



March 2025

Impact Report for Republic of South Korea



Financial Market Chapter



Imprint Publisher

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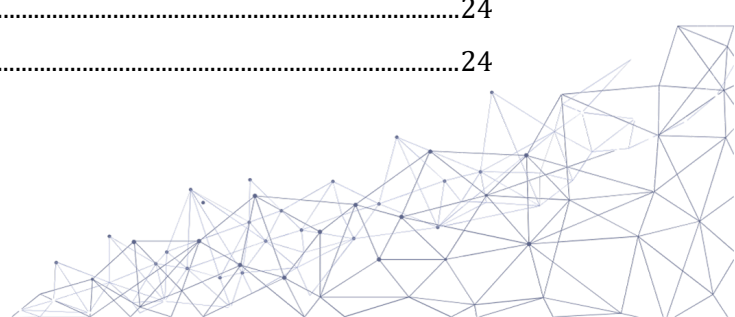
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Date of Publication: 2025. Suggested Citation: VBA et WifOR., Impact Intensity Benchmarks, Impact Report South Korea, 2025, www.value-balancing.com.



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Introduction

Understanding the societal impact of public policy in economic sectors is vital for fostering growth while achieving transition and other policy goals. To this end, the present report offers key insights into the performance of specific sectors.

This document presents impact statements for Republic of South Korea's NACE sectors.¹ The tables show the *direct impact* of companies' own operations as well as the *upstream impact* along their supply chains.² Positive or negative impact values are quantified in monetary terms and divided by each sector's macroeconomic output. These '*Impact Intensities*' (expressed in EUR of impact per EUR of output) enable comparability across countries, sectors, and companies. The output part of the formula is based on a macroeconomic assessment and reflects overall sector turnover volume.

Impact Intensities are provided for each impact driver across four stages of the value chain: Own operations, upstream tier 1, upstream tier 2, and upstream tier 3 to n.³ Results are shown for specific countries—Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Korea, Spain, Switzerland, Türkiye, the UK, and the USA—as well as a global average.

The tables provide a foundation for 'Type 4' sector-based benchmarks;⁴ companies can compare their reported or estimated impact with the table values. To ensure consistency, a company's impact must be monetized using the same value factor and scaled relative to revenue. In this way, company-specific Impact Intensity can be compared within the sector and across multiple sectors.

The comparison spans value chain stages within a company's control (own operations) and beyond (upstream). Impact Intensities are depicted for each upstream stage in the global supply chain, viewed from the perspective of the respective country. These stages are presented in tiers, enabling comparison with a company's global upstream supply chain. Note that these upstream impacts may not necessarily be located in the same country.

The values are modeled using input-output modeling, as outlined in the System of National Accounts.⁵ WifOR compiles the hybrid multi-regional model based on WIOD, EORA, and

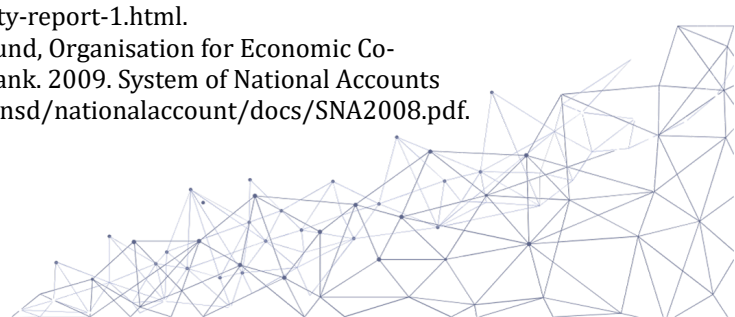
¹ Eurostat, NACE Rev. 2. Statistical classification of economic activities in the European Community, <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.pdf>.

² VBA, VBA Impact Statement, 11.2024, https://www.value-balancing.com/_Resources/Persistent/6/b/e/c/6bec726b5e28d5f75e2e5f153db845a3bbb93f2e/VBA_Impact%20Statement_Final.pdf.

³ Tiers represent different levels of suppliers in the supply chain, where 'tier 1' refers to direct suppliers, 'tier 2' to the suppliers of those direct suppliers, and 'tier 3 to n' to all subsequent levels.

⁴ VBA et al., Valuing Impact Materiality 2025, 2025, <https://www.value-balancing.com/en/publications/valuing-impact-materiality-report-1.html>.

⁵ European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and World Bank. 2009. System of National Accounts 2008. New York: United Nations. <https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf>.



EXIOBASE,⁶ enhanced by estimates based on *satellite accounts*, as outlined in the System of Environmental-Economic Accounting.⁷ The modeled effects are then multiplied by publicly available context-specific value factors⁸ to capture their societal impact.⁹

The tables are complemented by bar charts showing each impact driver's effect (in EUR per EUR output) in all the four value chain stages.

Responsibility of States

States have a primary duty to protect human rights and fundamental rights under international law, in accordance with the primacy principle. This obligation extends to preventing human rights abuses by third parties (including businesses) within their jurisdiction. This duty is grounded in legal obligations and reinforced by policy rationales that ensure consistency in enforcement.

Responsibility of Business

Businesses, by contrast, have a responsibility (rather than a duty) to respect human rights. Their role is supportive of state obligations but remains distinct. While international law has yet to fully define the extent of corporate human rights responsibilities, the UNGPs establish that businesses, at minimum, must prevent and address human rights harms linked to their operations. Beyond compliance with legal obligations, involvement in adverse human rights impacts must be prevented or remedied. Human rights due diligence is required for this purpose; this due diligence process includes assessing risks, integrating findings into corporate decision-making, and mitigating or remedying any adverse impacts.

Interplay

The interplay between *state obligations* and *business responsibilities* reflects a layered system of accountability: While states bear legal obligations to regulate corporate behavior, businesses have a practical responsibility to prevent harm. These responsibilities arise in different forms—whether they cause, contribute to, or are linked to human rights abuses. The nature of corporate involvement in human rights impacts determines their level of responsibility, with leverage and mitigation playing a critical role in addressing violations. Thus, while business responsibilities complement state obligations, they remain distinct and non-parallel, ensuring a balanced but clear accountability framework.

⁶ Scholz, Richard; Dorndorf, Tabea; Tesch, Jasmin; Köster, Robert; Croner, Daniel; Kalamov, Zarko; Setzer, Jana. 2025. Impact measurement using WifOR's sustainability footprint method. Methodological report. Version February 2025. WifOR Institute.

⁷ United Nations, ed. 2014. *System of Environmental-Economic Accounting 2012: Central Framework*. New York, NY: United Nations.

⁸ WifOR, Value Factors, <https://www.wifor.com/en/value-factors/#:~:text=Value%20factors%20convert%20physical%20units,dimensions%20and%20with%20financial%20indicators>

⁹ Scholz, Richard; Albu, Nora; Croner, Daniel; Kalamov, Zarko; Mai, Lukas; Forin, Silvia; Tesch, Jasmin; Dorndorf, Tabea; Setzer, Jana. 2025. WifOR Impact Valuation. Methodological Report. Version February 2025. WifOR Institute.



Accountability

While global businesses in the main complement state efforts and uphold responsible practices, international law establishes the primacy of state responsibility. States must create robust legal frameworks to hold businesses accountable, while companies must conduct human rights due diligence to prevent, mitigate, and remediate adverse impacts. Together, these obligations form a layered system, where corporate responsibility reinforces (rather than replaces) state duties to address human rights risks. Impact accounting helps states and businesses alike understand their respective responsibilities in the context of human rights and broader social, environmental, and economic impacts. While companies must assess their roles within supply chains and address potential harms, it is the states that bear the primary responsibility to tackle these issues and implement policies that prevent extensive negative impacts. Regulatory frameworks should go beyond preventing harm. They should empower businesses to generate positive impacts throughout the value chain. Neither states nor businesses may evade their responsibilities. States cannot plead powerlessness given that international treaties and criminal law extend their reach beyond national boundaries. By the same token, businesses cannot excuse harmful actions by pointing to weak state enforcement of human rights protections.

