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Impact Report for Japan

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Financial Market Chapter

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Introduction

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

This document presents impact statements for Japan'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 a production value chain: own operations, upstream tier 1, upstream tier 2, and upstream tiers 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 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 occur 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

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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 *satellite accounts*, as outlined in the System of Environmental-Economic Accounting,[7] forming the basis for the estimates. The modeled effects are then multiplied by publicly available context-specific value factors[8] 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.

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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 generally 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 Japan'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 four stages of the sector's value chain: own operations, upstream tier 1, upstream tier 2, and upstream tiers 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, both on Japan and on the world. 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	-0.13	-0.03	-0.02	-0.02	-0.20
Fair Wages	-0.09	-0.43	-0.18	-0.15	-0.85
GHG	-0.11	-0.03	-0.02	-0.02	-0.18
GVA	0.51	0.22	0.12	0.14	0.99
Human Rights	-0.00	-0.02	-0.01	-0.01	-0.03
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	-0.63	-0.14	-0.04	-0.02	-0.83
Occupational Health & Safety	-0.09	-0.08	-0.03	-0.02	-0.22
Ocean Plastic	0.00	-0.00	-0.00	-0.0	-0.0
Training	0.0	0.0	0.0	0.0	0.01
Waste	-0.01	-0.0	-0.0	-0.0	-0.02
Water	-0.0	-0.04	-0.04	-0.03	-0.11

Source: WifOR / VBA, Table for Japan - 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 in Japan, the impact intensity for air emissions is notably negative, with a total impact of -0.199723 EUR per EUR output, indicating significant environmental concerns associated with this sector. Moreover, the fair wages impact intensity is also negative at -0.845534 EUR per EUR output, suggesting severe issues related to labor compensation and equity within the industry. Additionally, the land use impact intensity is the most substantial negative figure at -0.831833 EUR per EUR output, highlighting critical challenges in sustainable land management practices in this sector.

Mining and Quarrying (B)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.16	-0.06	-0.02	-0.02	-0.27
Fair Wages	-0.04	-0.23	-0.07	-0.1	-0.44
GHG	-0.06	-0.12	-0.04	-0.03	-0.24
GVA	0.23	0.42	0.16	0.14	0.95
Human Rights	-0.0	-0.03	-0.01	-0.0	-0.04
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.04	-0.01	-0.02	-0.09
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.02	0.01	0.0	0.0	0.04
Waste	-0.0	-0.03	-0.0	-0.0	-0.03
Water	0.0	-0.0	-0.01	-0.02	-0.02

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

In the Mining and Quarrying sector in Japan, the total impact intensity for air emissions is significantly negative at -0.267686 EUR per EUR output, indicating substantial environmental harm associated with this industry. The fair wages impact intensity is also notably negative at -0.444755 EUR per EUR output, reflecting serious concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity stands at -0.241937 EUR per EUR output, further emphasizing the environmental challenges linked to mining activities.

Manufacturing (C)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.03	-0.02	-0.03	-0.11
Fair Wages	0.02	-0.16	-0.1	-0.18	-0.42
GHG	-0.04	-0.05	-0.03	-0.05	-0.17
GVA	0.3	0.26	0.17	0.24	0.97
Human Rights	-0.0	-0.01	-0.0	-0.01	-0.02
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.02	-0.01	-0.01	-0.05
Occupational Health & Safety	-0.02	-0.03	-0.02	-0.03	-0.11
Ocean Plastic	-0.01	-0.0	-0.0	-0.0	-0.01
Training	0.01	0.01	0.0	0.01	0.02
Waste	-0.0	-0.01	-0.01	-0.01	-0.02
Water	-0.0	-0.02	-0.01	-0.02	-0.05

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

In the Manufacturing sector in Japan, the total impact intensity for air emissions is negative at -0.114243 EUR per EUR output, indicating a moderate level of environmental impact associated with manufacturing activities. The fair wages impact intensity is also negative at -0.420386 EUR per EUR output, highlighting significant issues related to labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.165636 EUR per EUR output, further underscoring the environmental challenges posed by manufacturing processes.

