



ABOUT THIS REPORT

The 2022 Sustainability Report from Korea Zinc provides a qualitative overview of our performance in environmental, societal, and governance aspects, in line with our sustainability-centric management approach. Its annex, the ESG Data Book, presents quantitative performance data.

This report enhances our materiality analysis by examining the significant issues that Korea Zinc confronts through the lens of double materiality, considering multiple perspectives. We analyze both domestic and international trends using international indicators and industry benchmarking. Additionally, we incorporate the views of our stakeholders in various ways to ensure the transparent and accurate disclosure of ESG data.

Reporting Principles and Standards

This sustainability report has been compiled in line with the 2021 Global Reporting Initiative (GRI) Standards. The financial data contained within this report adheres to the consolidation standard of the Korean version of the International Financial Reporting Standards (K-IFRS). Furthermore, Korea Zinc has taken into account the industry standards set by the Sustainability Accounting Standards Board (SASB) in order to identify material issues relevant to our sector. We have also incorporated the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD).

Scope and Boundaries

This report encompasses the period from January to December 2022, and also includes some significant developments from the first half of 2023. It covers activities at our headquarters and Onsan Refinery. Additionally, it partially includes content related to climate change from KZ Green Tech Co., Ltd., a subsidiary, and Sun Metals Holdings Ltd. (SMC), an international business location. Where the scope of the report varies, this is clearly indicated in the report's footnotes.

Report Assurance

This report has been independently verified by the Korea Productivity Center, an independent assurance organization, to guarantee both independence and reliability. The verification was conducted in line with Type 1 assurance (at a moderate level, as per the AA1000AS (2008)* assurance standard). Additionally, Type 2 assurance was applied to eight key issues. The Korea Foundation for Quality has verified the Scope 1 and 2 emissions, while the Korea Standards Association has verified the Scope 3 emissions.

Report Distribution and Stakeholder Inquiries

This report can be downloaded from the Korea Zinc website. If stakeholders have any opinions or feedback, they are encouraged to contact us using the information provided below.

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* The 2022 Sustainability Report from Korea Zinc provides a qualitative overview of our performance in environmental, societal, and governance aspects, in line with our sustainability-centric management approach.

Korea Zinc presents a roadmap for future value through Troika Drive.

ESG DATA BOOK



Korea Zinc ensures the accuracy of its sustainability data through a third party, and we disclose this information transparently on an annual basis. We also comply with global initiatives and structure our sustainability report in accordance with information disclosure guidelines.

Sustainability Data

Economic Dimension

Korea Zinc's economic data are based on consolidated financial statements, as well as other sources such as production performance and sales ratios of primary products, which include data from SMC, our Australian subsidiary. According to the Articles of Incorporation, Korea Zinc is permitted to issue up to 48,000,000 shares. As of December 2022, we have issued 19,863,158 common shares. At present, there are 18,667,398 common shares in circulation, with 1,195,760 treasury shares being directly acquired and held. We have not issued any preferred shares. The shareholder information for Korea Zinc is disclosed annually in a transparent manner through our Business Reports. The current shareholdings of Young Poong, related parties of Young Poong, and other shareholders (including the National Pension Service) stand at 25.11%, 19.60%, and 54.29% respectively.

Financial Position

| Category | Unit | 2020 | 2021 | 2022 | |
|--|--|-------------------|-------------------|--------------------|-------|
| Assets | Current Assets | 4,912,869,202,998 | 5,689,044,210,643 | 6,071,090,869,900 | |
| | Non-current Assets | 3,586,776,374,652 | 4,275,004,424,006 | 6,026,827,489,074 | |
| | Total | 8,499,645,577,650 | 9,964,048,634,649 | 12,097,918,358,974 | |
| Liabilities | Current Liabilities | 1,118,415,592,360 | 1,770,527,531,625 | 2,319,116,608,598 | |
| | Non-current Liabilities | 294,201,298,978 | 459,286,640,200 | 547,069,633,828 | |
| | Total | 1,412,616,891,338 | 2,229,814,171,825 | 2,866,186,242,426 | |
| Equity | Capital | 94,350,000,000 | 94,350,000,000 | 99,315,790,000 | |
| | Additional Paid-in And Other Capital | 56,572,486,272 | 57,338,578,345 | 1,085,852,954,318 | |
| | Capital Adjustments | - 53,508,694,647 | - 53,508,694,647 | - 15,029,842,807 | |
| | Accumulated Other Comprehensive Income | - 67,310,345,930 | - 8,860,906,556 | - 80,834,625,981 | |
| | Retained Earnings | 6,939,677,782,254 | 7,518,367,793,855 | 7,953,409,019,052 | |
| | Non-controlling Invest Equity | 117,247,458,363 | 126,547,691,827 | 189,018,821,966 | |
| | Total | 7,087,028,686,312 | 7,734,234,462,824 | 9,231,732,116,548 | |
| Liabilities + Equity Total | | 8,499,645,577,650 | 9,964,048,634,649 | 12,097,918,358,974 | |
| Capital Adequacy Ratio (Equity/Assets) | % | 82 | 76.35 | 74.75 | |
| Debt Ratio (Liabilities/Assets) | | 20.27 | 29.31 | 31.70 | |
| Tax Paid | Pre-tax Profit | 100 million KRW | 8,124 | 11,391 | 8,815 |
| | Nominal Tax Amount | | 2,376 | 3,280 | 832 |
| | Nominal Tax Rate | % | 29.2 | 28.8 | 9.4 |
| | Real Tax Amount | 100 million KRW | 2,657 | 2,728 | 3,302 |
| | Real Tax Rate | % | 32.7 | 24.0 | 37.5 |

R&D Expenses

| Category | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------------|---------------|-------|-------|-------|-------|
| R&D Expenses | 1 million KRW | 1,411 | 2,423 | 4,730 | 7,559 |
| R&D Expenses / Sales | % | 0.03 | 0.04 | 0.07 | 0.09 |

Production Performance

| Category | Unit | 2019 | 2020 | 2021 | 2022 | |
|------------|-----------------|--------|-----------|-----------|-----------|-----------|
| Korea Zinc | Base Metals | Zinc | 650,086 | 643,542 | 640,372 | 640,067 |
| | | Lead | 413,060 | 435,040 | 426,415 | 412,432 |
| | Precious Metals | Gold | 8 | 10 | 14 | 12 |
| | | Silver | 2,083 | 2,321 | 2,202 | 2,075 |
| | Sulfuric Acid | | 1,251,259 | 1,309,118 | 1,298,192 | 1,257,802 |
| SMC | Base Metals | Zinc | 209,831 | 227,775 | 206,780 | 149,130 |
| | Sulfuric Acid | MT | 444,801 | 481,618 | 408,549 | 330,282 |
| | Others | | 277,593 | 184,668 | 139,621 | 120,903 |

Proportion of Main Products Sales

| Category | Unit | 2019 | 2020 | 2021 | 2022 | |
|------------|-----------------|--------|-------|-------|-------|-------|
| Korea Zinc | Base Metals | Zinc | 38.95 | 32.47 | 31.84 | 37.53 |
| | | Lead | 19.79 | 17.47 | 16.81 | 16.63 |
| | Precious Metals | Gold | 7.50 | 30.31 | 12.83 | 11.01 |
| | | Silver | 23.27 | 10.96 | 29.04 | 22.72 |
| | Sulfuric Acid | % | 0.96 | 0.27 | 0.94 | 1.53 |
| Others | | 9.54 | 8.51 | 8.54 | 10.58 | |
| SMC | Base Metals | Zinc | - | - | 85.27 | 87.41 |
| | Sulfuric Acid | | - | - | 3.43 | 4.26 |
| | Others | | - | - | 11.30 | 8.33 |

Export and Domestic Sales Ratio

| Category | Unit | 2019 | 2020 | 2021 | 2022 | |
|------------|------------------|---------------|-----------|-----------|-----------|-----------|
| Korea Zinc | Sales (Domestic) | 1 million KRW | 1,653,805 | 1,701,829 | 2,494,490 | 2,560,819 |
| | | % | 31.69 | 30.11 | 34.83 | 31.69 |
| | Sales (Export) | 1 million KRW | 3,565,018 | 3,950,320 | 4,668,016 | 5,520,559 |
| | | % | 68.31 | 69.89 | 65.17 | 68.31 |
| SMC | Sales (Domestic) | 1 million KRW | - | - | 209,348 | 224,899 |
| | | % | - | - | 27.20 | 37.39 |
| | Sales (Export) | 1 million KRW | - | - | 560,392 | 376,631 |
| | | % | - | - | 72.80 | 62.61 |

Sustainability Data

Environmental Dimension

The scope of the environmental data encompasses both the headquarters in Seoul and Onsan Refinery. The data pertaining to climate change includes information from our subsidiaries, KZ Green Tech and SMC. Certain business sites were excluded from the data collection if they were not applicable to specific data items.