Benchmarks

This document explores the impacts of South Korea's economy, focusing on direct and upstream supply chain impacts on the economic, environmental, and social domains. The analysis is based on the NACE classification of economic activities. Positive and negative impact values are quantified in monetary terms per unit of macroeconomic output (hereinafter "*Impact Intensities*"). The tables display these Impact Intensities in EUR per EUR output for each impact driver across five stages of the sector's value chain: own operations, upstream tier 1, upstream tier 2, and upstream tier 3 to n. The output data is derived from a macroeconomic assessment and reflects the turnover of each sector.

Intensities

The tables help identify the domestic economic sectors with the largest impacts across the country-specific value chain serving the South Korean economy. By providing maximum transparency on where significant impacts occur throughout the value chain stages, our analysis enables policymakers and regulators to more effectively manage the impacts. It supports the crafting of regulatory frameworks to mitigate negative and enhance positive impacts.



Sector Intensity Benchmarks

Agriculture, Forestry and Fishing (A)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.15	-0.02	-0.02	-0.02	-0.21
Fair Wages	-0.02	-0.06	-0.09	-0.14	-0.31
GHG	-0.12	-0.02	-0.02	-0.03	-0.19
GVA	0.54	0.13	0.12	0.17	0.96
Human Rights	-0.01	-0.00	-0.00	-0.00	-0.02
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	-0.65	-0.08	-0.04	-0.03	-0.81
Occupational Health & Safety	-0.06	-0.02	-0.02	-0.02	-0.11
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.01
Waste	-0.01	-0.00	-0.00	-0.00	-0.02
Water	-0.01	-0.06	-0.08	-0.09	-0.23

Source: WifOR / VBA, Table for Republic of Korea - Agriculture, forestry and fishing (NACE Code A), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Agriculture, Forestry, and Fishing sector of the Republic of Korea, the impact intensity for air emissions and greenhouse gas (GHG) emissions is notably negative, indicating significant environmental burdens associated with these activities, with total intensities of -0.208851 and -0.191179 EUR per EUR output, respectively. Conversely, the fair wages impact intensity is also negative, but less severe at -0.309571 EUR per EUR output, suggesting that wage-related issues are a significant concern in this sector. Additionally, land use has the highest negative impact intensity at -0.807312 EUR per EUR output, highlighting the critical environmental challenges posed by land utilization practices in agriculture, forestry, and fishing.



Mining and Quarrying (B)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.28	-0.01	-0.01	-0.02	-0.31
Fair Wages	0.03	-0.02	-0.03	-0.09	-0.11
GHG	-0.07	-0.02	-0.02	-0.03	-0.14
GVA	0.56	0.14	0.10	0.14	0.95
Human Rights	-0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.02	-0.00	-0.01	-0.03
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.04
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.01
Waste	-0.01	-0.00	-0.00	-0.00	-0.02
Water	0.00	-0.00	-0.00	-0.02	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Mining and quarrying (NACE Code B), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Mining and Quarrying sector of the Republic of Korea, the impact intensity for air emissions is significantly negative at -0.309068 EUR per EUR output, indicating a substantial environmental impact from these activities. The fair wages impact intensity is also negative at -0.105368 EUR per EUR output, reflecting concerns regarding wage practices within the sector, although it is less severe than the air emissions impact. Additionally, the GHG emissions intensity is negative at -0.139469 EUR per EUR output, further emphasizing the environmental challenges associated with mining and quarrying operations.



Manufacturing (C)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.03	-0.02	-0.04	-0.11
Fair Wages	0.01	-0.08	-0.07	-0.19	-0.33
GHG	-0.02	-0.06	-0.03	-0.06	-0.17
GVA	0.22	0.27	0.17	0.28	0.94
Human Rights	-0.00	-0.00	-0.00	-0.01	-0.02
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.02	-0.01	-0.02	-0.04
Occupational Health & Safety	-0.01	-0.02	-0.01	-0.03	-0.07
Ocean Plastic	-0.00	-0.00	-0.00	-0.00	-0.01
Training	0.00	0.01	0.01	0.01	0.03
Waste	-0.00	-0.01	-0.00	-0.01	-0.02
Water	-0.00	-0.02	-0.02	-0.04	-0.08

Source: WifOR / VBA, Table for Republic of Korea - Manufacturing (NACE Code C), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Manufacturing sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.328134 EUR per EUR output, indicating significant concerns regarding wage practices and labor conditions within the industry. Additionally, both air emissions and greenhouse gas (GHG) emissions have negative impact intensities of -0.106899 and -0.167024 EUR per EUR output, respectively, highlighting the environmental burdens associated with manufacturing activities. Furthermore, the land use impact intensity is also negative at -0.039889 EUR per EUR output, suggesting that land utilization practices in manufacturing contribute to environmental challenges.



Electricity, Gas, Steam and Air Conditioning Supply (D)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.08	-0.04	-0.02	-0.02	-0.17
Fair Wages	0.01	-0.14	-0.07	-0.13	-0.33
GHG	-0.28	-0.14	-0.05	-0.04	-0.51
GVA	0.25	0.32	0.17	0.18	0.91
Human Rights	0.00	-0.00	-0.00	-0.01	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.00	-0.02	-0.01	-0.02	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.01	0.01	0.02	0.04
Waste	-0.00	-0.02	-0.01	-0.00	-0.03
Water	-0.00	-0.00	-0.00	-0.02	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Electricity, gas, steam and air conditioning supply (NACE Code D), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Electricity, Gas, Steam, and Air Conditioning Supply sector of the Republic of Korea, the impact intensity for greenhouse gas (GHG) emissions is particularly high at -0.505749 EUR per EUR output, indicating a significant environmental burden from these activities. Additionally, the fair wages impact intensity is also notably negative at -0.332383 EUR per EUR output, reflecting serious concerns regarding labor practices in this sector. Furthermore, the air emissions intensity is negative at -0.172582 EUR per EUR output, further emphasizing the environmental challenges associated with energy supply operations.



Water Supply; Sewerage, Waste Management and Remediation Activities

(E)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.03	-0.02	-0.01	-0.03	-0.09
Fair Wages	0.02	-0.01	-0.04	-0.14	-0.17
GHG	-0.48	-0.08	-0.04	-0.05	-0.65
GVA	0.25	0.23	0.16	0.25	0.88
Human Rights	0.00	-0.00	-0.00	-0.01	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.02	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.01
Training	0.00	0.00	0.00	0.01	0.02
Waste	-0.00	-0.00	-0.00	-0.01	-0.01
Water	-0.00	-0.00	-0.00	-0.03	-0.03

Source: WifOR / VBA, Table for Republic of Korea - Water supply; sewerage, waste management and remediation activities (NACE Code E), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Water Supply; Sewerage, Waste Management, and Remediation Activities sector of the Republic of Korea, the impact intensity for greenhouse gas (GHG) emissions is particularly high at -0.649082 EUR per EUR output, indicating a significant environmental impact associated with these activities. Additionally, the fair wages impact intensity is negative at -0.171621 EUR per EUR output, reflecting concerns regarding labor practices and compensation within the sector. Furthermore, the air emissions intensity is also negative at -0.091693 EUR per EUR output, highlighting the environmental challenges related to emissions from water and waste management operations.