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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.05	-0.05	-0.02	-0.02	-0.13
Fair Wages	0.01	-0.17	-0.07	-0.1	-0.33
GHG	-0.2	-0.1	-0.03	-0.03	-0.36
GVA	0.24	0.4	0.17	0.15	0.96
Human Rights	0.0	-0.02	-0.01	-0.0	-0.03
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.0	-0.03	-0.01	-0.02	-0.06
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.0	0.01	0.0	0.0	0.02
Waste	-0.0	-0.02	-0.0	-0.0	-0.03
Water	-0.0	-0.0	-0.0	-0.02	-0.02

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.131282 EUR per EUR output, indicating a significant environmental burden associated with energy production and supply. The greenhouse gas (GHG) impact intensity is notably high at -0.355562 EUR per EUR output, reflecting serious concerns regarding the sector's contribution to climate change. Additionally, the fair wages impact intensity is negative at -0.327144 EUR per EUR output, suggesting substantial issues related to labor compensation and equity within this industry.

Water Supply; Sewerage, Waste Management and Remediation Activities (E)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.01	-0.0	-0.0	-0.01	-0.03
Fair Wages	0.04	-0.0	-0.02	-0.05	-0.03
GHG	-0.34	-0.03	-0.01	-0.01	-0.4
GVA	0.68	0.16	0.07	0.07	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.03
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.02	-0.0	-0.0	-0.0	-0.03
Water	-0.0	-0.0	-0.0	-0.01	-0.01

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.025975 EUR per EUR output, indicating a relatively low environmental impact from these activities compared to other sectors. The greenhouse gas (GHG) impact intensity is significantly negative at -0.395786 EUR per EUR output, highlighting substantial concerns regarding the sector's contribution to climate change. Additionally, the fair wages impact intensity is slightly positive at 0.032321 EUR per EUR output, suggesting that while there are some issues related to labor compensation, they are less severe compared to other sectors.

Construction (F)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.03	-0.01	-0.02	-0.06
Fair Wages	0.04	-0.12	-0.06	-0.12	-0.27
GHG	-0.0	-0.03	-0.02	-0.03	-0.08
GVA	0.44	0.25	0.13	0.16	0.98
Human Rights	-0.0	-0.01	-0.0	-0.01	-0.02
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.03	-0.02	-0.05
Occupational Health & Safety	-0.01	-0.03	-0.01	-0.02	-0.08
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.01	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.01
Water	0.0	-0.0	-0.0	-0.01	-0.02

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

In the Construction sector in Japan, the total impact intensity for air emissions is negative at -0.062198 EUR per EUR output, indicating a moderate level of environmental impact associated with construction activities. The fair wages impact intensity is also negative at -0.268380 EUR per EUR output, reflecting significant issues related to labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.083082 EUR per EUR output, further emphasizing the environmental challenges linked to construction practices.

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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.02
Fair Wages	0.03	-0.01	-0.02	-0.05	-0.06
GHG	-0.01	-0.01	-0.01	-0.01	-0.04
GVA	0.66	0.17	0.08	0.09	0.99
Human Rights	-0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.01	-0.05
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.01

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.017750 EUR per EUR output, indicating a relatively low environmental impact from these activities. The fair wages impact intensity is also negative at -0.060101 EUR per EUR output, suggesting notable concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.038566 EUR per EUR output, further highlighting the environmental challenges associated with this industry.

