169,326,090
Equity			
Controlling invest equity	7,607,686,770,997	6,969,781,227,949	6,715,426,245,333
Capital	94,350,000,000	94,350,000,000	94,350,000,000
Additional paid-in and other capital	57,338,578,345	56,572,486,272	56,572,486,272
Capital adjustments	(53,508,694,647)	(53,508,694,647)	(53,508,694,647)
Accumulated other comprehensive income	(8,860,906,556)	(67,310,345,930)	26,311,640,202
Retained earnings	7,518,367,793,855	6,939,677,782,254	6,591,700,813,506
Non-controlling invest equity	126,547,691,827	117,247,458,363	122,965,650,076
Total Stockholder's equity	7,734,234,462,824	7,087,028,686,312	6,838,391,895,409
Total liabilities & Stockholder's equity	9,964,048,634,649	8,499,645,577,650	7,840,561,221,499

(Unit: KRW)

Category	48 th term	47 th term	46 th term
Comprehensive profit (loss) of non-controlling shareholders	5,325,304,564	2,121,398,524	305,653,411
Earnings per share			
Basis earnings share(loss)	45,648	32,418	35,811

Statements of cash flow

(Unit: KRW)

(48th term) December 31, 2021
(47th term) December 31, 2020
(46th term) December 31, 2019

Category	48 th term	47 th term	46 th term
Operating cash flow	606,883,888,565	456,522,986,973	692,660,279,007
Net income	856,683,021,865	697,452,704,211	851,034,068,014
Receipt of interest	27,472,888,303	25,720,280,163	53,750,750,816
Receipt of dividends	180,320,420	610,936,150	2,438,005,300
Payment of interest	(4,642,020,031)	(1,538,078,694)	(732,945,598)
Payment of corporate tax	(272,810,321,992)	(265,722,854,857)	(213,829,599,525)
Investment activity cash flow	(577,707,783,864)	(547,586,397,377)	(473,864,320,878)
Decrease in short-term loans	467,935,519,449	687,570,112,392	675,445,841,147
Increase in short-term loans	(375,367,531,248)	(696,263,119,471)	(744,803,755,903)
Decrease in long-term loans	430,133,374	152,400,000	
Increase in long-term loans	(488,654,031)		
Disposition of fair value financial assets through profit or loss	2,860,716,212,683	2,464,181,538,958	1,966,087,968,141
Acquisition of fair value financial assets through profit or loss	(2,985,779,872,893)	(2,344,735,358,834)	(2,171,558,536,727)
Disposition of investment in liquidity subsidiaries			30,318,033,196
Net payment of derivatives	17,101,267,324	(1,998,241,601)	1,917,393,874
Increase in short-term loans	18,907,760	300,000,000	1,638,900,180
Decrease in short-term loans	(17,566,810,709)	(311,650,799)	
Disposition of financial assets at fair value through other comprehensive income	168,668,033,636	38,142,715,281	147,374,826,933
Acquisition of financial assets at fair value through other comprehensive income	(184,710,368,814)	(27,239,780,000)	(10,068,020,000)
Disposition of financial assets at amortized cost	17,355,000	18,680,000	10,135,000
Acquisition of financial assets at amortized cost	(3,080,000)	(23,385,000)	(12,300,000)

(Unit: KRW)