Construction (F)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.04	-0.02	-0.03	-0.09
Fair Wages	0.03	-0.03	-0.05	-0.16	-0.20
GHG	-0.02	-0.04	-0.03	-0.05	-0.13
GVA	0.34	0.23	0.14	0.24	0.94
Human Rights	-0.00	-0.00	-0.00	-0.01	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.01	-0.01	-0.02	-0.04
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.03	-0.06
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.01
Training	0.00	0.00	0.00	0.01	0.02
Waste	-0.00	-0.00	-0.00	-0.01	-0.01
Water	0.00	-0.01	-0.01	-0.02	-0.04

Source: WifOR / VBA, Table for Republic of Korea - Construction (NACE Code F), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Construction sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.198215 EUR per EUR output, indicating significant issues related to labor compensation and working conditions. Additionally, the air emissions impact intensity is negative at -0.093473 EUR per EUR output, reflecting environmental concerns associated with construction activities. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.130974 EUR per EUR output, underscoring the environmental challenges posed by construction processes.



Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles (G)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.03
Fair Wages	-0.05	-0.01	-0.02	-0.06	-0.14
GHG	-0.01	-0.02	-0.01	-0.02	-0.06
GVA	0.57	0.19	0.09	0.12	0.97
Human Rights	-0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.03	-0.01	-0.00	-0.01	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.02	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Wholesale and retail trade; repair of motor vehicles and motorcycles (NACE Code G), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles sector of the Republic of Korea, the impact intensity for fair wages is significantly negative at -0.142806 EUR per EUR output, indicating serious concerns regarding compensation and labor conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.025397 EUR per EUR output, reflecting the environmental implications associated with retail and repair activities. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.064551 EUR per EUR output, highlighting the environmental challenges linked to operations in this sector.



Transportation and Storage (H)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.11	-0.01	-0.02	-0.02	-0.16
Fair Wages	0.01	-0.02	-0.06	-0.11	-0.18
GHG	-0.10	-0.03	-0.04	-0.04	-0.20
GVA	0.35	0.21	0.17	0.19	0.92
Human Rights	0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.02	-0.06
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.02
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	0.00	-0.00	-0.01	-0.03	-0.03

Source: WifOR / VBA, Table for Republic of Korea - Transportation and storage (NACE Code H), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Transportation and Storage sector of the Republic of Korea, the impact intensity for air emissions is significantly negative at -0.161683 EUR per EUR output, indicating a substantial environmental burden associated with transportation activities. Additionally, the greenhouse gas (GHG) emissions intensity is also negative at -0.196603 EUR per EUR output, further emphasizing the environmental challenges linked to this sector. Furthermore, the fair wages impact intensity is negative at -0.182163 EUR per EUR output, reflecting serious concerns regarding labor practices and compensation within the transportation and storage industry.



Accommodation and Food Service Activities (I)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.01	-0.02	-0.02	-0.08
Fair Wages	-0.09	-0.03	-0.09	-0.14	-0.35
GHG	-0.02	-0.02	-0.03	-0.03	-0.10
GVA	0.48	0.16	0.13	0.17	0.95
Human Rights	-0.01	-0.00	-0.00	-0.00	-0.02
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.04	-0.05	-0.03	-0.12
Occupational Health & Safety	-0.04	-0.01	-0.02	-0.02	-0.09
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	0.00	-0.03	-0.08	-0.10	-0.21

Source: WifOR / VBA, Table for Republic of Korea - Accommodation and food service activities (NACE Code I), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Accommodation and Food Service Activities sector of the Republic of Korea, the impact intensity for fair wages is significantly negative at -0.348616 EUR per EUR output, indicating serious concerns regarding labor compensation and working conditions in this industry. Additionally, the air emissions impact intensity is negative at -0.078780 EUR per EUR output, reflecting the environmental implications associated with hospitality and food service operations. Furthermore, the water impact intensity is notably negative at -0.210910 EUR per EUR output, highlighting substantial environmental challenges related to water usage and management in this sector.



Information and Communication (J)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.0	-0.01	-0.01	-0.03
Fair Wages	0.01	-0.01	-0.02	-0.08	-0.10
GHG	-0.01	-0.01	-0.01	-0.03	-0.06
GVA	0.44	0.24	0.12	0.16	0.96
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.04
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.01	0.02
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.00	-0.02	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Information and communication (NACE Code J), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Information and Communication sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.099523 EUR per EUR output, indicating significant concerns regarding labor compensation and working conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.026042 EUR per EUR output, reflecting the environmental implications associated with information and communication activities. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.055962 EUR per EUR output, underscoring the environmental challenges linked to operations in this sector.



Financial and Insurance Activities (K)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.01	-0.02
Fair Wages	0.03	-0.01	-0.01	-0.05	-0.05
GHG	-0.00	-0.01	-0.01	-0.02	-0.04
GVA	0.52	0.22	0.09	0.11	0.94
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.00	-0.01	-0.00	-0.01	-0.02
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.02
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.01	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Financial and insurance activities (NACE Code K), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Financial and Insurance Activities sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.046779 EUR per EUR output, indicating concerns regarding compensation and labor practices within this industry. Additionally, the air emissions impact intensity is negative at -0.017350 EUR per EUR output, reflecting the environmental implications associated with financial and insurance operations. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.041751 EUR per EUR output, highlighting the environmental challenges linked to activities in this sector.



Real Estate Activities (L)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.01	-0.01
Fair Wages	-0.00	0.00	-0.01	-0.02	-0.03
GHG	-0.00	-0.01	-0.01	-0.01	-0.03
GVA	0.79	0.10	0.05	0.05	0.98
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.00	-0.00	-0.00	-0.00	-0.01
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.00	-0.01

Source: WifOR / VBA, Table for Republic of Korea - Real estate activities (NACE Code L), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Real Estate Activities sector of the Republic of Korea, the impact intensity for fair wages is slightly negative at -0.028669 EUR per EUR output, indicating some concerns regarding labor compensation and practices within this industry. Additionally, the air emissions impact intensity is negative at -0.011909 EUR per EUR output, reflecting the environmental implications associated with real estate operations. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.029715 EUR per EUR output, highlighting the environmental challenges linked to activities in this sector.



Professional, Scientific and Technical Activities (M)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.01	-0.01	-0.01	-0.01	-0.03
Fair Wages	0.00	-0.01	-0.02	-0.07	-0.10
GHG	-0.00	-0.01	-0.01	-0.02	-0.05
GVA	0.59	0.16	0.08	0.12	0.96
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.01	-0.00	-0.01	-0.04
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.02	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Professional, scientific and technical activities (NACE Code M), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Professional, Scientific and Technical Activities sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.100489 EUR per EUR output, indicating significant concerns regarding labor compensation and working conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.030170 EUR per EUR output, reflecting the environmental implications associated with professional and technical services. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.052902 EUR per EUR output, underscoring the environmental challenges linked to activities in this sector.



Administrative and Support Service Activities (N)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.03
Fair Wages	-0.08	-0.01	-0.02	-0.07	-0.19
GHG	-0.00	-0.02	-0.01	-0.02	-0.06
GVA	0.61	0.15	0.08	0.12	0.95
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.03	-0.01	-0.00	-0.01	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.01	-0.03	-0.03

Source: WifOR / VBA, Table for Republic of Korea - Administrative and support service activities (NACE Code N), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Administrative and Support Service Activities sector of the Republic of Korea, the impact intensity for fair wages is significantly negative at -0.186841 EUR per EUR output, indicating serious concerns regarding labor compensation and working conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.025492 EUR per EUR output, reflecting the environmental implications associated with administrative and support services. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.055765 EUR per EUR output, underscoring the environmental challenges linked to activities in this sector.