Transportation and Storage (H)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.2	-0.07	-0.03	-0.02	-0.32
Fair Wages	0.04	-0.01	-0.03	-0.07	-0.07
GHG	-0.09	-0.03	-0.02	-0.02	-0.16
GVA	0.55	0.2	0.12	0.12	0.99
Human Rights	0.0	-0.0	-0.0	-0.0	-0.01
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.01	-0.05
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.01

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

In the Transportation and Storage sector in Japan, the total impact intensity for air emissions is significantly negative at -0.322130 EUR per EUR output, indicating a substantial environmental burden associated with transportation activities. The greenhouse gas (GHG) impact intensity is also notably negative at -0.160922 EUR per EUR output, reflecting serious concerns regarding the sector's contribution to climate change. Additionally, the fair wages impact intensity is negative at -0.074622 EUR per EUR output, suggesting ongoing issues related to labor compensation and equity within the industry.

Accommodation and Food Service Activities (I)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.01	-0.01	-0.02	-0.04
Fair Wages	-0.11	-0.03	-0.16	-0.14	-0.44
GHG	-0.01	-0.02	-0.02	-0.02	-0.07
GVA	0.44	0.27	0.14	0.14	0.99
Human Rights	-0.0	-0.0	-0.0	-0.0	-0.01
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.02	-0.02	-0.02	-0.06
Occupational Health & Safety	-0.04	-0.02	-0.03	-0.02	-0.11
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.01	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.01
Water	0.0	-0.12	-0.04	-0.03	-0.2

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.041971 EUR per EUR output, indicating a moderate environmental impact associated with these services. The fair wages impact intensity is significantly negative at -0.443138 EUR per EUR output, reflecting serious concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.068989 EUR per EUR output, further highlighting the environmental challenges linked to this industry.

Information and Communication (J)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.02
Fair Wages	0.04	-0.02	-0.02	-0.06	-0.07
GHG	-0.01	-0.01	-0.01	-0.01	-0.03
GVA	0.55	0.24	0.1	0.1	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.04
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.02	0.01	0.0	0.0	0.03
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	-0.0	-0.0	-0.01	-0.01	-0.02

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

In the Information and Communication sector in Japan, the total impact intensity for air emissions is negative at -0.016991 EUR per EUR output, indicating a relatively low environmental impact associated with these activities. The fair wages impact intensity is also negative at -0.065249 EUR per EUR output, suggesting notable concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.034530 EUR per EUR output, further emphasizing the environmental challenges linked to this industry.

Financial and Insurance Activities (K)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.01
Fair Wages	0.06	-0.0	-0.01	-0.05	-0.0
GHG	-0.0	-0.01	-0.0	-0.01	-0.02
GVA	0.58	0.23	0.09	0.09	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.0	-0.01
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.03
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.02	0.01	0.0	0.0	0.03
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.01

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.011476 EUR per EUR output, indicating a relatively low environmental impact associated with these services. The fair wages impact intensity is slightly negative at -0.000077 EUR per EUR output, suggesting minimal concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.023366 EUR per EUR output, further highlighting the environmental challenges linked to this industry, albeit at a lower intensity compared to other sectors.

Real Estate Activities (L)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.0	-0.01
Fair Wages	0.01	-0.0	-0.01	-0.02	-0.02
GHG	-0.0	-0.0	-0.0	-0.0	-0.01
GVA	0.85	0.08	0.04	0.03	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.0	-0.0
Occupational Health & Safety	-0.0	-0.0	-0.0	-0.0	-0.01
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.0	-0.0

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

In the Real Estate Activities sector in Japan, the total impact intensity for air emissions is negative at -0.005609 EUR per EUR output, indicating a relatively low environmental impact associated with these activities. The fair wages impact intensity is also negative at -0.021452 EUR per EUR output, reflecting some concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.009999 EUR per EUR output, further emphasizing the environmental challenges linked to real estate activities, albeit at a lower intensity compared to other sectors.

Professional, Scientific and Technical Activities (M)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.01
Fair Wages	0.05	-0.01	-0.02	-0.05	-0.02
GHG	-0.01	-0.01	-0.01	-0.01	-0.03
GVA	0.62	0.2	0.09	0.09	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.03	-0.01	-0.01	-0.01	-0.05
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.01	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.01

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.014203 EUR per EUR output, indicating a relatively low environmental impact associated with these services. The fair wages impact intensity is slightly negative at -0.015268 EUR per EUR output, suggesting some concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.032893 EUR per EUR output, further highlighting the environmental challenges linked to this industry.