Category	48 th term	47 th term	46 th term
Disposition of investments in associates	893,488,011		
Acquisition of investment in associates	(84,250,218,341)		(10,000,000,000)
Disposition of investments in subsidiaries	28,344,227,149		
Acquisition of investment in subsidiaries	(10,711,280,620)		
Disposition of tangible assets	947,335,049	948,685,701	645,106,450
Acquisition of tangible assets	(463,828,370,657)	(662,144,567,510)	(358,140,007,607)
Disposition of intangible assets		916,663,984	3,620,000,000
Acquisition of intangible assets	(14,859,493,467)	(7,178,231,297)	(7,295,393,018)
Disposition of investment real estate	9,452,500,000	978,656,800	
Increase in long-term loans	(3,757,390,000)	(1,000,000,000)	(500,000,000)
Decrease in long-term loans	2,499,999		1,605,082,048
Decrease in deposit	527,555,807	302,076,442	239,880,700
Increase in deposit	(4,621,804,561)	(203,592,423)	(389,475,292)
change of consolidated scope	13,182,056,236		
Financial activity cash flow	1,661,830,293	(171,390,603,906)	(190,911,553,410)
Paid in capital increase of subsidiaries			1,566,339,880
Net increase in short-term borrowings	138,468,943,162	85,039,577,468	11,886,928,843
Repayment of current long-term borrowings	(916,108,800)		
Early repayment of current long-term borrowings	(137,360,000)	(1,502,539,651)	(4,830,355,891)
Repayment of lease liabilities	(3,262,722,371)	(2,522,389,676)	(3,361,988,369)
Decrease in non-controlling interest	(1,920,000,000)		
Increase in rental deposit	5,321,400		
Increase in non-controlling liabilities	14,046,591,810	1,446,987,953	
Issuance of bonds	4,000,000,000		
Increase in long-term borrowings	122,023,645,092		
Increase In non-controlling interest	6,880,000,000	6,000,000,000	(201,822,103)
Dividend payment	(277,526,480,000)	(259,852,240,000)	(195,970,655,770)
Net increase or decrease in cash and cash equivalents	30,837,934,994	(262,454,014,310)	27,884,404,719
Cash and cash equivalents at the beginning of the year	425,567,595,232	689,518,057,370	656,089,868,179
Effect of exchange rate fluctuation of foreign currency denominated cash, etc.	10,059,795,785	(1,496,447,828)	5,543,784,472
Cash and cash equivalents at the end of the year	466,465,326,011	425,567,595,232	689,518,057,370

Korea Zinc Co., Ltd.

To the Shareholders and Board of Directors of

March 15th, 2022

Opinion

We have audited the consolidated financial statements of Korea Zinc Company, Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2021, and 2020, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021, and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Proper timing of revenue recognition for export sales

The Group generates its revenue primarily from the sale of zinc, lead and precious metals. The Group shall recognize revenue when (or as) the Group satisfies a performance obligation by transferring a promised good or service to customers. Due to various trade terms, there is a risk that the timing of revenue recognition is different from the timing when the Group transfers control to customers. In addition, since the Group has settlement conditions with certain customers determining unit sales prices based on the prices on the London Metal Exchange after the transfer of controls takes place, there is a risk of error in timing of recognition of export sales which could occur during the settlement process. As such, we identified the timing of revenue recognition of export sales as a key audit matter. The primary procedures we performed to address this key audit matter included the following:

- Inspecting the terms of major sales contracts to assess whether the timing of a transfer of control when the Group recognizes revenue is complied with the relevant accounting standards;
- Inspecting transaction evidence of export sales occurred close to the end of the reporting period by using sampling method based on statistic technique and assessing the appropriateness of the timing of the revenue recognition by comparing delivery date with sales recognition date; and
- Using sampling method based on statistic technique, inspecting the transaction evidence to ensure the settled amount was based on the contracted terms and the timing of revenue recognition was appropriate for sampled settlement transactions.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with K-IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit. We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards. From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements as of and for the year ended December 31, 2021 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is Jae K. Na.



152, Teheran-ro, Gangnam-gu, Seoul (27th Floor, Gangnam Finance Center)

Kyo T. Kim, CEO of Samjong KPMG LLC.

This report is effective as of March 15, 2022, the auditors' report date. Certain subsequent events or circumstances may have occurred between the auditors' report date and the time when the auditors' report is read. Such events or circumstances could significantly affect the financial statements and may result in modifications to the auditors' report.



Verification Statement on 2021 Greenhouse Gas & Energy Inventory Report

■ Introduction

Korean Foundation for Quality (hereinafter 'KFQ') has been engaged by 「Corporation」 to independently verify its 2021 Greenhouse Gas Emission & Energy Consumption Report (hereinafter 'GHG Inventory').

■ Verification Scope & Standard

KFQ's verification was focused on all the facilities which emitted the greenhouse gas during the year of 2021 under operational control of 「Korea Zinc Co., Ltd.」. 'Greenhouse Gas and Energy Target Management Scheme (Notification No. 2021-278 of Ministry of Environment & IPCC Guidelines 2006)' were mainly applied in verification process but also the Company Guidelines for GHG Inventory was considered.