Energy Consumption

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|--------------------------------|--------------------------------|-----------------------------|------------|------------|------------|------------|----------|
| Headquarters | Electricity | | 3.83 | 4.75 | 5.94 | 5.28 | |
| | Fuel | LNG (City Gas, Natural Gas) | TJ | 0.74 | 1.09 | 1.35 | 1.12 |
| | | Gasoline | | 1.08 | 1.06 | 1.28 | 1.74 |
| | Total | | 5.64 | 6.91 | 8.56 | 8.14 | |
| | Energy Intensity (Sale Based*) | TJ / 1 billion KRW | 0.00084 | 0.00091 | 0.00086 | 0.00073 | |
| Onsan Refinery | Electricity | | 33,557 | 33,816 | 25,294 | 23,117 | |
| | Fuel | LNG (City Gas, Natural Gas) | | 1,502 | 1,555 | 8,963 | 11,409 |
| | | Kerosene | | - | - | - | - |
| | Fuel | Diesel | TJ | 4 | 4 | 4 | 4 |
| | | Gasoline | | - | - | - | - |
| | Others | | 18,434 | 12,931 | 16,085 | 15,404 | |
| | Total | | 53,496 | 48,307 | 50,346 | 49,933 | |
| Energy Intensity (Sale Based*) | TJ / 1 billion KRW | 7.99 | 6.37 | 5.05 | 4.45 | | |
| SMC** | Electricity | MWh | 711,986.24 | 789,394.64 | 908,569.98 | 662,289.10 | |
| | Fuel | Diesel | | 1,552.38 | 1,520.19 | 1,613.06 | 2,456.15 |
| | | LPG | KL | 819.8 | 759.64 | 524.02 | 401.83 |
| | | Gasoline | | 29.71 | 40.31 | 70.86 | 58.98 |
| | Fuel Total | | 2,401.89 | 2,320.14 | 2,207.94 | 2,916.96 | |

* Based on consolidated sales in Annual Reports ** Based on fuel procurement

Renewable Energy Generation

| Category | | Unit | 2019 | 2020 | 2021* | 2022 |
|----------|------------------------------------|------|---------|---------|--------|---------|
| SMC | Renewable Energy Generated | MWh | 211,418 | 123,088 | 28,541 | 154,962 |
| | Renewable Energy Consumption Ratio | % | 22.9 | 13.5 | 3.1 | 19.0 |

* In 2021, renewable energy generation decreased because the facility was shut down and replaced due to failure.

Air Pollutant Emissions

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|----------------|-----------|--------|-----------|---------|--------|---------|---|
| Onsan Refinery | NOx | | 1,131.0 | 770.0 | 807.9 | 1,042.0 | |
| | SOx | | 2,223.0 | 1,270.0 | 1087.3 | 1,091.0 | |
| | PM (Dust) | | 91.0 | 93.0 | 93.2 | 93.0 | |
| Headquarters | | Tonnes | NOx | 0 | 0 | 0 | 0 |
| | | | SOx | 0 | 0 | 0 | 0 |
| | | | PM (Dust) | 0 | 0 | 0 | 0 |

Greenhouse Gas Emissions

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|--|---|---|-----------|-----------|-----------|-----------|---------|
| Scope 1 | | | 2,215,475 | 1,891,934 | 2,342,812 | 2,343,881 | |
| Scope 2 | | tCO ₂ eq | 1,629,769 | 1,642,616 | 1,210,471 | 1,106,536 | |
| Scope 1+2 | | | 3,845,243 | 3,534,549 | 3,553,283 | 3,450,416 | |
| GHG Intensity (sale based*) | | 1,000 tCO ₂ eq/ 1 billion KRW | 0.57 | 0.47 | 0.36 | 0.31 | |
| Domestic | 1. Purchased Goods and Services | | - | - | 1,324,432 | 1,261,367 | |
| | | | - | - | 115 | 169 | |
| | | | - | - | 132,616 | 122,621 | |
| | 4. Upstream Transportation and Distribution | | - | - | 24,224 | 21,360 | |
| | | | - | - | 24,015 | 29,442 | |
| | 6. Business Travel | | - | - | 355 | 517 | |
| | | | - | - | 355 | 349 | |
| | 9. Downstream Transportation and Distribution | | - | - | 8,631 | 10,865 | |
| | | | - | - | 169,821 | 161,819 | |
| | 11. Use of Sold Products | | - | - | 83,180 | 75,695 | |
| | | | - | - | 1,767,744 | 1,684,204 | |
| | Scope 3 Total | | | | | | |
| | Overseas (SMC) | Scope 1 | | 5,915 | 6,561 | 6,487 | 8,528 |
| | | Scope 2 | | 704,061 | 599,164 | 697,845 | 508,717 |
| | | Scope 1+2 | | 709,976 | 605,725 | 704,332 | 517,245 |
| Domestic + Overseas | Scope 1+2 | | 4,555,219 | 4,140,274 | 4,257,615 | 3,967,662 | |
| GHG Intensity (Not Including Scope 3)* | | 1,000 tCO ₂ eq/ 1 billion KRW | 0.68 | 0.55 | 0.43 | 0.35 | |

* Based on consolidated sales of Annual Reports ** Scope 3 has been measured since 2021.

Soil Pollutant

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|------------------------------------|------|------|------|------|------|
| Onsan Refinery | Total Petroleum Hydrocarbons (TPH) | ppm | - | 61 | 156 | 56 |

Water Pollutant Emissions

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|-----|--------|-------|-------|-------|-------|
| Onsan Refinery | BOD | | 24.7 | 9.8 | 12.8 | 8.2 |
| | COD | | 56.9 | 14.8 | 11.8 | 71.0 |
| | TOC | | 0 | 0 | 0 | 32.6 |
| | SS | | 22.7 | 20.7 | 14.4 | 103.9 |
| | T-N | | 74.2 | 75.8 | 75.4 | 150.7 |
| | T-P | Tonnes | 0.3 | 0.1 | 0.1 | 0.06 |
| Total | | 178.8 | 121.2 | 114.5 | 366.5 | |
| Headquarters | BOD | | 0 | 0 | 0 | 0 |
| | COD | | 0 | 0 | 0 | 0 |
| | TOC | | 0 | 0 | 0 | 0 |
| | SS | | 0 | 0 | 0 | 0 |