Administrative and Support Service Activities (N)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.01
Fair Wages	-0.0	-0.01	-0.01	-0.05	-0.06
GHG	-0.01	-0.0	-0.0	-0.01	-0.03
GVA	0.67	0.17	0.07	0.08	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.0	-0.0
Occupational Health & Safety	-0.01	-0.01	-0.0	-0.01	-0.03
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.01

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.012019 EUR per EUR output, indicating a relatively low environmental impact associated with these services. The fair wages impact intensity is also negative at -0.063680 EUR per EUR output, reflecting some concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.027283 EUR per EUR output, further emphasizing the environmental challenges linked to this industry.

Public Administration and Defense; Compulsory Social Security (O)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.01	-0.01	-0.02
Fair Wages	0.04	-0.0	-0.02	-0.05	-0.04
GHG	-0.01	-0.01	-0.01	-0.01	-0.04
GVA	0.68	0.16	0.07	0.08	0.99
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.05	-0.01	-0.01	-0.01	-0.07
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.0	-0.0	-0.01	-0.02

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is negative at -0.019198 EUR per EUR output, indicating a moderate environmental impact associated with these activities. The fair wages impact intensity is also negative at -0.040842 EUR per EUR output, reflecting concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.044631 EUR per EUR output, further emphasizing the environmental challenges linked to this industry.

Education (P)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.01
Fair Wages	0.12	-0.03	-0.01	-0.03	0.04
GHG	-0.01	-0.01	-0.01	-0.01	-0.03
GVA	0.81	0.09	0.05	0.05	1.0
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.0	-0.0
Occupational Health & Safety	-0.05	-0.01	-0.0	-0.01	-0.06
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	-0.0	-0.0	-0.0	-0.0	-0.01

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

In the Education sector in Japan, the total impact intensity for air emissions is negative at -0.012198 EUR per EUR output, indicating a relatively low environmental impact associated with educational activities. The fair wages impact intensity is slightly positive at 0.039150 EUR per EUR output, suggesting that labor compensation issues are less severe compared to other sectors. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.031343 EUR per EUR output, further highlighting the environmental challenges linked to this industry.

Human Health and Social Work Activities (Q)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.01	-0.01	-0.01	-0.03
Fair Wages	0.05	-0.01	-0.03	-0.06	-0.05
GHG	-0.0	-0.02	-0.01	-0.01	-0.04
GVA	0.58	0.22	0.09	0.1	0.99
Human Rights	0.0	-0.0	-0.0	-0.0	-0.0
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.07	-0.01	-0.01	-0.01	-0.1
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	-0.0	-0.01	-0.01	-0.01	-0.03

Source: WifOR / VBA, Table for Japan - 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 in Japan, the total impact intensity for air emissions is notably negative at -0.025576 EUR per EUR output, indicating a moderate environmental impact associated with these services. The fair wages impact intensity is also negative at -0.045420 EUR per EUR output, reflecting concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.044787 EUR per EUR output, further emphasizing the environmental challenges linked to this industry.

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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.0	-0.0	-0.0	-0.01	-0.02
Fair Wages	-0.02	-0.01	-0.02	-0.05	-0.1
GHG	-0.05	-0.02	-0.01	-0.01	-0.09
GVA	0.68	0.16	0.07	0.08	0.99
Human Rights	-0.0	-0.0	-0.0	-0.0	-0.01
Invasive Species	-0.0	-0.0	-0.0	-0.0	-0.0
Land Use	0.0	-0.0	-0.0	-0.01	-0.01
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.01	-0.05
Ocean Plastic	0.0	-0.0	-0.0	-0.0	-0.0
Training	0.01	0.0	0.0	0.0	0.02
Waste	-0.0	-0.0	-0.0	-0.0	-0.0
Water	0.0	-0.01	-0.0	-0.01	-0.02

Source: WifOR / VBA, Table for Japan - 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.