■ Verification Procedure

The Verification has been planned and conducted by the "Greenhouse Gas and Energy Target Management Scheme", and to reach reasonable level of assurance.

■ Limitations of verification

Accuracy and completeness of emission data reported in the 'GHG Inventory' are subject to inherent limitations due to their nature and the methodology used in determining, calculating and estimating such data.

■ Conclusion/Opinion

Through verification procedures such as ISO 14064-1, ISO 14064-3, the following conclusions are presented on greenhouse gas emissions and energy usage data.

- 1) The Inventory Report has been stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme'
- 2) The result of Material discrepancy satisfied the criteria for an organization that emits more than 500,000 tCO₂-eq shall not exceed 2.5% from total emission as per "Greenhouse Gas and Energy Target Management Scheme"
- 3) Thus, KFQ conclude that the Greenhouse Gas Emissions and Energy Consumption of the Company in 2021 is correctly calculated and stated in accordance with 'Rules for verification of operating the greenhouse gas emission trading scheme'.

2021 Greenhouse Gas Emissions of 「KOREA ZINC」

Division	GHG Emissions (tCO ₂ -eq)		
	Direct Emissions (Scope1)	Indirect Emissions (Scope2)	Scope1 + Scope2
Onsan Refinery	2,342,375.212	1,210,470.631	3,552,845
Headquarters	154.004	284.245	438
Total	2,342,529.216	1,210,754.876	3,553,283

* The above GHG emissions are cut in units of integer for each business site, and a difference of less than ±1 tCO₂eq from the actual value of the system may occur.

July 15th, 2022

Ji Young Song

CEO Ji-Young Song

Korean Foundation for Quality (KFQ)

To the Stakeholders of KOREA ZINC INC

The Korea Productivity Center (hereinafter the "Assurer") was appointed by Korea Zinc Co., Ltd. (hereinafter the "Company") to provide independent assurance of its "Korea Zinc Sustainability Report 2021" (hereinafter the "Report"), and hereby presents the following assurance statement.

Responsibility and Independence

The Company is fully responsible for the reliability and accuracy of all the information and opinions presented in the Report. The Assurer is responsible solely for the third party assurance of the content in the Report. As an independent assurance agency, the Assurer was neither involved in the process of preparing the Report, nor in any conflicts of interest that may undermine our independence.

Assurance Standard and Method

This assurance was conducted in accordance with Type 2 assurance and the Moderate Level based on AA1000AS v3*. The Assessor reviewed whether the Client complied with the four principles of inclusivity, materiality, responsiveness, and impact presented by AA1000AP (2018)**. Based on the four-principle composition method, we carried out the assessment service. On the basis of documents and information presented by the Client and in the field interviews, we checked all indicators and information specified in the Report to confirm their balance, comparability, accuracy, timeliness, clarity, and reliability.

Methodology

This assurance was conducted through the following methods:

- Verified if the requirements for the Core option of the GRI Standards were fulfilled.
- Verified the compliance with the principles of the Report contents and quality based on the GRI Standards.
- Verified the selection of material issues covered and the appropriateness of the contents.
- Verified the suitability of the contents and any errors in expression through a comparison analysis with other sources.
- Verified the basis of Core data and information and the internal process and system through on-site inspection at the headquarters in Seoul.

Findings and Conclusion

It is the Assurer's opinion that the Report represents the sustainability efforts and performance results of the Company in a fair and accurate way. In addition, the Assurer verified if the requirements for the Core option of the GRI Standards were fulfilled. Universal Standards were prepared in full compliance with the requirements of the Core option while Topic-specific Standards were reviewed in line with disclosures of the material topics identified through the process of determining report content as follows.