Sustainability Data

Environmental Dimension

Chemical / Chemical Hazards Emissions and Increase/Decrease

| Category | Unit | 2019 | 2020 | 2021 | 2022 | Year on Year |
|-----------------------------|--------|-------|-------|-------|--------|--------------|
| Lead and Its Compounds | Tonnes | 1,364 | 1,128 | 1,102 | 1,000 | -102 |
| Mercury and Its Compounds | | - | - | - | 6 | - |
| Arsenic and Its Compounds | | - | - | - | 4,442 | - |
| Hydrogen Chloride | | 0 | 0 | 0 | 0 | 0 |
| Hydrogen Fluoride | | 0 | 0 | 0 | 0 | 0 |
| Sulfuric Acid | | 0 | 0 | 0 | 0 | 0 |
| Nitric Acid | | 0 | 0 | 0 | 0 | 0 |
| Chlorine | | 0 | 0 | 0 | 0 | 0 |
| Hydrazine Hydrate | | 0 | 0 | 0 | 0 | 0 |
| Fluorosilicic Acid | | 0 | 0 | 0 | 0 | 0 |
| Selenium and Its Compounds | | 21 | 21 | - | 292 | - |
| Hydroquinone | | 0 | 0 | 0 | 0 | 0 |
| Nickel and Its Compounds | | 1.51 | 2.07 | 4.97 | 6.27 | 1.30 |
| Cadmium and Its Compounds | | 39.15 | 63.29 | 66.45 | 82.58 | 16.13 |
| Chromium and Its Compounds | | 0.06 | 0 | 0 | 6.32 | 6.32 |
| Sodium Hydroxide | | 0 | 0 | 0 | 0 | 0 |
| Aluminum and Its Compounds | | 298 | 561 | 290 | 423 | 132 |
| Manganese and Its Compounds | | 63 | 81 | 59 | 80 | 21 |
| Tin and Its Compounds | | 0 | 0 | 0 | 17 | 17 |
| Antimony and Its Compounds | | 826 | 820 | 516 | 615 | 99 |
| Barium and Its Compounds | 0 | 0 | 0 | 11 | 11 | |
| Cobalt and Its Compounds | 0.23 | 0.45 | 0.29 | 0.36 | 0.07 | |
| Copper and Its Compounds | 145 | 160 | 224 | 236 | 12 | |
| Zinc and Its Compounds | 2,288 | 3,124 | 3,801 | 4,698 | 897 | |
| Silver and Its Compounds | 0 | 0 | 0 | 0 | 0 | |
| Potassium | - | - | - | 2,641 | - | |
| Sodium | - | - | - | 1,138 | - | |
| Total | | 5,045 | 5,962 | 6,065 | 15,695 | 9,630 |

Waste Generated

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|-----------------------|-------------------------|---|---------|--------|---------|--------|-------|
| Headquarters | Hazardous Waste | Hazardous Waste | - | - | - | - | |
| | General Waste | | 11 | 11 | 11 | 8 | |
| | Total | | 11 | 11 | 11 | 8 | |
| Onsan Refinery | Hazardous Waste | Waste Treatment (Incineration + Landfill) | 63,889 | 70,498 | 51,195 | 69,565 | |
| | | Recycled/Reused | 71 | 118 | 55 | 117 | |
| | | Others | - | 3 | - | - | |
| | Total (Hazardous Waste) | | 63,960 | 70,619 | 51,250 | 69,682 | |
| | General Waste | Incineration | | 1,556 | 2,056 | 1,638 | 2,090 |
| Landfill | | | 712 | 521 | 261 | 430 | |
| Recycled/Reused | | Tonnes | 33,153 | 26,857 | 26,931 | 27,049 | |
| Others | | | 5,269 | 4,847 | 8,304 | 3,510 | |
| Total (General Waste) | | 40,690 | 34,281 | 37,134 | 33,079 | | |
| Total | | 104,650 | 104,900 | 88,384 | 102,761 | | |
| SMC | Hazardous Waste | Waste Treatment | 34 | 349 | 239 | 131 | |
| | | Recycled | 18 | 37 | 33 | 27 | |
| | General Waste | Incineration | | - | - | - | |
| | | Landfill | | 820 | 1,497 | 1,934 | 1,200 |
| | | Recycled | | 67 | 490 | 0 | 0 |
| Total | | 938 | 2,374 | 2,207 | 1,358 | | |

Waste-related Objectives and Performance

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|------------------|--------|---------|---|---|---|
| Onsan Refinery | Reduction Target | - | - | A 5% reduction compared to the previous year. | A 5% reduction compared to the previous year. | A 5% reduction compared to the previous year. |
| | Waste Generated | Tonnes | 104,650 | 104,900 | 88,384 | 102,761 |
| | Rate of Change | % | | 0.2 | -15.7 | 16.3 |

Recycled Waste (Including Slag)

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|--------------------------|--------|--------|---------|---------|---------|
| Onsan Refinery | Recycled General Waste | | 33,153 | 26,857 | 26,931 | 27,049 |
| | Recycled Hazardous Waste | | 71 | 118 | 55 | 117 |
| | Recycled Slag* | Tonnes | - | 699,444 | 732,432 | 614,832 |
| | Total | | 33,224 | 726,419 | 759,418 | 641,998 |
| | Recycled Rate | % | 31.74 | 90.31 | 92.52 | 89.46 |

※ In 2022, Korea Zinc's environmental investment was KRW 3,459 million for air quality, KRW 3,193 million for water quality, and KRW 2,488 million for chemicals. The total amount was KRW 9,040 million.
* Slag recycling has been measured since 2020.

Water Management

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|----------------------|---------------------|------------|------------|------------|------------|
| Onsan Refinery | Water Intake* | 1,000m ³ | 0 | 0 | 0 | 0 |
| | Water Usage | Industrial Water | 12,316,391 | 12,156,003 | 13,595,789 | 13,595,918 |
| | Water Reused | Tonnes | 710,551 | 553,675 | 415,130 | 667,870 |
| | Water Reuse Rate | % | 5.8 | 4.6 | 3.1 | 5.0 |
| | Wastewater Discharge | 1,000m ³ | 2,491 | 2,461 | 2,566 | 2,886 |
| Headquarters | Water Usage | | 2,363 | 2,809 | 3,614 | 4,016 |
| | Water Reused | Tonnes | 0 | 0 | 0 | 0 |
| | Water Reuse Rate | % | 0 | 0 | 0 | 0 |

*100% of the water used by Onsan Refinery comes from the municipal water system.

Sustainability Data

Environmental Dimension

Renewable Materials Usage

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|--------------|-------------------------|--------|------|---------|---------|---------|
| Headquarters | Secondary Raw Materials | Usage | - | 634,537 | 636,661 | 508,081 |
| | Total | Tonnes | - | 634,537 | 636,661 | 508,081 |

Non-renewable Materials Usage

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|----------------|---|--------|-----------|-----------|-----------|-----------|--------|
| Headquarters | Zinc Oxide Concentrate | Usage | 913,243 | 961,090 | 958,301 | 968,827 | |
| | Lead Concentrate | | 601,063 | 643,614 | 644,270 | 589,835 | |
| | Total | | 1,514,306 | 1,604,704 | 1,602,571 | 1,558,662 | |
| Onsan Refinery | Other Processed Sludge (General) | Tonnes | 878 | 875 | 1,717 | 1,288 | |
| | Other Slags (General) | | 7,438 | 7,243 | 7,755 | - | |
| | Other Dust (General) | | 5,637 | 5,460 | 3,306 | 1,682 | |
| | Other Waste (General) | | 199 | 231 | 78 | 20 | |
| | Waste Glass (General) | | 5,714 | 4,706 | 3,289 | 2,594 | |
| | Waste Electrical and Electronic Products (General) | | 10,590 | 16,310 | 15,359 | 13,955 | |
| | Electric Vehicle Waste Battery (General) | | - | - | - | 37 | |
| | Wastewater Treatment Sludge (General) | | Usage | 18,006 | 34,904 | 43,638 | 32,071 |
| | Waste Synthetic Resins (General) | | 5,857 | 1,442 | 596 | 217 | |
| | Waste Foundry Sand (General) | | 58,844 | 44,194 | 34,096 | 26,244 | |
| | Other Processed Sludge (Designated) | | 66,512 | 151,601 | 136,774 | 175,599 | |
| | Slags (Designated) | | 6,728 | 30,753 | 188,235 | 212,342 | |
| | Dust (Designated) | | 6,243 | 11,171 | 13,339 | 11,910 | |
| | Secondary Waste Storage Battery Containing Waste Sulfuric Acid (Designated) | | 1,929 | 828 | 1,250 | 14,671 | |
| | Total | | 194,576 | 309,719 | 449,430 | 492,632 | |

Environmental Training Performance

| Category | | Unit | 2019* | 2020 | 2021 | 2022 | |
|--------------|---|------------------------|---|---------|--------|--------|-------|
| Headquarters | Number of Participants | Persons | - | 4,160 | 1,768 | 1,971 | |
| | Training Hours | Hours | - | 24,560 | 15,982 | 28,736 | |
| | Air | Persons | - | 2 | - | 2 | |
| | | Hours | - | 56 | - | 56 | |
| | Compulsory Training Including Environmental Engineers | Water, Waste, Soil | Persons | - | 1 | 1 | 2 |
| | | | Hours | - | 6 | 28 | 34 |
| | | | Hazardous Chemical Substance Managers/Technicians, Inspectors | Persons | - | 2 | 8 |
| | Training for Staff Handling Hazardous Substances | Number of Participants | Persons | - | 1,059 | 1,033 | 1,771 |
| | | | Hours | - | 16 | 16 | 16 |
| | Training for Hazardous Substances Workers | Number of Participants | Persons | 3,246 | 3,000 | 879 | 200 |
| | | | Hours | 2 | 2 | 2 | 2 |

* Data from 2019 are not available due to internal system changes.