Public Administration and Defense; Compulsory Social Security (O)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.01	-0.02
Fair Wages	0.05	-0.01	-0.01	-0.05	-0.01
GHG	-0.00	-0.02	-0.01	-0.02	-0.05
GVA	0.70	0.12	0.06	0.09	0.97
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.06	-0.01	-0.00	-0.01	-0.08
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.01	-0.02

Source: WifOR / VBA, Table for Republic of Korea - Public administration and defense; compulsory social security (NACE Code O), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Public Administration and Defense; Compulsory Social Security sector of the Republic of Korea, the impact intensity for fair wages is slightly positive at 0.014845 EUR per EUR output, suggesting that labor compensation is relatively better compared to other sectors. However, the air emissions impact intensity is negative at -0.019546 EUR per EUR output, indicating environmental concerns associated with public administration activities. Additionally, the greenhouse gas (GHG) emissions intensity is also negative at -0.045908 EUR per EUR output, highlighting the environmental challenges linked to operations in this sector.



Education (P)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.03
Fair Wages	0.13	-0.02	-0.03	-0.06	0.03
GHG	-0.01	-0.02	-0.01	-0.02	-0.06
GVA	0.71	0.10	0.07	0.09	0.97
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.01	-0.01	-0.01	-0.02
Occupational Health & Safety	-0.05	-0.01	-0.01	-0.01	-0.07
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.01	-0.02	-0.04

Source: WifOR / VBA, Table for Republic of Korea - Education (NACE Code P), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Education sector of the Republic of Korea, the impact intensity for fair wages is positive at 0.027764 EUR per EUR output, indicating relatively better labor compensation compared to other sectors. However, the air emissions impact intensity is negative at -0.026625 EUR per EUR output, reflecting environmental concerns associated with educational institutions and their operations. Additionally, the greenhouse gas (GHG) emissions intensity is also negative at -0.058832 EUR per EUR output, highlighting the environmental challenges linked to activities in the education sector.



Human Health and Social Work Activities (Q)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.02	-0.04
Fair Wages	-0.02	-0.02	-0.03	-0.10	-0.17
GHG	-0.01	-0.02	-0.02	-0.03	-0.08
GVA	0.51	0.15	0.11	0.18	0.94
Human Rights	0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.01	-0.01	-0.01	-0.03
Occupational Health & Safety	-0.05	-0.01	-0.01	-0.02	-0.08
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	-0.00	-0.01	-0.02	-0.03	-0.06

Source: WifOR / VBA, Table for Republic of Korea - Human health and social work activities (NACE Code Q), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Human Health and Social Work Activities sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.166062 EUR per EUR output, indicating significant concerns regarding labor compensation and working conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.040241 EUR per EUR output, reflecting environmental implications associated with health and social services. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.078780 EUR per EUR output, highlighting the environmental challenges linked to operations in this sector.



Arts, Entertainment and Recreation and Other Services and Activities (R&S)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.01	-0.01	-0.01	-0.02	-0.04
Fair Wages	-0.05	-0.02	-0.04	-0.10	-0.20
GHG	-0.09	-0.02	-0.02	-0.03	-0.16
GVA	0.50	0.18	0.11	0.17	0.96
Human Rights	-0.01	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.01	-0.01	-0.02
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.02	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.01	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	0.00	-0.00	-0.01	-0.03	-0.04

Source: WifOR / VBA, Table for Republic of Korea - Arts, entertainment and recreation and other services and activities (NACE Code R&S), 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025.

In the Arts, Entertainment and Recreation; Other Services sector of the Republic of Korea, the impact intensity for fair wages is notably negative at -0.204609 EUR per EUR output, indicating significant concerns regarding labor compensation and working conditions within this industry. Additionally, the air emissions impact intensity is negative at -0.044598 EUR per EUR output, reflecting environmental implications associated with activities in this sector. Furthermore, the greenhouse gas (GHG) emissions intensity is also negative at -0.159823 EUR per EUR output, highlighting the environmental challenges linked to operations in arts and entertainment services.



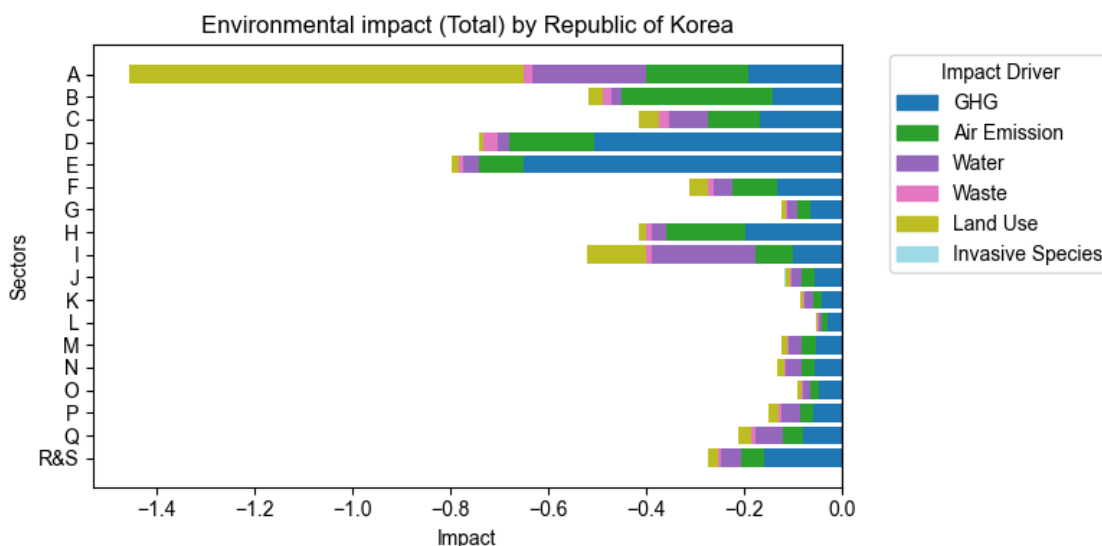


Overview

The overall assessment of the Republic of Korea, based on the Value Balancing Alliance and WifOR methodologies, reveals significant environmental and social challenges across various sectors. Environmental impact intensities indicate that sectors such as Manufacturing, Transportation, and Agriculture contribute heavily to greenhouse gas emissions and air pollution, particularly in upstream activities, necessitating targeted mitigation strategies. Socially, fair wages and occupational health and safety issues are prevalent, especially in sectors like Construction and Health, where upstream impacts exacerbate labor conditions. The data highlights the need for comprehensive policies that address both environmental sustainability and social equity, emphasizing the interconnectedness of these factors in driving overall value creation. Ultimately, enhancing performance in both areas will be crucial for fostering sustainable development in the Republic of Korea.