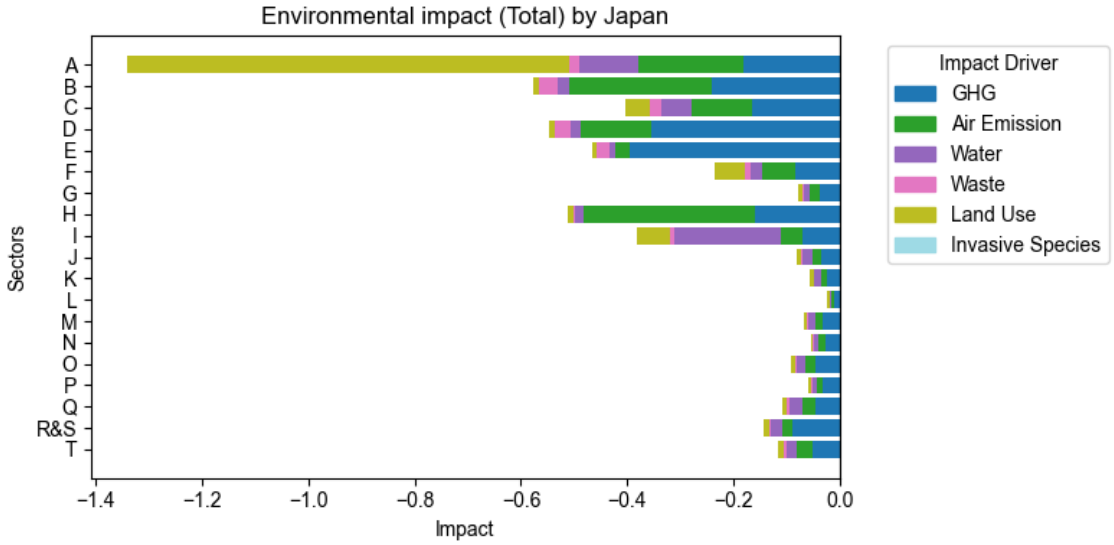
In the Arts, Entertainment, and Recreation sector in Japan, the total impact intensity for air emissions is negative at -0.020082 EUR per EUR output, indicating a moderate environmental impact associated with these activities. The fair wages impact intensity is also negative at -0.103775 EUR per EUR output, reflecting serious concerns regarding labor compensation and equity within the sector. Additionally, the greenhouse gas (GHG) impact intensity is recorded at -0.088296 EUR per EUR output, further emphasizing the environmental challenges linked to this industry.

Overview

The overall assessment of Japan's economic sectors, as analyzed through the Value Balancing Alliance and WifOR methodologies, reveals significant environmental and social impacts across various industries. Environmental impact intensities indicate that sectors such as Agriculture, Manufacturing, and Transportation contribute notably to air emissions and greenhouse gases, necessitating targeted interventions to mitigate their ecological footprints. Social impact assessments highlight concerns related to fair wages and occupational health and safety, particularly in sectors like Human Health and Social Work Activities and Arts, Entertainment, and Recreation, where negative impacts are pronounced. The data emphasizes the interconnectedness of direct and upstream activities, suggesting that comprehensive strategies addressing both environmental and social factors are essential for sustainable development. Overall, the findings underscore the importance of integrating value factors into decision-making processes to enhance corporate responsibility and promote a more sustainable economy in Japan.