※ Korea Zinc diligently manages and discloses information regarding any infringements of environmental laws and regulations across all its operations via the Environment Information Disclosure System (ENV-INFO System). In 2019, the Onsan Refinery recorded two environmental violations, resulting in a fine of KRW 5,980,000. In 2020, there were no recorded violations. However, in 2021, there were two violations, leading to a fine of KRW 2,080,000, and in 2022, there was one violation, with a fine of KRW 1,400,000. No environmental violations were reported at any other business locations or within the corporation, including the international subsidiary SMC, within the reporting scope. Korea Zinc remains committed to closely monitoring and adhering to all environmental laws and regulations.

Social Dimension

The scope of the social data encompasses the headquarters in Seoul, Onsan Refinery, and SMC, our Australian subsidiary. Certain business sites were excluded from data collection based on the relevance of data items. The data labeled as "Korea Zinc" represents the combined data from the Korea Zinc headquarters and Onsan Refinery.

Employees

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|-----------------------------|------------|------------|----------|-------|-------|--------|-------|
| Total Employees | Korea Zinc | | 1,412 | 1,441 | 1,554 | 1,742* | |
| | SMC | | 295 | 311 | 290 | 321 | |
| By Gender | Korea Zinc | Male | 1,358 | 1,384 | 1,489 | 1,649 | |
| | | Female | 54 | 57 | 65 | 93 | |
| | SMC | Male | 274 | 283 | 265 | 290 | |
| | | Female | 21 | 28 | 25 | 31 | |
| By Nationality | Korea Zinc | Korean | 1,410 | 1,439 | 1,552 | 1,737 | |
| | | Foreigner | 2 | 2 | 2 | 5 | |
| By Age | Korea Zinc | Persons | Under 30 | 245 | 228 | 301 | 394 |
| | | | 30 to 50 | 924 | 939 | 956 | 1,026 |
| | | | Over 50 | 243 | 274 | 297 | 322 |
| | | | Total | 1,412 | 1,441 | 1,554 | 1,742 |
| | SMC | Persons | Under 30 | 65 | 61 | 59 | 63 |
| | | | 30 to 50 | 194 | 202 | 189 | 208 |
| | | | Over 50 | 36 | 48 | 42 | 50 |
| | | | Total | 295 | 311 | 290 | 321 |
| Employees with Disabilities | Korea Zinc | Personnel | 25 | 27 | 25 | 25 | |
| | | Percentage | % | 1.8 | 1.9 | 1.6 | 1.4 |

* The total employee count includes 18 individuals who retired as of December 31, 2022, and 4 registered executives. This accounts for the discrepancy between the total number of employees (1,720) as disclosed in the Business Report.

New Hires

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|-----------------|------------|---------|--------------------------------|------|------|------|------|
| Total New Hires | Korea Zinc | | 42 | 67 | 188 | 302 | |
| | SMC | | 46 | 45 | 42 | 87 | |
| By Gender | Korea Zinc | Persons | Male | 39 | 53 | 177 | 263 |
| | | | Female | 3 | 7 | 11 | 39 |
| | | | Percentage of Female New Hires | % | 7.7 | 13.2 | 6.2 |
| | SMC | Persons | Male | 38 | 39 | 35 | 72 |
| | | | Female | 8 | 6 | 7 | 15 |
| | | | Percentage of Female New Hires | % | 21.1 | 15.4 | 20.0 |
| By Age | Korea Zinc | Persons | Under 30 | 31 | 47 | 152 | 218 |
| | | | 30 to 50 | 11 | 20 | 34 | 80 |
| | | | Over 50 | - | - | 2 | 4 |
| | SMC | Persons | Total | 42 | 67 | 188 | 302 |
| | | | Under 30 | 20 | 21 | 18 | 43 |
| | | | 30 to 50 | 20 | 24 | 21 | 38 |
| Total | SMC | Persons | Over 50 | 6 | - | 3 | 6 |
| | | | Total | 46 | 45 | 42 | 87 |

Sustainability Data

Social Dimension

Employees by Employment Type

| Category | | | Unit | 2019 | 2020 | 2021 | 2022 |
|---|-----------------------------------|--------------------|--------------------|-------|-------|-------|-------|
| Employees by Employment Type and Gender | Korea Zinc | Permanent | Male | 1,385 | 1,401 | 1,458 | 1,518 |
| | | | Female | | | | 88 |
| | | | Total | 1,385 | 1,401 | 1,458 | 1,606 |
| | Korea Zinc | Temporary | Male | 32 | 54 | 96 | 131 |
| | | | Female | | | 0 | 5 |
| | | | Total | 32 | 54 | 96 | 136 |
| | Percentage of Temporary Employees | Male | % | 2.4 | 3.9 | 6.4 | 7.9 |
| | | Female | | 0.0 | 0.0 | 0.0 | 5.4 |
| | SMC | Permanent | Male | 269 | 278 | 262 | 288 |
| | | | Female | 18 | 25 | 22 | 28 |
| | | | Total | 287 | 303 | 284 | 316 |
| | | Temporary | Male | 5 | 5 | 3 | 2 |
| Female | | | 3 | 3 | 3 | 3 | |
| Total | | | 8 | 8 | 6 | 5 | |
| Percentage of Temporary Employees | Male | % | 1.9 | 1.8 | 1.1 | 0.7 | |
| | Female | | 16.7 | 12.0 | 13.6 | 10.7 | |
| Average | | | 2.8 | 2.6 | 2.1 | 1.6 | |
| | Other Indirect* Employees | Headquarters | Contract Employees | 1 | 5 | 5 | 7 |
| | Onsan Refinery | Contract Employees | 0 | 0 | 668 | 652 | |

* Dispatched workers refer to personnel who work for Korea Zinc, and subcontract workers refer to personnel who work for their affiliated companies.

Employees in Manager or Higher Position by Gender

| Category | | | Unit | 2019* | 2020 | 2021 | 2022 |
|-----------------------------------|---|--|--------|-------|------|------|-------|
| Manager** or Higher Position | Headquarters | Number of Employees in Manager or Higher Position | Male | 94 | 80 | 99 | 120 |
| | | | Female | 3 | 3 | 4 | 11 |
| | | Percentage of Female Employees in Manager or Higher Position | % | 3.2 | 3.8 | 4.0 | 9.2 |
| | Onsan Refinery | Number of Employees in Manager or Higher Position | Male | 162 | 164 | 189 | 369 |
| | | | Female | - | - | - | 1 |
| | | Percentage of Female Employees in Manager or Higher Position | % | 0.0 | 0.0 | 0.0 | 0.3 |
| SMC | Number of Employees in Manager or Higher Position | Male | 2 | 2 | 3 | 3 | |
| | | Female | 1 | 1 | | | |
| Departments Generating Profits*** | Korea Zinc | Number of Employees in Departments Generating Profits | Male | - | - | - | 1,150 |
| | | | Female | - | - | - | 8 |
| | | Percentage of Female Employees in Departments Generating Profits**** | % | - | - | - | 0.7 |
| Stem-Related Personnel***** | Headquarters | Number of Employees | Male | - | - | - | 34 |
| | | | Female | - | - | - | 6 |
| | | Percentage of Female Employees***** | % | - | - | - | 17.7 |
| | Onsan Refinery | Number of Employees | Male | - | - | - | 1,453 |
| | | | Female | - | - | - | 34 |
| | | Percentage of Female Employees | % | - | - | - | 2.3 |

* Data in 2019 are not available due to the internal system changes. ** Manager: Employees in management positions (e.g., manager, senior manager) or higher. *** Departments generating profits: Departments that directly contribute to sales and production. **** Percentage of female employees in departments generating profits: includes departments that produce products and departments that sell products through sales. ***** STEM-related personnel: Personnel belonging to IT, new material development, and the Planning Division. ***** Percentage of female employees: Calculated based on the number of STEM-related personnel.