Environmental Impact KOR

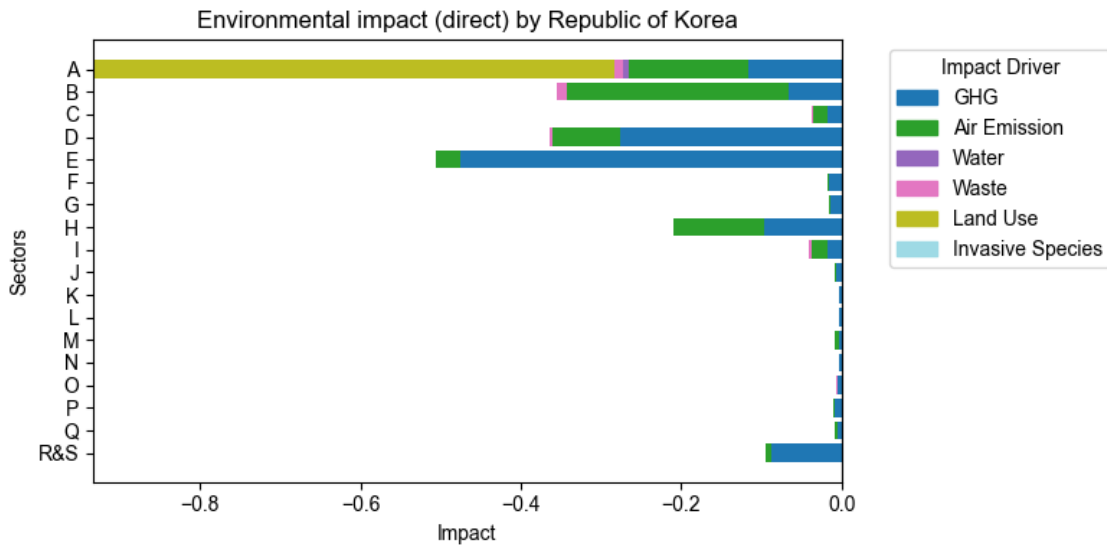
Total



Source: VBA/WifOR, Overview of environmental impact, Total in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

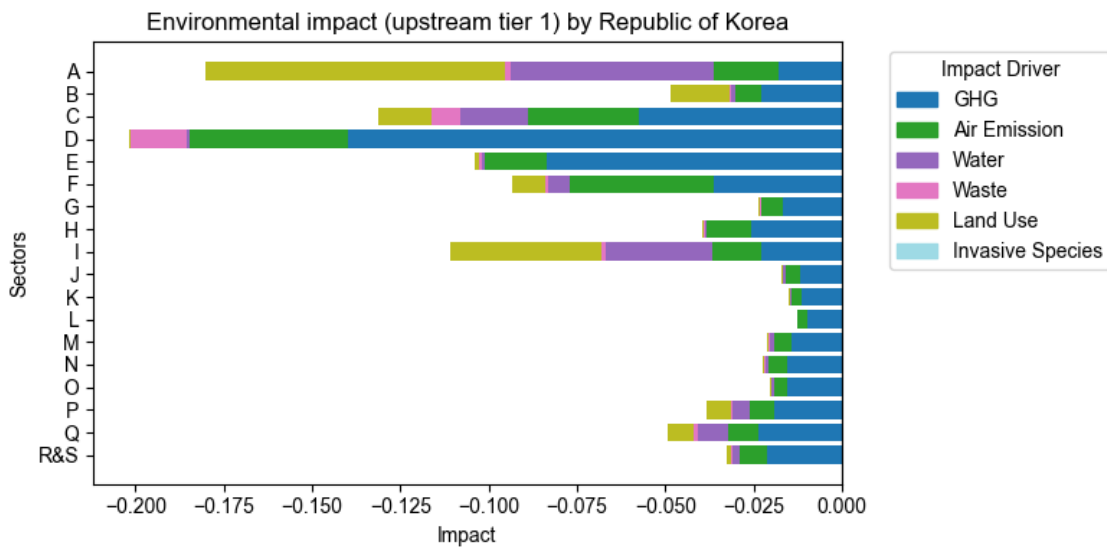


direct



Source: VBA/WifOR, Overview of environmental impact, direct in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

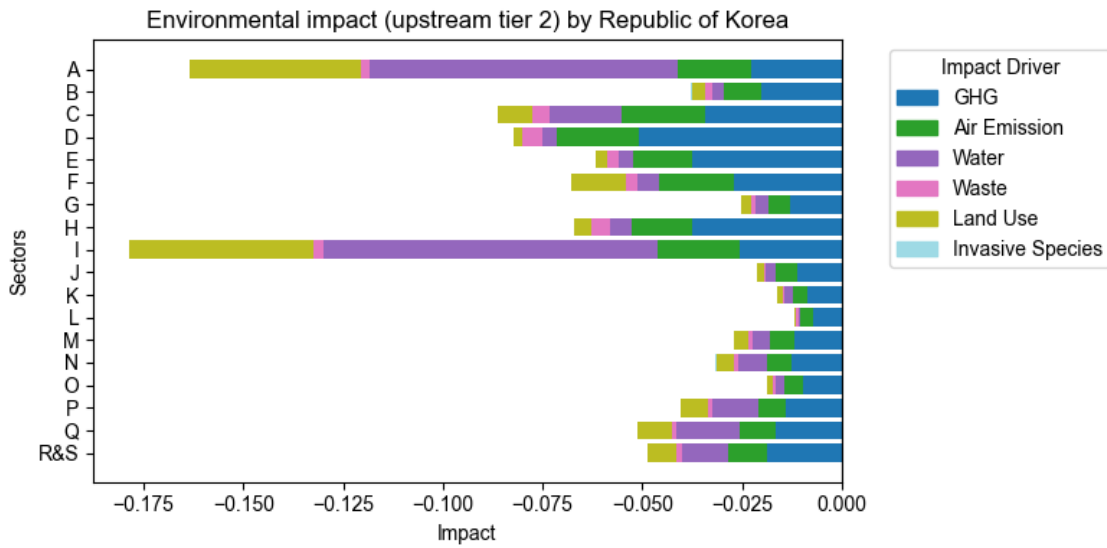
upstream tier 1



Source: VBA/WifOR, Overview of environmental impact, upstream tier 1 in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

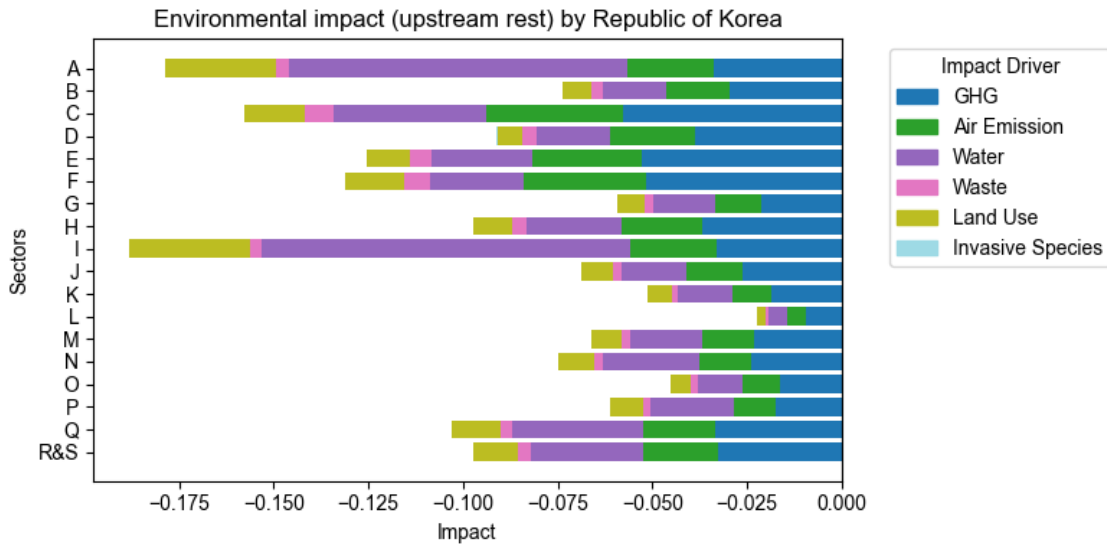


upstream tier 2



Source: VBA/WifOR, Overview of environmental impact, upstream tier 2 in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream rest



Source: VBA/WifOR, Overview of environmental impact, upstream rest in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