Material Issues	Material Topic	Disclosures
Creating a Safe work environment	Occupational Health and Safety	403-1~7, 403-9~10
Establishing Advanced Governance	Governance	N/A*
Minimizing environmental impact	Materials	301-1
Responding to Climate Change	Emissions	305-1~2, 305-4~5, 305-7
Managing Human Resources	Employment Training and Education	401-1~2, 404-1~2
Strengthening Social Contribution	Local Community	413-1

*This issue is connected with the GRI 102 Universal Standards disclosures which is not connected with Topic-Specific Standards

Inclusivity: Stakeholder Engagement

The Assurer confirmed that the Company communicated with stakeholders to comply with the Inclusivity principle through the relevant communication channels. The Company defined its five stakeholders groups as customers, employees, shareholders/invetors, partners, and local communities, and collected opinions from stakeholders through communication channels that considered the different characteristics of each stakeholder. Collected opinions were reflected in management strategies, and is also verified that this type of management decision-making process is a good example.

Materiality: Identification and Reporting of Material Issues

The Assurer verified that the Company used a materiality test process for identifying its material issues. In particular, the Company identified its material issues through an annual external environmental analysis, such as examining global standards including GRI Guidelines, media research and investigating issues related to the extractives & minerals processing industry. The Company also used an internal environmental analysis, such as reviewing issues from previous reports and examining management issues in the selection of material issues. In addition, the Assurer verified that the Company proposed its future strategy to respond to the selected issues by reporting the issues derived from the materiality assessment process in accordance with the Stakeholder Matrix.

Responsiveness: Organization's Response to Issues

It was verified that the Company diagnosed major expectations that affect the stakeholders' performance and established appropriate measures to respond to them, of which the contents were properly stated on the Report. In particular, the Assurer verified the Company's response to material issues objectively through an annual survey and interview of stakeholders. Moreover, the Report earnestly discloses all corresponding activities and their performances regarding the major issues of sustainable management.

Impact: Measuring Sustainability Impact

The Company considers the societal impact of the organization by establishing the boundaries of the impact of major issues. Moreover, the Report earnestly discloses the product and development activities to focus on the environmental and safety impacts of the product and social issues and to minimize the negative impact through EESH management.

Limitations

The Assurer verified the Report based on the aforementioned assurance standards. The on-site verification was carried out at the headquarters in Seoul. The financial data in the Report was verified through the financial statements and disclosure information which was audited by an auditor, while the aggregated data at the corporate level are used for the verification of Environmental and Social performance. The Assurer discloses that the results may vary if further verification procedures are performed. The Assurer expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Recommendation

The Assurer recognizes the diverse efforts and performance made by the Company and suggests the following for the Company's publication of the Report in the future and the improvement of its sustainability standards:

Through Materiality analysis, It is verified that the Company reports 'safety and health', 'product quality and safety', and 'carbon neutrality' as global key issues in the extractives & minerals processing industry. It is verified that the Company reports industrial safety, customer safety, health, supplier environmental evaluation, energy, and emissions, and it is excellent that data such as worker disaster rate, safety and health education, greenhouse gas emissions, and energy use are transparently disclosed. The Assurer recommends continuous disclosure of monitoring systems and implementation status so that the Company can share safety and health operating systems and performance trends with stakeholders in the future.

June 2022

kpc

한국생산성본부

KOREA PRODUCTIVITY CENTER

AA1000

Licensed Report

000-81/V3-E77Q3

Wan G. Ahn, CEO

Seung T. Cheong, Director

Eun I. Kang, Research fellow

안완기

정승태

강은일

The Sustainability Management Center of the Korea Productivity Center is a fully qualified independent assurance agency. It is officially certified by AccountAbility that established AA1000, the international standard for stakeholder engagement and assurance. It has the Assurance Committee with of experienced experts who are qualified for the consultation and assurance of sustainability practice.

* AA1000AS v3: AA1000 Assurance Standard v3 is the global assurance standard established by Accountability to provide a comprehensive way of verifying an organization's management, compliance with the principles and reliability of performance data for reporting its sustainability issues.
** AA1000APS (2018): AA1000 Accountability Principles Standard (2018) is the global assurance principles established Accountability to provide the basis for the AA1000 Assurance Standard.