Turnover and Retirement

| Category | | | Unit | 2019 | 2020 | 2021 | 2022 | |
|--------------------|----------------|-------------------|---------|--------|------|------|------|----|
| Total Retirees | Korea Zinc | Headquarters | Persons | 6 | 2 | 4 | 14 | |
| | | Onsan Refinery | | 25 | 37 | 72 | 95 | |
| | | SMC | | 46 | 32 | 61 | 56 | |
| | | Total | | 31 | 39 | 76 | 109 | |
| Retirement Rate | Korea Zinc | Headquarters | % | 0.4 | 0.1 | 0.3 | 0.8 | |
| | | Onsan Refinery | | 1.8 | 2.6 | 4.6 | 5.5 | |
| | | SMC | | 1.1 | 2.7 | 2.5 | 3.2 | |
| | | Total | | 15 | 11 | 20 | 21 | |
| Retirees by Gender | Korea Zinc | Male | Persons | 30 | 37 | 71 | 101 | |
| | | Female | | 1 | 2 | 5 | 8 | |
| | | Total | | 43 | 30 | 56 | 52 | |
| | SMC | Male | | 3 | 2 | 5 | 4 | |
| | | Female | | 6 | 11 | 27 | 67 | |
| | | Total | | 9 | 14 | 26 | 23 | |
| Retirees by Age | Korea Zinc | Under 30 | Persons | 16 | 14 | 23 | 19 | |
| | | 30 to 50 | | 31 | 39 | 76 | 109 | |
| | | Over 50 | | 5 | 7 | 12 | 9 | |
| | SMC | Under 30 | | 34 | 21 | 39 | 34 | |
| | | 30 to 50 | | 7 | 4 | 10 | 13 | |
| | | Over 50 | | 46 | 32 | 61 | 56 | |
| Employee Turnover | Korea Zinc | Turnover Rate | % | 0.04 | 0.01 | 0.03 | 0.07 | |
| | | | | 0.03 | 0.01 | 0.03 | 0.06 | |
| | | Employee Turnover | | Male | 5 | - | 3 | 7 |
| | | | | Female | - | 2 | 1 | 6 |
| | Onsan Refinery | Turnover Rate | % | 0.02 | 0.03 | 0.04 | 0.06 | |
| | | | | 0.01 | 0.01 | 0.03 | 0.04 | |
| | | Employee Turnover | | Male | 22 | 21 | 45 | 70 |
| | | | | Female | 1 | - | 4 | - |
| | SMC | Turnover Rate | % | 15.6 | 10.3 | 21.0 | 17.5 | |
| | | | | 43 | 30 | 56 | 52 | |
| | | Employee Turnover | | Male | 3 | 2 | 5 | 4 |
| | | | | Female | 2.7 | 0 | 21.0 | 0 |
| Average Tenure | Korea Zinc | Years | 13.4 | 12.5 | 12.7 | 10.7 | | |
| | | | 14.8 | 15.0 | 14.3 | 13.2 | | |
| | | | 12 | 12 | 10 | 9 | | |

Sustainability Data

Social Dimension

Employees Eligible for Regular Performance Evaluations and Career Development Reviews

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|--|--------------------|----------------|-------|-------|-------|-------|------|
| Number of Employees Eligible for Regular Performance Evaluations and Career Development Review | Headquarters* | | 121 | 127 | 130 | 155 | |
| | Onsan Refinery | Persons | 1,255 | 1,270 | 1,296 | 1,477 | |
| | SMC | | 287 | 303 | 284 | 316 | |
| By Nationality | Korea Zinc | By Gender | Male | 81.8 | 81.1 | 77.7 | 75.5 |
| | | Female | 18.2 | 18.9 | 22.3 | 24.5 | |
| | By Employment Type | Office Workers | 100.0 | 100.0 | 100.0 | 100.0 | |
| | | Technicians | 97.5 | 97.5 | 97.5 | 96.8 | |
| | Onsan Refinery | By Gender | Male | 2.5 | 2.5 | 2.5 | 3.2 |
| | | Female | 17.5 | 18.0 | 18.5 | 21.3 | |
| By Employment Type | Office Workers | 82.5 | 82.0 | 81.5 | 78.7 | | |
| | Technicians | 269 | 278 | 262 | 288 | | |
| SMC | By Gender | Male | 18 | 25 | 22 | 28 | |
| | | Female | 135 | 143 | 139 | 145 | |
| | By Employment Type | Office Workers | 152 | 160 | 145 | 171 | |

* Data from headquarters exclude employees in assistant positions

Gender Pay Gap

| Category | | Unit | 2022 | |
|--------------------------|----------|--------------|------|-----|
| Female to Male Pay Ratio | New Hire | Basic Salary | % | 100 |

Occupational Safety and Health

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|--|---------------------------|---------|-------|-------|-------|-------|
| Contractor | Number of Workers | Persons | 1,269 | 1,300 | 1,470 | 1,708 |
| | Number of Injured Workers | | 2 | 1 | 8 | 8 |
| | Accident Rate | % | 0.16 | 0.08 | 0.54 | 0.47 |
| Supplier | Number of Workers | Persons | 1,610 | 1,830 | 2,050 | 2,042 |
| | Number of Injured Workers | | 17 | 17 | 15 | 15 |
| | Accident Rate | % | 0.99 | 0.93 | 0.68 | 0.78 |
| Contractor + Subcontractor | Number of Workers | Persons | 2,879 | 3,130 | 3,520 | 3,750 |
| | Number of Injured Workers | | 19 | 18 | 23 | 23 |
| | Accident Rate | % | 0.63 | 0.58 | 0.65 | 0.61 |
| Industrial Accidents | Number of Accidents | Cases | 18 | 18 | 22 | 24 |
| | Occurrence Rate | % | 0.63 | 0.58 | 0.63 | 0.64 |
| Total Recordable injury Frequency Rate (TRIFR) | Internal Accident Rate | | 0.66 | 1.28 | 4.54 | 4.15 |
| | Contractor Accident Rate | % | 4.40 | 4.10 | 4.07 | 4.08 |
| Lost-timer Injury Frequency Rate (LTIFR) | Internal Accident Rate | | 0.66 | 0.32 | 2.27 | 1.95 |
| | Contractor Accident Rate | | 4.14 | 3.87 | 2.85 | 3.26 |

Subcontractor Complaints and Disputes

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|---------------------|-------|------|------|------|------|
| Headquarters | Complaints Received | | 0 | 0 | 0 | 0 |
| | Disputes Resolved | Cases | 0 | 0 | 0 | 0 |
| Onsan Refinery | Complaints Received | | 0 | 0 | 0 | 0 |
| | Disputes Resolved | | 0 | 0 | 0 | 0 |

Investment in Information Security

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------|--|------|--------|---------|--------|---------|
| SMC | | AUD | 35,800 | 112,250 | 94,914 | 188,000 |

Infringement and Leakage of Personal Information

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|--|-------|------|------|------|------|
| Headquarters | | | 0 | 0 | 0 | 0 |
| Onsan Refinery | | Cases | 0 | 0 | 0 | 0 |

Capacity Building of Employees

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|------------------------------------|--|---------------|---------|---------|---------|---------|
| Total Training Expenses | Headquarters | | 160.7 | 167.1 | 76.8 | 678.8 |
| | Onsan Refinery | 1 million KRW | 261.7 | 155.7 | 359.5 | 905.2 |
| | Korea Zinc (Headquarters + Onsan Refinery) | | 422.4 | 322.8 | 436.3 | 1,584.0 |
| Number of Employees Trained | SMC | AUD | 309,246 | 156,651 | 253,830 | 112,045 |
| | Headquarters | | 139 | 146 | 154 | 196 |
| | Onsan Refinery | Persons | 1,273 | 1,295 | 1,400 | 1,546 |
| Total Training Hours (Accumulated) | Korea Zinc (Headquarters + Onsan Refinery) | | 1,412 | 1,441 | 1,554 | 1,742 |
| | SMC | | 294 | 308 | 290 | 320 |
| | Headquarters | | 1,689 | 7,723 | 9,155 | 14,297 |
| Training Hours Per Employee | Onsan Refinery | | 66,168 | 74,590 | 52,383 | 70,285 |
| | Korea Zinc (Headquarters + Onsan Refinery) | Hours | 67,857 | 82,313 | 61,538 | 84,582 |
| | SMC | | 12 | 12 | 12 | 12 |
| Human Capital ROI* | Korea Zinc Average | | 9.9 | 17.2 | 6.6 | 11.5 |
| | | | 7.67 | 8.03 | 9.00 | 6.45 |