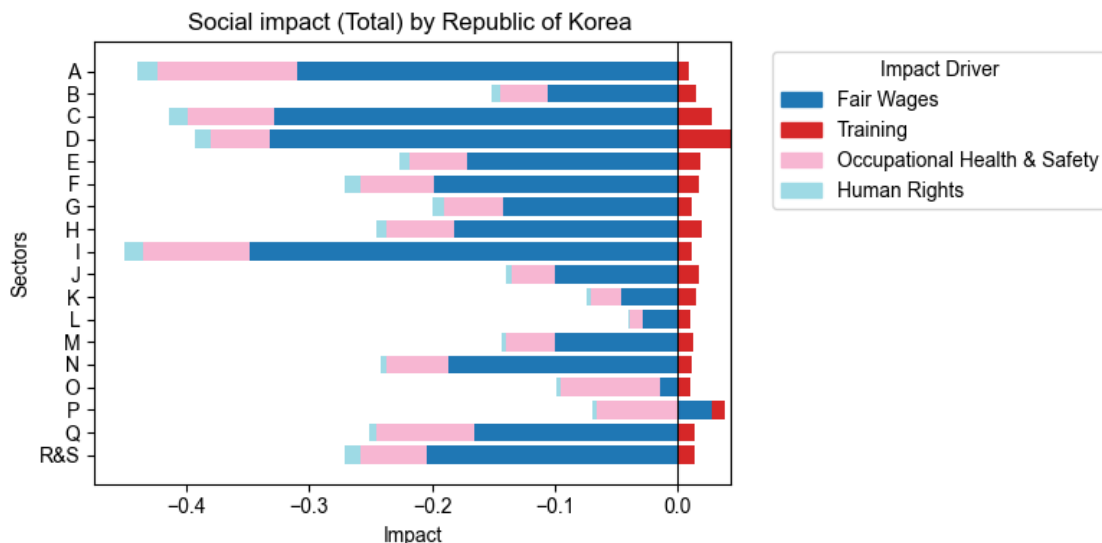
The environmental impact intensities across various NACE sectors in the Republic of Korea reveal significant differences in how each sector contributes to environmental burdens at



different stages of the value chain. Direct impacts tend to be lower compared to upstream impacts, particularly in sectors like Manufacturing and Transportation, where upstream activities contribute substantially to greenhouse gas (GHG) emissions and air pollution. For instance, while direct impacts may show moderate emissions, upstream tiers often exhibit higher intensities, indicating that supply chain activities are major contributors to environmental degradation. Additionally, sectors such as Agriculture and Construction demonstrate pronounced negative impacts across multiple environmental drivers, including land use and water usage, particularly in upstream stages. Overall, the data highlights the importance of addressing upstream activities in order to mitigate environmental impacts effectively across the entire value chain.

Social Impact KOR

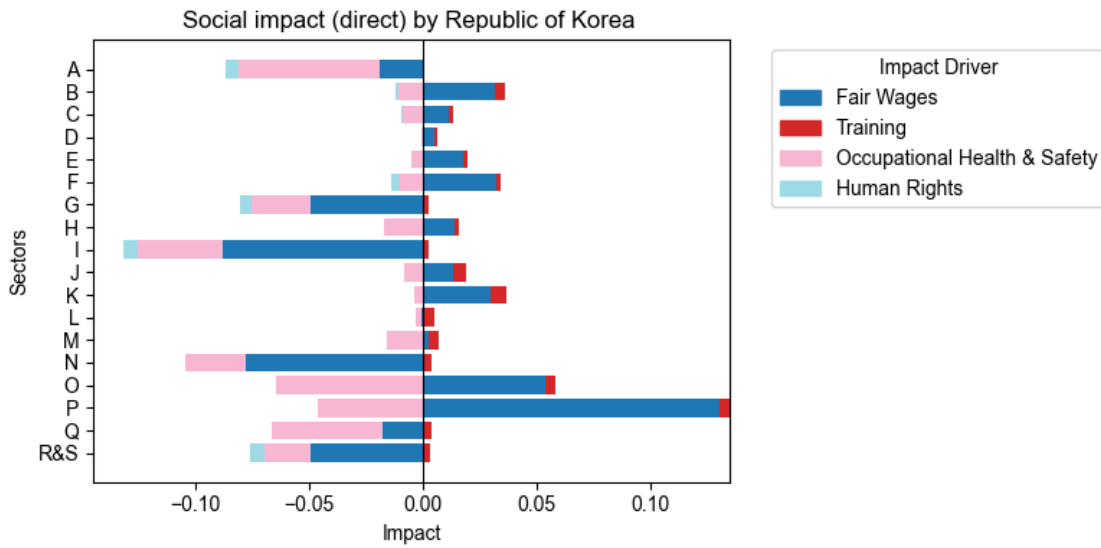
Total



Source: VBA/WifOR, Overview of social impact, Total in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

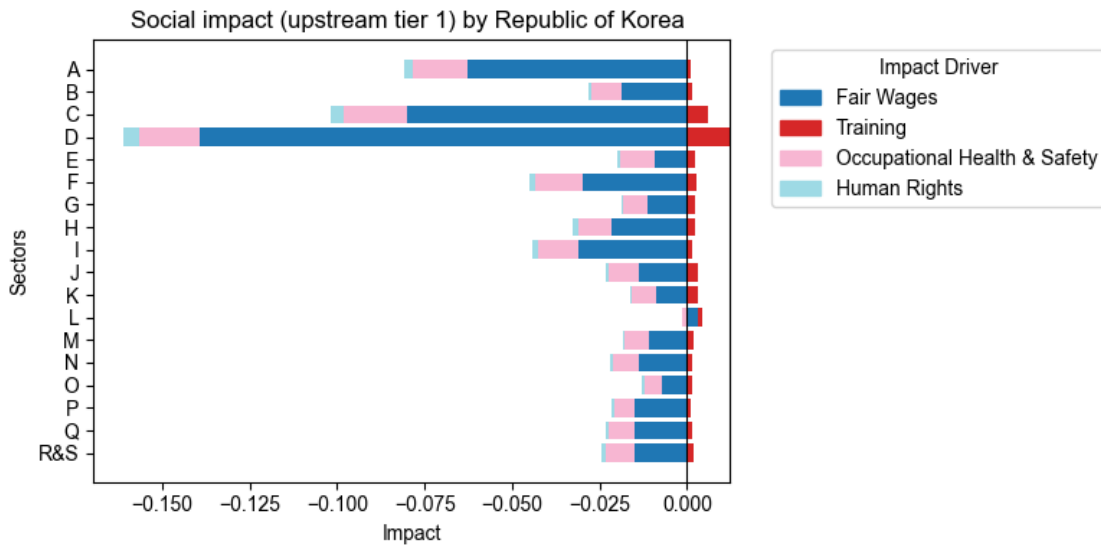


direct



Source: VBA/WifOR, Overview of social impact, direct in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