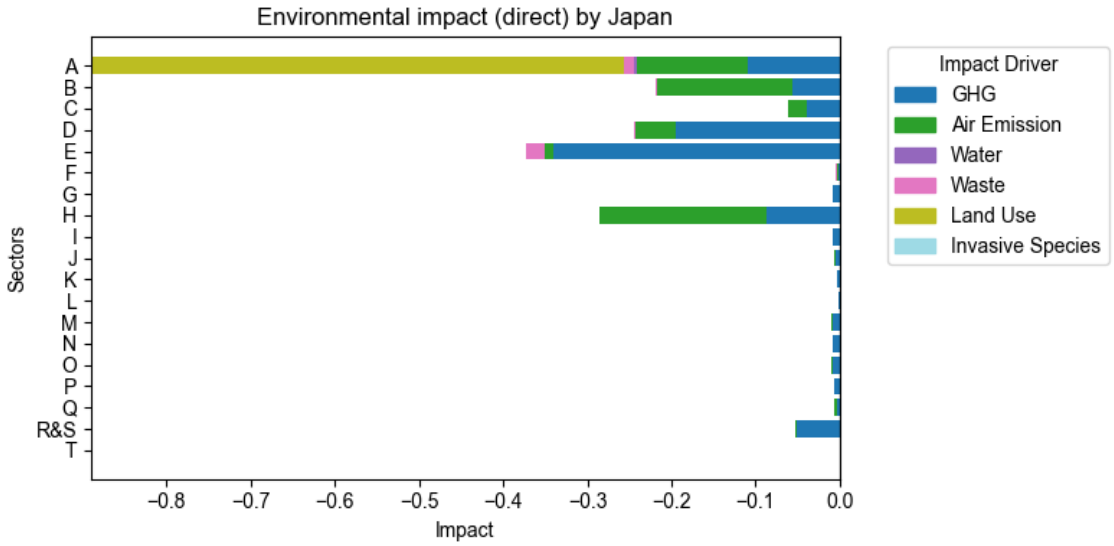
Environmental Impact JPN

Total



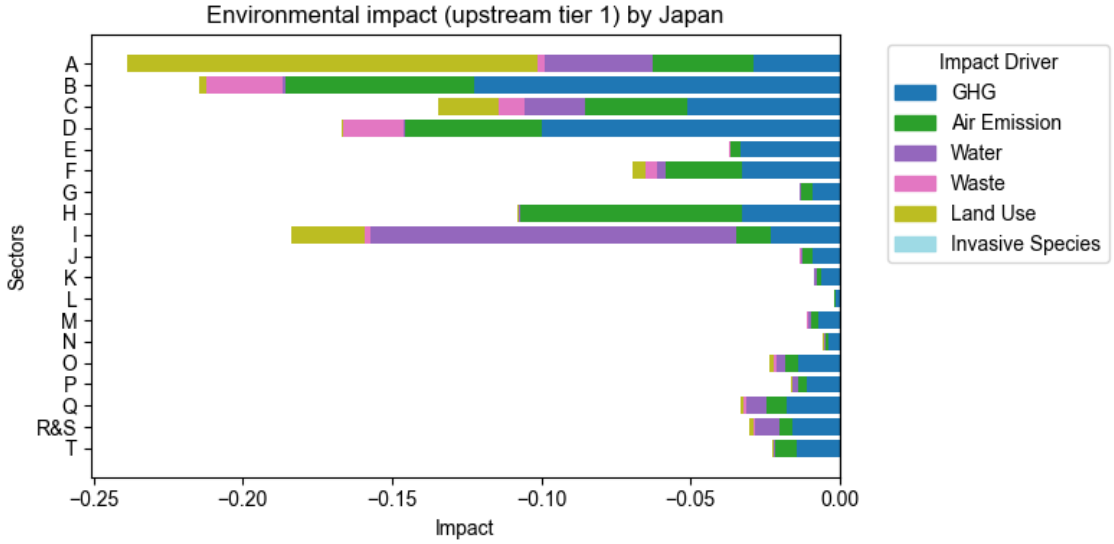
Source: VBA/WifOR, Overview of environmental impact, Total in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