* ROI(Return on Investment)

Human Rights Protection Training Hours (Compulsory Education)

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|--|-------|--------|-------|-------|-------|
| Headquarters | | | 944 | 1,016 | 789 | 644 |
| Onsan Refinery | | Hours | 10,064 | 8,566 | 7,292 | 5,154 |
| SMC | | | 1 | 1 | 1 | 1 |

Human Rights Protection Training

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|--|---------|-------|-------|-------|-------|
| Headquarters | | | 118 | 127 | 132 | 161 |
| Onsan Refinery | The Number of Participants Based on Sexual Harassment Training | Persons | 1,258 | 1,275 | 1,335 | 1,476 |
| SMC | | | 205 | 66 | 41 | 92 |

Sustainability Data

Social Dimension

Volunteer Work

| Category | | Unit | 2019 | 2020* | 2021* | 2022 |
|--------------|---------------------------------|---------|------|-------|-------|------|
| Headquarters | Annual Participants | Persons | 133 | - | - | 90 |
| | Total Hours | | 532 | - | - | 360 |
| | Participation Hour per Employee | Hours | 4 | - | - | 4 |

* Due to the prevention of the spread of COVID-19 and social distancing, social contribution activities were not conducted in 2020 and 2021.

Social Contribution (Shared Management) Expenses *,**

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|---|---|----------------------|---------------|-------|-------|-------|-------|
| Headquarters | Community Investment | 1 million KRW | 2,658 | 2,242 | 1,786 | 1,735 | |
| | | % | 50.23 | 37.60 | 33.30 | 24.27 | |
| | Social Contribution Activities Expenses | 1 million KRW | 1,985 | 3,141 | 2,769 | 3,924 | |
| | | % | 37.52 | 52.66 | 51.64 | 54.89 | |
| | Commercial Initiatives | 1 million KRW | 648 | 581 | 808 | 1,490 | |
| | | % | 12.25 | 9.74 | 15.06 | 20.84 | |
| | In-kind Donations | | 0 | 0 | 0 | 0 | |
| | Total Amount of Social Contribution | 1 million KRW | 5,291 | 5,964 | 5,363 | 7,149 | |
| | Onsan Refinery | Community Investment | 1 million KRW | 579 | 403 | 832 | 1,097 |
| | | | % | 71.75 | 61.20 | 58.51 | 63.28 |
| Social Contribution Activities Expenses | | 1 million KRW | 65 | 85 | 125 | 160 | |
| | | % | 8.06 | 12.97 | 8.80 | 9.24 | |
| Commercial Initiatives | | 1 million KRW | 163 | 170 | 465 | 476 | |
| | | % | 20.20 | 25.83 | 32.69 | 27.48 | |
| In-kind Donations | | | 0 | 0 | 0 | 0 | |
| Total Amount of Social Contribution | | 1 million KRW | 807 | 658 | 1,423 | 1,733 | |
| Korea Zinc | | Community Investment | 1 million KRW | 3,237 | 2,645 | 2,618 | 2,832 |
| | | | % | 53.08 | 39.94 | 38.59 | 31.88 |
| | Social Contribution Activities Expenses | 1 million KRW | 2,050 | 3,226 | 2,894 | 4,085 | |
| | | % | 33.62 | 48.72 | 42.66 | 45.98 | |
| | Commercial Initiatives | 1 million KRW | 811 | 751 | 1,273 | 1,966 | |
| | | % | 13.30 | 11.34 | 18.76 | 22.14 | |
| | In-kind Donations | | 0 | 0 | 0 | 0 | |
| | Total Amount of Social Contribution | 1 million KRW | 6,098 | 6,622 | 6,786 | 8,883 | |

* The headquarters has consistently allocated 0.079% of sales to donations since 2019. However, due to a surge in sales in 2022, the percentage dropped to 0.064%, even though the expenses for social contributions actually increased. Onsan Refinery showed a slight decrease from 0.010% in 2019 to 0.009% in 2020, but then steadily increased to 0.014% in 2021 and 0.015% in 2022.

** In compliance with Article 31 of the Political Funds Act, Korea Zinc refrains from providing funds intended to influence policy-making. Furthermore, we do not donate to or sponsor agencies or companies that are embroiled in legal or financial disputes, or those affiliated with specific political parties or organizations.

Employee & Board Compensation*

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|-------------------------|--|---------------------------|------|------|-------|------|
| Board Compensation | Number of Members | Persons | 9 | 9 | 11 | 11 |
| | Remuneration Cap | | 70 | 70 | 70 | 70 |
| | Total Remuneration | 100 million KRW | 38.5 | 40.6 | 42.6 | 63.0 |
| | Average Remuneration Per Director | | 4.3 | 4.5 | 3.9 | 5.7 |
| | CEO Compensation | Total Annual Compensation | | 746 | 1,664 | 756 |
| Employee Compensation** | Remuneration of all Employees Except The CEO (or CEO Equivalents)** | Median | 76 | 79 | 78 | 86 |
| | | Interquartile | 83 | 85 | 86 | 95 |
| | Ratio of CEO Remuneration to all Employees Except The CEO (or CEO Equivalents) | Median | 9.8 | 21.1 | 9.7 | 11.7 |
| | | Interquartile | 9.0 | 19.6 | 8.8 | 10.6 |

* Limited to Korea Zinc ** The median and interquartile values were calculated based on the CEO and CEO equivalents, and the mean values were calculated using data in the Business Report.

Maternity and Parental Leave

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|----------------------------------|----------------|-------------|--------|------|------|------|-----|
| Use of Maternity Leave | Headquarters | Persons | 1 | - | 3 | 2 | |
| | Onsan Refinery | | 1 | 5 | - | 2 | |
| | Korea Zinc | | 2 | 5 | 3 | 4 | |
| | SMC | | - | 2 | 2 | - | |
| Return Rate After Childbirth | Headquarters | % | 100 | - | 100 | 100 | |
| | Onsan Refinery | | 100 | 100 | - | 100 | |
| | Korea Zinc | | 100 | 100 | 100 | 100 | |
| | SMC | | | 100 | 50 | | |
| Use of Parental Leave | Korea Zinc | Male | 1 | 3 | 2 | 9 | |
| | | Female | 3 | 2 | 7 | 2 | |
| | | Total | 4 | 5 | 9 | 11 | |
| Return Rate After Parental Leave | Korea Zinc | Male | 1 | 3 | 2 | 9 | |
| | | Female | 3 | 2 | 5 | 2 | |
| | | Total | 4 | 5 | 7 | 11 | |
| | | Return Rate | Male | 80 | 100 | 100 | 100 |
| | | | Female | | | | |

※ The retention rate for 12 months after return-to-work was 75% in 2019 and 100% in 2020, 2021, and 2022.

※※ The results of the Employee Happiness Index Survey recorded 5.0 in 2021 and 5.6 in 2022 (out of 10 points).

Union Membership and Collective Bargaining

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|------------|-------------------------------|---------|------|------|-------|-------|
| Korea Zinc | Union Members | Persons | 989 | 979 | 1,004 | 1,064 |
| | Union Membership Rate | % | 69.8 | 67.3 | 64.7 | 61.9 |
| SMC | Eligible For Union Membership | Persons | 170 | 170 | 169 | 173 |

Association and Group Activities

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|---|--|---------------|------|------|------|------|
| International Zinc Association (IZA) | | 1,000 USD | - | 345 | 341 | 340 |
| International Lead Association (ILA) | | | - | 100 | 100 | 100 |
| Ulsan Chamber of Commerce | | | 90 | 90 | 90 | 100 |
| Korea Business Council for Sustainable Development (KBCSD) | | 1 million KRW | - | - | 55 | 65 |
| Korean Nonferrous Metal Association | | | 58 | 58 | 58 | 58 |
| Energy and Mineral Resource Development Association of Korea (EMRD) | | | - | 30 | 30 | 30 |
| International Antimony Association (iZA) | | 1,000 EUR | 52 | 46 | 82 | 139 |
| Onsan Industrial Estate Association | | 1 million KRW | 24 | 24 | 24 | 24 |
| Seoul Chamber of Commerce | | | 36 | 36 | 48 | 80 |
| Korea Listed Companies Association | | | - | - | 12 | - |

Sustainability Data

Governance Dimension

The scope of governance data includes the headquarters in Seoul and Onsan Refinery.