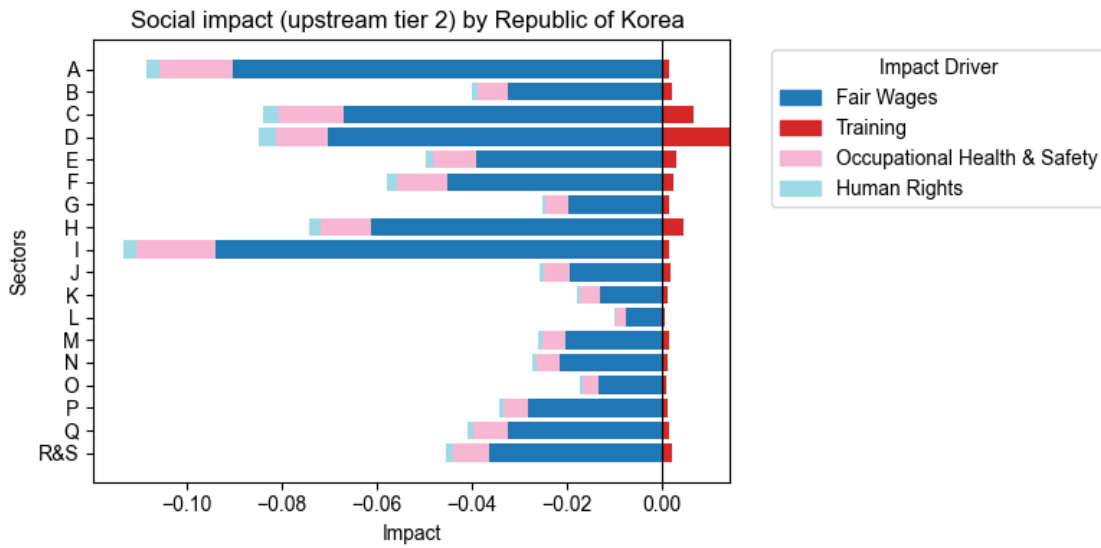
upstream tier 1



Source: VBA/WifOR, Overview of social impact, upstream tier 1 in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

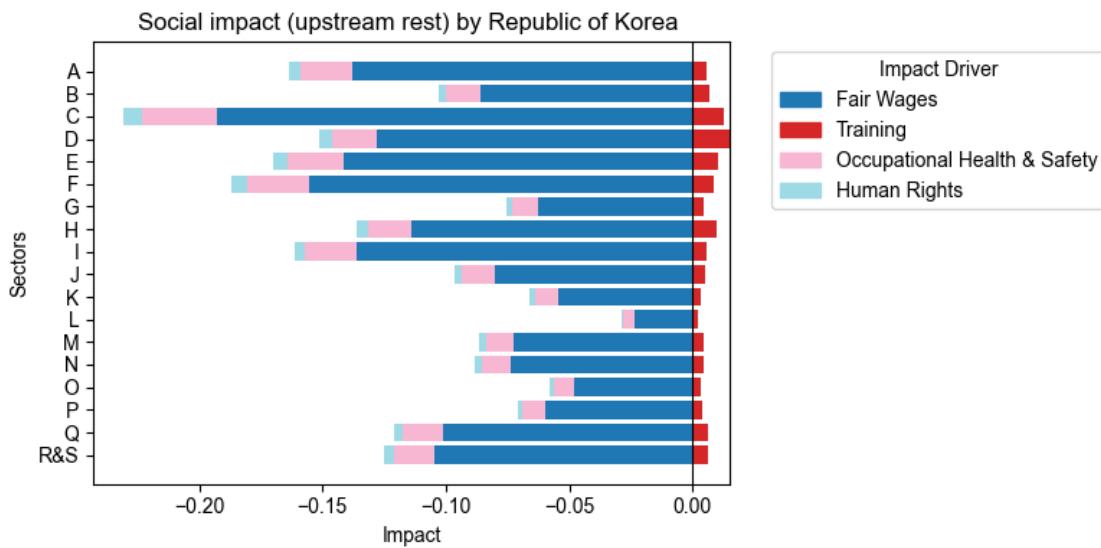


upstream tier 2



Source: VBA/WifOR, Overview of social impact, upstream tier 2 in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream rest



Source: VBA/WifOR, Overview of social impact, upstream rest in Republic of Korea, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

The impact intensities of social factors across various NACE sectors in the Republic of Korea, as assessed by the VBA and WifOR methodologies, highlight significant disparities in how sectors contribute to social outcomes at different stages of the value chain. Direct impacts are



generally lower, particularly in sectors like Education and Health, where fair wages and occupational health and safety show moderate negative intensities. However, upstream activities, especially in sectors such as Manufacturing and Construction, reveal more pronounced negative impacts, particularly regarding fair wages and training, indicating that supply chain practices significantly affect social conditions. The methodologies emphasize the importance of addressing upstream impacts to enhance overall social performance, as these activities often exacerbate issues related to labor rights and working conditions. Overall, the findings underscore the need for targeted interventions in upstream processes to improve social outcomes across the entire value chain.



Application

Beyond comparing company and sector impacts, the data presented here can support various additional applications. This chapter highlights several such use cases.

Impact benchmarks can help state institutions assess risks, guide investments and funding strategies, inform procurement decisions, enforce compliance, and shape policies that promote human rights protection, environmental sustainability, and economic growth. By applying country-specific and industry-specific impact benchmarks, governments and regulatory bodies can reduce liabilities, such as pollution and labor exploitation, while ensuring fair competition.

Collection of ideas				
	Regulation & Compliance	Policy & Economic Planning	Investment & Development Finance	Risk Assessment
Institution	Ministries	Development Institutions	Development Banks	Insurance Entities
Vision of application	Benchmarks could support industry-specific sustainability target setting and provide valuable insights for cost-benefit analyses of regulations	Development institutions could use benchmarks to shape industry-specific sustainability goals like labour protection guidelines	Benchmarks could help guide funding decisions for large projects, ensuring proper risk mitigation, particularly in sectors such as agriculture	Insurers could assess risks using industry benchmarks, helping determine eligibility and pricing for political risk insurance
	Public Procurement & Infrastructure	International Trade & Market Access	Accountability & Consumer Protection	Supply Chain Management
Institution	Public-Private Partnerships	Trade Ministries	Consumer Protection Agencies	Export Credit Agencies
Vision of application	Governments could use country-specific impact benchmarks to compare and select private sector partners (e.g., Infrastructure projects)	Trade ministries could apply sustainability benchmarks to imported goods (e.g., carbon intensity benchmarks for minerals)	Transparency rules could be enforced, requiring companies to disclose their impacts relative to benchmarks to prevent false claims and ensure accountability	Export credit agencies could use environmental and social benchmarks in financing decisions to promote ethical and sustainable supply chains

Figure VBA, Policy Applications, 2025

Impact Intensities represent the average environmental, social, and economic impact per sector output across countries, regions, and globally. They serve as a reference point for assessing an organization’s sustainability performance in its own operations and supply chains across industries and geographies. By comparing their performance to sector averages, companies and other organizations can determine whether they meet or exceed benchmarks and set specific targets for improvement.¹⁰

¹⁰ VBA et al., Valuing Impact Materiality 2025, 2025, www.value-balancing.com.



Beyond internal assessments, Impact Intensities encourage collaboration with suppliers and partners, fostering sustainability improvements across shared supply chains. By identifying high-impact tiers or regions, companies can make informed decisions about production and sourcing. On a global scale, comparing benchmarks across countries highlights regions with critical sustainability challenges, enabling firms to focus efforts where they are most needed. These benchmarks also help organizations anticipate risks beyond production, such as regulatory pressures or resource availability constraints. By revealing industries and countries where unsustainable environmental or social challenges could lead to future restrictions, they support strategic decisions on production, sourcing, resource allocation, and diversification. Additionally, they help companies effectively communicate sustainability achievements across diverse markets.