Appendix

Korea Zinc SUSTAINABILITY REPORT 2021 100 | 101

| GRI Standards Index

Universal Standards (GRI 100)				
Standard	Disclosure	Contents	Page	Note
Organizational profile	102-1	Name of the organization	9	-
	102-2	Activities, brands, products, and services	15 ~ 21	-
	102-3	Location of headquarters	9	-
	102-4	Location of operations	9, 12, 13	-
	102-5	Ownership and legal form	9, 10, 11	-
	102-6	Markets served	9, 12, 13	-
	102-7	Scale of the organization	9	-
	102-8	Information on employees and other workers	9, 86	-
	102-9	Supply chain	45, 88	-
	102-10	Significant changes to the organization and its supply chain	-	No change
	102-11	Precautionary Principle or approach	34, 35	-
	102-12	External initiatives	108	-
	102-13	Membership of associations	108	-
Strategy	102-14	Statement from senior decision-maker	5, 6	-
	102-15	Key impacts, risks, and opportunities	34, 35, 50, 51	-
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	30 ~ 33	-
	102-17	Mechanisms for advice and concerns about ethics	30, 31	-
Governance	102-18	Governance structure	56 ~ 61	-
	102-20	Executive-level responsibility for economic, environmental, and social topics	28	-
	102-21	Consulting stakeholders on economic, environmental, and social topics	47	-
	102-22	Composition of the highest governance body and its committees	57	-
	102-23	Chair of the highest governance body	57	-
	102-24	Nominating and selecting the highest governance body	60, 61	-
	102-26	Role of highest governance body in setting purpose, values, and strategy	56, 58, 59	-
	102-27	Collective knowledge of highest governance body	57, 61	-
	102-28	Evaluating the highest governance body's performance	59	-
	102-29	Identifying and managing economic, environmental, and social impacts	58, 59	-
	102-30	Effectiveness of risk management processes	34, 35	-
	102-31	Review of economic, environmental, and social topics	35, 50, 51	-

Universal Standards (GRI 100)				
Standard	Disclosure	Contents	Page	Note
Governance	102-32	Highest governance body's role in sustainability reporting	28	-
	102-33	Communicating critical concerns	50, 51	-
	102-34	Nature and total number of critical concerns	51	-
	102-35	Remuneration policies	59	-
	102-36	Process for determining remuneration	59	-
	102-37	Stakeholders' involvement in remuneration	59	-
	102-38	Annual total compensation ratio	59	-
	102-39	Percentage increase in annual total compensation ratio	89	-
Stakeholder engagement	102-40	List of stakeholder groups	47	-
	102-41	Collective bargaining agreements	75, 87	-
	102-42	Identifying and selecting stakeholders	47	-
	102-43	Approach to stakeholder engagement	47	-
	102-44	Key topics and concerns raised	47, 50, 51	-
Reporting practice	102-45	Entities included in the consolidated financial statements	10, 11	-
	102-46	Defining report content and topic Boundaries	50, 51	-
	102-47	List of material topics	50	-
	102-48	Restatements of information	-	No such cases
	102-49	Changes in reporting	-	About this report
	102-50	Reporting period	-	September, 2021
	102-51	Date of most recent report	-	September, 2021
	102-52	Reporting cycle	-	About this report
	102-53	Contact point for questions regarding the report	-	About this report
	102-54	Claims of reporting in accordance with the GRI Standards	-	About this report
	102-55	GRI content index	102 ~ 106	-
	102-56	External assurance	-	About this report

Topic-Specific Standards _ Material Topics				
Issue	Disclosure	Contents	Page	Note
Creating safe work environment	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	52 ~ 55	-
	103-3	Evaluation of the management approach		-
Establishing advanced governance system	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	56 ~ 61	-
	103-3	Evaluation of the management approach		-
Minimizing environmental effect	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	62 ~ 66	-
	103-3	Evaluation of the management approach		-
Responding to climate change	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	67 ~ 71	-
	103-3	Evaluation of the management approach		-
Managing human resources	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	72 ~ 76	-
	103-3	Evaluation of the management approach		-
Strengthening social contribution	103-1	Explanation of the material topic and its Boundary	50, 51	-
	103-2	The management approach and its components	77 ~ 81	-
	103-3	Evaluation of the management approach		-