Composition of Board of Directors

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|-----------------------------|--|---------|------|------|------|------|
| Total Registered Executives | | | 9 | 9 | 11 | 11 |
| Single-board System | Internal Directors (Executive Directors) | Persons | 4 | 4 | 5 | 5 |
| | Independent Directors | | 5 | 5 | 6 | 6 |
| | Proportion of Independent Directors | % | 55.6 | 55.6 | 54.5 | 54.5 |
| Gender Diversity | Male | | 9 | 9 | 10 | 10 |
| | Female | | 0 | 0 | 1 | 1 |
| | Female Executives Who are Not Controlling Shareholders and Their Relatives Among Registered Executives | Persons | 0 | 0 | 1 | 1 |
| | Proportion of Female Directors | % | 0 | 0 | 9.1 | 9.1 |

The Board of Directors' Meetings

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|---|------------------------------------|---------|------|------|------|------|
| Board of Directors | Total Meetings Held | | 15 | 13 | 14 | 23 |
| | Regular | Times | 6 | 6 | 5 | 5 |
| | Temporary | | 9 | 7 | 9 | 18 |
| Board Attendance Rate | Internal Director | % | 96.4 | 100 | 100 | 97.4 |
| | Independent Director | | 98.6 | 98.5 | 96.4 | 90.1 |
| Number of Agendas | | Numbers | 23 | 24 | 25 | 22 |
| ESG Agendas | Number of ESG Agendas* | | - | - | - | 3 |
| Report of Material Issues | Number of Material Issues Reported | Times | - | - | - | 3 |
| Audit Committee | Total Meetings Held | | 3 | 3 | 3 | 3 |
| | Attendance Rate | % | 100 | 100 | 100 | 88.9 |
| Independent Director Recommendation Committee | Total Meetings Held | Times | 1 | 1 | 2 | 1 |
| | Attendance Rate | % | 100 | 100 | 100 | 100 |

* The ESG Committee was established in 2022.

Protection of Shareholder Rights

| Category | | Unit | 2019 | 2020 | 2021 | 2022 | |
|---------------------------------|---------------------|----------------------|-----------------|--------------|--------------|--------------|-------|
| Stock Type | | Shares | Common Share | Common Share | Common Share | Common Share | |
| | Face Value | | 5,000 | 5,000 | 5,000 | 5,000 | |
| | Dividend Per Share | KRW | 14,000 | 15,000 | 20,000 | 20,000 | |
| Shareholder Return | Cash Dividend | Total Dividend | 100 million KRW | 2,474 | 2,651 | 3,545 | 3,973 |
| | | Market Dividend Rate | | 3.3 | 3.6 | 3.8 | 3.5 |
| | Dividend Propensity | % | 38.7 | 46.3 | 43.6 | 50.0 | |
| Dividend Propensity | Consolidated | | 43.6 | 47.3 | 46.7 | 60.5 | |
| | Separated | | | | | | |
| Number of Voluntary Disclosures | | Numbers | 0 | 0 | 0 | 5 | |

Code of Conduct Application Ratio

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|---------------|------|------|------|------|------|
| Korea Zinc | Board Members | | 100 | 100 | 100 | 100 |
| | Employees | % | 100 | 100 | 100 | 100 |
| Onsan Refinery | Board Members | | 100 | 100 | 100 | 100 |
| | Employees | | 100 | 100 | 100 | 100 |

Corruption Risk Assessment and Measures at Business Sites

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|---|--|---|--|---|-------------------------|------|
| Business Sites Assessed for Corruption Risk | Number of Business Sites | Sites | 11 | 12 | 11 | 11 |
| | Percentage of Business Sites* | % | 100 | 100 | 100 | 100 |
| | Number of Business Sites that Underwent Field Audits | Sites | 2 | 3 | 3 | 2 |
| Confirmed Corruption Cases and Measures in Response | Reporting | | | | 1 | |
| | Measures Completed, such as Disciplinary Actions | Cases | - | - | In Progress | - |
| Field On-site Inspections | On-site Inspection Items | Investment Effectiveness/ Environment/ Field Audits | Document Security/ Inventory On-site Inspections/ Investment Effectiveness/ Safety/ Field Audits | Document Security/ Investment Effectiveness/ Field Audits | Team Job Audits/ Safety | |

* Based on target business sites

Ethics / Compliance Training

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|------------|-----------|-----------|-------|-------|-------|-------|
| Korea Zinc | Employees | Permanent | 1,385 | 1,401 | 1,458 | 1,606 |
| | | Temporary | 32 | 54 | 96 | 136 |
| | Total | Persons | 1,412 | 1,441 | 1,554 | 1,742 |
| SMC | Employees | Permanent | 295 | 311 | 290 | 321 |
| | Total | | 295 | 311 | 290 | 321 |

Percentage of Ethics/Compliance Training Provided

| Category | | Unit | 2019 | 2020 | 2021 | 2022 |
|----------------|---|---------------|------|------|------|------|
| Korea Zinc | Percentage of People Who Completed Training on Anti-corruption Policies/ Procedures by Region | Board Members | 100 | 100 | 100 | 100 |
| | | Employees | 100 | 100 | 100 | 100 |
| | | Suppliers | 100 | 100 | 100 | 100 |
| Onsan Refinery | Percentage of People Who Completed Training on Anti-corruption Policies/ Procedures by Region | Board Members | 100 | 100 | 100 | 100 |
| | | Employees | 100 | 100 | 100 | 100 |
| | | Suppliers | 100 | 100 | 100 | 100 |
| SMC | Percentage of People Who Completed Training on Anti-corruption Policies/ Procedures by Region | Board Members | 100 | 100 | 100 | 100 |
| | | Employees | 100 | 100 | 100 | 100 |

Participation in Global Initiatives

GRI Index - Universal Standards

General Disclosures

| Topic | GRI Standards | Disclosure | References | Remarks |
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| | 2-17 | Collective knowledge of the highest Governance body | 79 | |
| | 2-18 | Evaluation of the performance of the highest governance body | 80 | |
| Strategy, Policies and Practices | 2-19 | Remuneration policies | 80 | |
| | 2-20 | Process to determine remuneration | 80 | |
| | 2-21 | Annual total compensation ratio | 80, ESG Data Book 14 | |
| | 2-22 | Statement on sustainable development strategy | 2~3 | |
| | 2-23 | Policy commitments | 2~3 | |
| | 2-24 | Embedding policy commitments | 51~52, 63 | |
| | 2-25 | Processes to remediate negative impacts | 39~41, 72 | |
| | 2-26 | Mechanisms for seeking advice and raising concerns | 72 | |
| | 2-27 | Compliance with laws and regulations | 84~85 | |
| | 2-28 | Membership associations | ESG Data Book 15 | |
| Stakeholder Engagement | 2-29 | Approach to stakeholder engagement | 72~73 | |
| | 2-30 | Collective bargaining agreements | 55 | |

Material Topics

| Topic | GRI Standards | Disclosure | References | Remarks |
|-----------------|---------------|--------------------------------------|------------|---------|
| Material topics | 3-1 | Process to determine material topics | 32 | |
| | 3-2 | List of material topics | 33 | |
| | 3-3 | Management of material topics | 34~35 | |

GRI Index - Topic Specific Standards

Economic Performance(GRI 200)

| Topic | GRI Standards | Disclosure | References | Remarks |
|---------------------------|---------------|---|----------------------|---------------|
| Economic Performance | 201-1 | Direct economic value generated and distributed | 9 | |
| | 201-2 | Financial implications and other risks and opportunities due to climate change | 44~45 | |
| | 201-3 | Defined benefit plan obligations and other retirement plans | 56 | |
| Indirect Economic Impacts | 203-1 | Infrastructure investments and services supported | 67~69 | |
| | 203-2 | Significant indirect economic impacts | 67~69 | |
| Anti-corruption | 205-2 | Communication and training about anti-corruption policies and procedures | 84, ESG Data Book 17 | |
| | 205-3 | Confirmed incidents of corruption and actions taken | 85, ESG Data Book 17 | |
| Anti-competitive Behavior | 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | | No violations |
| Tax | 207-1 | Approach to tax | 85 | |
| | 207-2 | Tax governance, control, and risk management | 85 | |
| | 207-3 | Stakeholder engagement and management of concerns related to tax | 85 | |