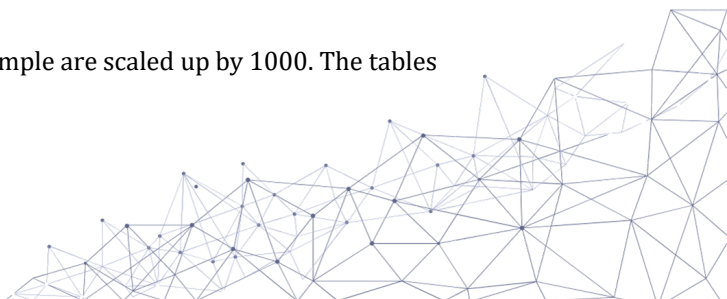
The benchmarks serve as a key reference for materiality assessments, helping companies prioritize impacts, allocate resources efficiently, and align with stakeholder and sustainability goals. They provide reliable data for transparent reporting, enabling companies to demonstrate their performance to investors, customers, and other stakeholders. This fosters trust, ensures compliance with standards, and enhances corporate reputation.

As sustainability becomes increasingly important and disclosure regulations evolve, assessment and reporting methodologies must keep pace. Impact Intensity benchmarks offer valuable guidance for improving practices, refining sustainability reporting, sharpening decision-making, and optimizing resource allocation. It is important to note that Impact Intensities are monetized using WifOR value factors, and meaningful comparisons require companies to calculate their impacts using the same methodology.

To illustrate how these benchmarks can be applied in practice, consider the following example: In Australia's Consumer Goods sector, an increase of EUR 1000¹¹ in production results in an average negative impact of EUR 6.98 from greenhouse gas (GHG) emissions within a company's own operations. Direct suppliers contribute another EUR 16.04, while suppliers' suppliers account for EUR 10.20 globally, and the remaining global supply chain adds EUR 15.77. Altogether, the total damage due to GHG emissions across the entire value chain amounts to approximately EUR 49 per EUR 1000 of output. This indicates that the majority of GHG emissions are driven by the upstream supply chain rather than the direct operations of Consumer Goods companies.

A company operating in this sector in Australia can compare these Impact Intensity benchmarks with its own data to evaluate its performance. To calculate its own GHG Impact Intensities, the company must take its environmental data per country and value chain stage, divide it by its output or turnover (own operations in the respective country), and multiply the result with the WifOR value factor:

¹¹ For ease of interpretation, the numbers in this example are scaled up by 1000. The tables show impact per EUR 1 of output.



$$GHG\ Intensity_{c,v} = \frac{GHG\ emissions_{c,v}}{Output_c} * WifOR\ value\ factor\ for\ GHG\ emissions^{12}$$

If the company's calculated GHG Intensity values are lower than the benchmark, this indicates a smaller GHG footprint relative to the sector average. Conversely, higher values suggest a larger-than-average impact.

For a materiality assessment, Impact Intensities at or above the sectoral benchmark can be considered material, signaling areas that may require targeted sustainability measures.

Caveats

Data Accuracy

The input-output model used to calculate the Impact Intensities integrates satellite accounts for various indicators, constructed using multiple data sources. These accounts aim to accurately portray industry effects across all countries based on the best available knowledge and data.¹³ However, varying data availability across indicators, countries, and sectors necessitates certain extrapolations and assumptions. WifOR is committed to continuously updating its data to improve accuracy and minimize errors or gaps. As such, the results here represent a snapshot, capturing current impacts as comprehensively as possible. Despite inherent limitations, this dataset remains, to the best of our knowledge, the most detailed, granular, and comprehensive source available for assessing industrial impacts.

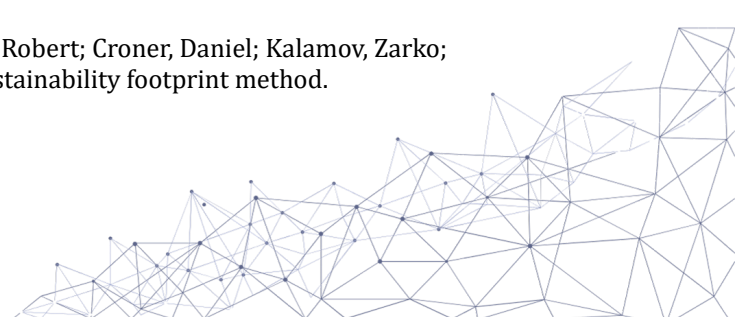
Impact Valuation

Impact Valuation advances traditional reporting beyond disclosure of companies' social and environmental effects in disparate units (e.g., GHG emissions in metric tons or occupational accidents in numbers of events). It captures the environmental and social changes caused by these outputs, tracks their broader impact on society, and conveys these effects in monetary terms—a unified metric that enables comparison across a diverse range of indicators.

Various approaches exist to quantify the societal value of indicators. In the present assessment, the indicators were monetized using the WifOR Impact Valuation methodology, with publicly available value factors. WifOR primarily focuses on damage costs to measure impacts. However, this is not feasible for all indicators, as some impact pathways and their consequences remain insufficiently understood. Each indicator therefore follows a specific valuation approach. For example, GHG emissions contribute to climate change regardless of their source and are thus valued using a 'social cost of carbon' approach and a global value factor. By contrast, water consumption is assessed based on economic damage and human

¹² c = country of operation; v = value chain level

¹³ Scholz, Richard; Dorndorf, Tabea; Tesch, Jasmin; Köster, Robert; Croner, Daniel; Kalamov, Zarko; Setzer, Jana. 2024. Impact measurement using WifOR's sustainability footprint method. Methodological report. 2024 WifOR Institute.



health impacts, yielding country-specific value factors that reflect local water scarcity. This means water consumption in highly water-stressed regions will generate a disproportionately higher impact, in some cases exceeding that of GHG emissions at global level. Given such methodological idiosyncrasies, comparisons between indicators should be interpreted cautiously, as differing valuation approaches limit direct comparability, especially on a worldwide level.

Double Counting

Impact Valuation carries the risk of *double counting*, as different impact drivers may share the same, or overlapping, impact pathways. This challenge is particularly relevant when analyzing multiple indicators together. For instance, waste incineration releases air pollutants that contribute to respiratory disease and health-related costs—accounted for in the value factor for *Waste*, but also included in the factor for *Air Emission*. Simply subtracting this impact from the waste coefficient would underestimate the true impact of waste, while summing both indicators would lead to double counting.

Economic Impact

Gross Value Added (GVA) is a key metric for assessing a company's economic contribution across value chains. It represents the economic value generated through company operations after deducting the cost of inputs and services used in production. Often, the total GVA across the entire value chain approximately matches the direct output of a company—if a company generates EUR 1,000 in direct output, the total GVA across its supply chain and internal operations typically also equals EUR 1,000. This equivalence is down to the fact that GVA encompasses all value-creation activities, from raw materials production to final goods and services, and is therefore distributed across all stages of the value chain. The distribution varies by industry and location: manufacturing or heavy engineering often rely on extensive supplier networks, resulting in significant upstream GVA contributions, while software development or advanced technology focus on highly integrated operations and tend to generate a substantial proportion of GVA internally.

Netting Impacts

Impact Valuation seeks to enhance transparency, an aim that cannot be achieved if results are overly aggregated. Expressing diverse impacts using a common monetary metric does reduce complexity, but it also risks obscuring critical nuances. And while simplification can be useful, it should not carry the implication that negative impacts can be offset by positive ones.

There are certain cases where netting impacts can be appropriate (e.g., aggregating an indicator across different locations). But practices such as netting across different indicators can lead to *greenwashing* and a misrepresentation of results. This risk is particularly relevant for economic impact (represented by GVA), which has therefore been intentionally excluded from the charts below.



In the current phase of Impact Valuation development, limitations remain, including overlapping indicators (double counting), divergent valuation approaches, and data gaps that hinder a fully comprehensive assessment. Moreover, different impacts affect different groups unevenly, meaning that a positive impact on one group does not necessarily compensate for a negative impact on another (for instance, extra vocational training for managers cannot offset agricultural losses caused by water scarcity)





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