Topic-Specific Standards _ Non-Material Topics				
Economic Performance (GRI 200)				
Standard	Disclosure	Contents	Page	Note
Economic performance	201-1	Direct economic value generated and distributed	14, 22, 23	-
	201-2	Financial implications and other risks and opportunities due to climate change	67, 68	-
	201-3	Defined benefit plan obligations and other retirement plans	75	-
Indirect economic impacts	203-1	Infrastructure investments and services supported	77 ~ 81	-
	203-2	Significant indirect economic impacts	37	-
Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures	30	-
	205-3	Confirmed incidents of corruption and actions taken	31	-
Anti-competitive behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	31	-
Tax	207-1	Approach to tax	39	-
	207-2	Tax governance, control, and risk management	34, 35, 39	-
	207-4	Country-by-country reporting	85	-

Environmental Performance (GRI 300)				
Standard	Disclosure	Contents	Page	Note
Materials	301-1	Materials used by weight or volume	63	-
	301-2	Recycled input materials used	20	-
Energy	302-1	Energy consumption within the organization	71, 85	-
	302-2	Energy consumption outside of the organization	71, 86	-
	302-3	Energy intensity	71	-
	302-4	Reduction of energy consumption	67, 71	-
Water	303-1	Interactions with water as a shared resource	62, 64	-
	303-2	Management of water discharge-related impacts	64	-
	303-3	Water withdrawal	64, 86	-
	303-4	Water discharge	64, 86	-
	303-5	Water consumption	64, 86	-
Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	12, 13	-
	304-2	Significant impacts of activities, products, and services on biodiversity	43	-
Emissions	305-1	Direct (Scope 1) GHG emissions	71, 85	-
	305-2	Energy indirect (Scope 2) GHG emissions	71, 85	-
	305-4	GHG emissions intensity	71	-
	305-5	Reduction of GHG emissions	71	-
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	64, 85	-
Waste	306-1	Waste generation and significant waste-related impacts	64	-
	306-2	Management of significant waste-related impacts	65	-
	306-3	Waste generated	60, 81	-
Environmental compliance	307-1	Non-compliance with environmental laws and regulations	86	-

Social Performance (GRI 400)				
Standard	Disclosure	Contents	Page	Note
Employment	401-1	New employee hires and employee turnover	86, 87	-
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	76	-
	401-3	Parental leave	76, 87	-
Occupational Health and Safety	403-1	Occupational health and safety management system	52 ~ 55	-
	403-2	Hazard identification, risk assessment, and incident investigation	54, 55	-
	403-3	Occupational health services	52 ~ 55	-

Social Performance (GRI 400)				
Standard	Disclosure	Contents	Page	Note
Occupational health and safety	403-4	Worker participation, consultation, and communication on occupational health and safety	54, 55	-
	403-5	Worker training on occupational health and safety	54, 55	-
	403-6	Promotion of worker health	76	-
	403-7	"Prevention and mitigation of occupational health and safety impacts directly linked by business relationships"	40, 54, 58, 87	-
	403-8	Workers covered by an occupational health and safety management system	40, 52 ~ 55	-
	403-9	Work-related injuries	54, 87	-
	403-10	Work-related ill health	87	-
Training and education	404-1	Average hours of training per year per employee	87	-
	404-2	Programs for upgrading employee skills and transition assistance programs	74	-
Diversity and equal opportunity	405-1	Diversity of governance bodies and employees	57, 60, 86, 87	-
Freedom of association and collective bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	36, 75	-
Child labor	408-1	Operations and suppliers at significant risk for incidents of child labor	36	-
Forced or compulsory labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	36	-
Security practices	410-1	Security personnel trained in human rights policies or procedures	44, 74	-
Human rights assessment	412-2	Employee training on human rights policies or procedures	74	-
Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	77 ~ 81	-
Public policy	415-1	Political contributions	46	No political contribution
Customer privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	88	0
Socioeconomic compliance	419-1	Non-compliance with laws and regulations in the social and economic area	-	0

SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Classification	Accounting metric	Unit	Page
Greenhouse gas emissions	EM-MM-110a.1	Quantitative	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	tonnes, %	71, 99
	EM-MM-110a.2	Qualitative	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	68, 71
Air quality	EM-MM-120a.1	Quantitative	Air emissions of the following pollutants: CO, NOx (excluding N2O), SOx, particulate matter (PM10), mercury (Hg), lead (Pb), and volatile organic compounds (VOCs)	tonnes	64
Energy management	EM-MM-130a.1	Quantitative	Total energy consumed, percentage grid electricity, percentage renewable	TJ	71
Water management	EM-MM-140a.1	Quantitative	Total fresh water withdrawn, total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	m³, %	64
Waste & hazardous materials management	EM-MM-150a.10	Quantitative	Description of waste and hazardous materials management policies and procedures for active and inactive operations	tonnes, %	65
Workforce health & safety	EM-MM-320a.1	Quantitative	(1) MSHA all-incidence rate, (2) fatality rate, (3) near miss frequency rate (NMFR) and (4) average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees	%	87, 88
Business ethics & transparency	EM-MM-510a.1	Qualitative	Description of the management system for prevention of corruption and bribery throughout the value chain	-	30-33

*Lost Time Injury Rate: The rate of injury of labor loss that occurred per million hours / **Occupational Illness Frequency Rate: Occupational disease incidence

Topic	Code	Classification	Accounting metric	Unit	Page
Activity Metrics	EM-MM-000.A	Quantitative	Production of (1) metal ores and (2) finished metal products	tonnes	24
	EM-MM-000.B	Quantitative	Total number of employees, percentage contractors	number, %	86

TCFD Index

Section	Disclosures	Page
Governance	a) The board's oversight of climate-related risks and opportunities.	69
	b) Management's role in assessing and managing climate-related risks and opportunities.	69
Strategy	a) The climate-related risks and opportunities the organization has identified over the short, medium, and long term.	70
	b) The impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	70
	c) The resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	70
Risk Management	a) The organization's processes for identifying and assessing climaterelated risks.	70
	b) The organization's processes for managing climaterelated risks.	70
	c) How processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.	70
Metrics and Targets	a) The metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	71
	b) Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	71
	c) The targets used by the organization to manage climate related risks and opportunities and performance against targets	71

Appendix | MEMBERSHIPS AND ASSOCIATIONS

Korea Customs Logistics Association	Korea Industrial Safety Association	Korean Institute of Plant Engineering
Korean Chemical Society	Civil Defense Council	Korea Emissions Market Association
Industrial Safety Committee	Regional (Ulsan) Legislation Association	Busan/Ulsan/Gyeongnam Forum
Emergency Planning Council	Industrial Security Council	Listed Company Audit Committee
Seoul Chamber of Commerce	Reserve Army Council	Onsan Industrial Complex Safety Management Association
Onsan Industrial Complex General Affairs Department Heads' Council	Onsan Industrial Complex Facility Directors' Council	Onsan Industrial Complex Scholarship Committee
Onsan Industrial Complex Environmental Management Association	Ulsan/Yangsan Entrepreneur Association	Ulsan Regional Facility Directors' Council
Ulsan Industrial Health Council	Ulsan Chamber of Commerce	Ulsan Electric Engineers Association
Ulsan Safety Communication Committee	Ulsan Research Center Directors' Council	Ulsan Port Development Council
Ulsan Logistics Council	Korea Personal Improvement Association	KRX Emissions Market
Korea Metal Recycling Industry Association	Korea International Trade Association	Korea Nonferrous Metal Association
Korean Association of Occupational Health Nurses	Korea Industrial Technology Association	Korea Listed Companies Association
Korea-America Association	Ulsan Environmental Engineers Association	Environmental Protection Council
Ulju Province Volunteer Center	Korea Mining Association	Overseas Resource Development Association
International Antimony Association	International Lead Association	International Zinc Association
KBCSD	Korea RE100 Committee	

| Organizations that Participated

Audit Team	Management Support Division	Technology Team
Strategies & Planning Division	Production Support Division	Advanced Materials Business Division
Safety Management Division	Raw Materials Division	HR Team
Recycling Division	Procurement Division	Finance & Accounting Division
Information Security Team	Sustainability Management Division	Environmental Management Division



In order to create a happy and bountiful world,
Korea Zinc will take the lead in creating social
and environmental values.

Korea Zinc Co., Ltd. www.koreazinc.co.kr

542, Gangnam-daero, Gangnam-gu, Seoul / +82-2-519-3416
ESG Management Team