Participation in Global Initiatives

GRI Index - Topic Specific Standards

Environmental Performance (GRI 300)

| Topic | GRI Standards | Disclosure | References | Remarks |
|-----------------------------------|---------------|---|----------------------|---------------|
| Materials | 301-1 | Materials used by weight or volume | ESG Data Book 8 | |
| | 301-2 | Recycled input materials used | ESG Data Book 8 | |
| Energy | 302-1 | Energy consumption within the organization | ESG Data Book 4 | |
| | 302-2 | Energy consumption outside of the organization | 42, ESG Data Book 4 | |
| | 302-3 | Energy intensity | ESG Data Book 4 | |
| | 302-4 | Reduction of energy consumption | 42, ESG Data Book 4 | |
| Water and Effluents | 303-1 | Interactions with water as a shared resource | 39 | |
| | 303-2 | Management of water discharge-related impacts | 39 | |
| | 303-3 | Water withdrawal | ESG Data Book 7 | |
| | 303-4 | Water discharge | ESG Data Book 7 | |
| | 303-5 | Water consumption | 39, ESG Data Book 7 | |
| Biodiversity | 304-1 | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | 41 | |
| | 304-2 | Significant impacts of activities, products and services on biodiversity | 41 | |
| | 304-3 | Habitats protected or restored | 69 | |
| | 304-4 | IUCN Red List species and national conservation list species with habitats in areas affected by operations | - | No such cases |
| Emissions | 305-1 | Direct (Scope 1) GHG emissions | 46, ESG Data Book 5 | |
| | 305-2 | Energy indirect (Scope 2) GHG emissions | 46, ESG Data Book 5 | |
| | 305-3 | Other indirect (Scope 3) GHG emissions | 46, ESG Data Book 5 | |
| | 305-4 | GHG emissions intensity | ESG Data Book 5 | |
| | 305-5 | Reduction of GHG emissions | ESG Data Book 5 | |
| | 305-7 | Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions | 38, E SG Data Book 4 | |
| Effluents and Waste | 306-1 | Waste generation and significant waste-related impacts | 39 | |
| | 306-2 | Management of significant waste-related impacts | 39 | |
| | 306-3 | Waste generated | ESG Data Book 7 | |
| | 306-4 | Waste diverted from disposa | ESG Data Book 7 | |
| | 306-5 | Waste directed to disposal | 39, ESG Data Book 7 | |
| Environmental Compliance | 307-1 | Non-compliance with environmental laws and regulations | ESG Data Book 8 | |
| Supplier Environmental Assessment | 308-1 | New suppliers that were screened using environmental criteria | 63 | |
| | 308-2 | Negative environmental impacts in the supply chain and actions taken | 63 | |

Social Performance (GRI 400)

| Topic | GRI Standards | Disclosure | References | Remarks |
|--|---------------|--|----------------------|---------------------------|
| Employment | 401-1 | New employee hires and employee turnover | ESG Data Book 9, 11 | |
| | 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | 57 | |
| | 401-3 | Parental leave | ESG Data Book 15 | |
| Occupational Health and Safety | 403-1 | Occupational health and safety management system | 58~61 | |
| | 403-2 | Hazard identification, risk assessment, and incident investigation | 58~61 | |
| | 403-3 | Occupational health services | 60 | |
| | 403-4 | Worker participation, consultation, and communication on occupational health and safety | 58 | |
| | 403-5 | Worker training on occupational health and safety | 60 | |
| | 403-6 | Promotion of worker health | 57, 60 | |
| | 403-7 | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | 60~61 | |
| | 403-8 | Workers covered by an occupational health and safety management system | 58, 60 | |
| | 403-9 | Work-related injuries | ESG Data Book 12 | |
| | 403-10 | Work-related ill health | ESG Data Book 12 | |
| Training and Education | 404-1 | Average hours of training per year per employee | ESG Data Book 13 | |
| | 404-2 | Programs for upgrading employee skills and transition assistance programs | 54~55 | |
| | 404-3 | Percentage of employees receiving regular performance and career development reviews | ESG Data Book 12 | |
| Diversity and Equal Opportunity | 405-1 | Diversity of governance bodies and employees | 77, ESG Data Book 10 | |
| | 405-2 | Ratio of basic salary and remuneration of women to men | ESG Data Book 10 | |
| 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 | 51~52, 63 | |
| Child Labor | 408-1 | Operations and suppliers at significant risk for incidents of child labor | 51~52, 63 | |
| Forced or Compulsory Labor | 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labor | 51~52, 63 | |
| Security Practices | 410-1 | Security personnel trained in human rights policies or procedures | 62, ESG Data Book 13 | |
| | 412-1 | Operations that have been subject to human rights reviews or impact assessments | 51~52 | |
| | 412-2 | Employee training on human rights policies or procedures | ESG Data Book 13 | |
| Human Rights Assessment | 412-3 | Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening | 63 | |
| | 413-1 | Operations with local community engagement, impact assessments, and development programs | 67 | |
| Local Communities | 413-2 | Operations with significant actual and potential negative impacts on local communities | 38~39 | |
| | 414-1 | New suppliers that were screened using social criteria | - | No such cases |
| Supplier Social Assessment | 414-2 | Negative social impacts in the supply chain and actions taken | 63 | |
| | 415-1 | Political contributions | ESG Data Book 14 | No political contribution |
| Customer Privacy | 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data | ESG Data Book 13 | 0 cases |
| Socioeconomic Compliance | 419-1 | Non-compliance with laws and regulations in the social and economic area | ESG Data Book 10 | 0 cases |

Participation in Global Initiatives

SASB

SASB Index

| Topic | Code | Classification | Accounting Metric | Unit | Page |
|--|--------------|----------------|---|-----------|---------------------|
| Greenhouse Gas Emissions | EM-MM-110a.1 | Quantitative | Gross global Scope 1 emissions, percentage covered under emissionslimiting regulations | Tonnes, % | ESG Data Book 5 |
| | 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 | - | 42 |
| 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 | 38, ESG Data Book 4 |
| Energy Management | EM-MM-130a.1 | Quantitative | Total energy consumed, percentage grid electricity, percentage renewable | TJ | ESG Data Book 4 |
| 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, % | ESG Data Book 7 |
| Waste & Hazardous Materials Management | EM-MM-150a.2 | Quantitative | Description of waste and hazardous materials management policies and procedures for active and inactive operations | Tonnes, % | ESG Data Book 7 |
| 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 | % | ESG Data Book 12 |
| Business Ethics & Transparency | EM-MM-510a.1 | Qualitative | Description of the management system for prevention of corruption and bribery throughout the value chain | - | 84-85 |

TCFD

TCFD Index

| | Disclosures | Page | CDP |
|---------------------|--|-------|---------------------|
| Governance | The board's oversight of climate-related risks and opportunities. | 43 | C1.1a |
| | Management's role in assessing and managing climate-related risks and opportunities. | | C1.2a |
| Strategy | The climate-related risks and opportunities the organization has identified over the short, medium, and long term. | 44-45 | C2.3, C2.4 |
| | The impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. | | C2.3, C2.4, C3.3 |
| Risk Management | The resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario. | 46 | C3.2 |
| | The organization's processes for identifying and assessing climaterelated risks. | | C2.2 |
| Metrics and Targets | The organization's processes for managing climaterelated risks. | 44-46 | C6.10 C9 |
| | How processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management. | | 49, ESG Data Book 5 |
| | The metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process. | | 47 |
| | The targets used by the organization to manage climate related risks and opportunities and performance against targets | | C4.1 |

UN SDGs

UN SDGs Index

| 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 | 67-69 |
|  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 | 58-61 |
|  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 | 54-55 |
|  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 | 20-21, 42, 47 |
|  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 | 18-29 |
|  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 | 42, 47, ESG Data Book 15 |
|  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 | 68 |
|  12 RESPONSIBLE CONSUMPTION AND PRODUCTION Ensure sustainable consumption and production patterns | Continuous production through inter-industry circulation and cooperation | 24-29, 49 |
|  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 | 42, 46-47 |

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