direct



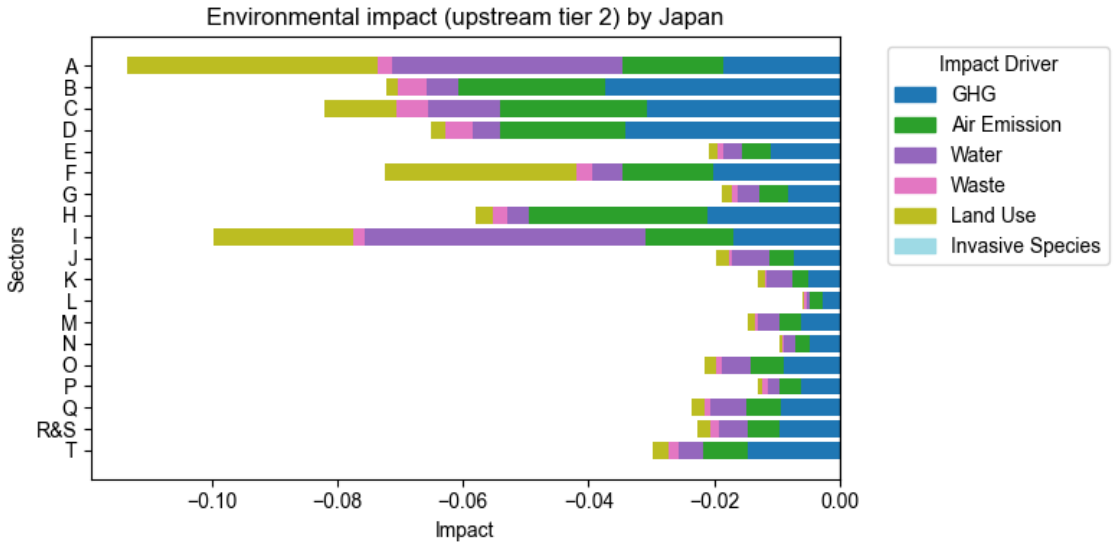
Source: VBA/WifOR, Overview of environmental impact, direct in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream tier 1



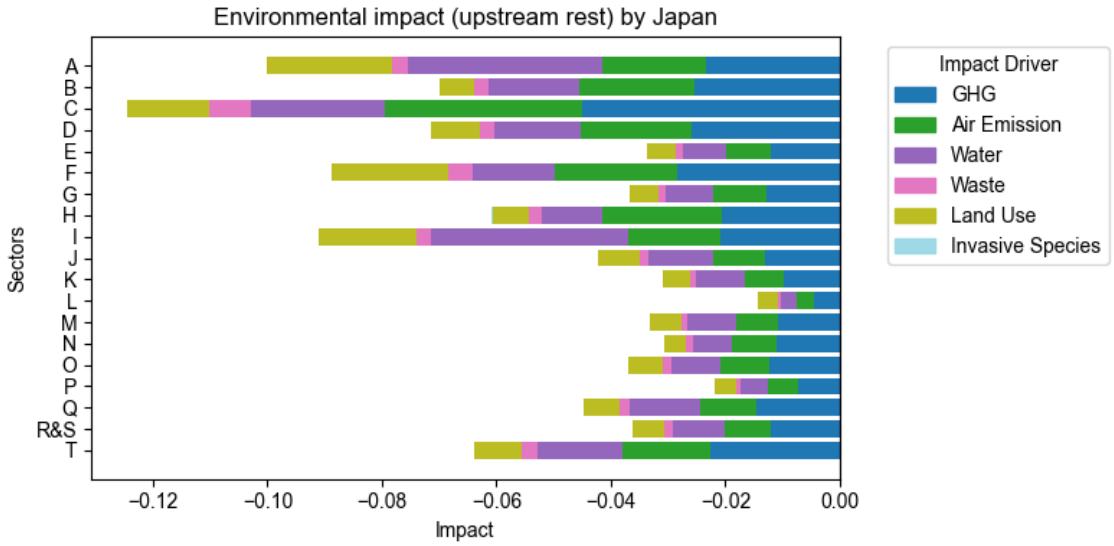
Source: VBA/WifOR, Overview of environmental impact, upstream tier 1 in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream tier 2



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

upstream rest



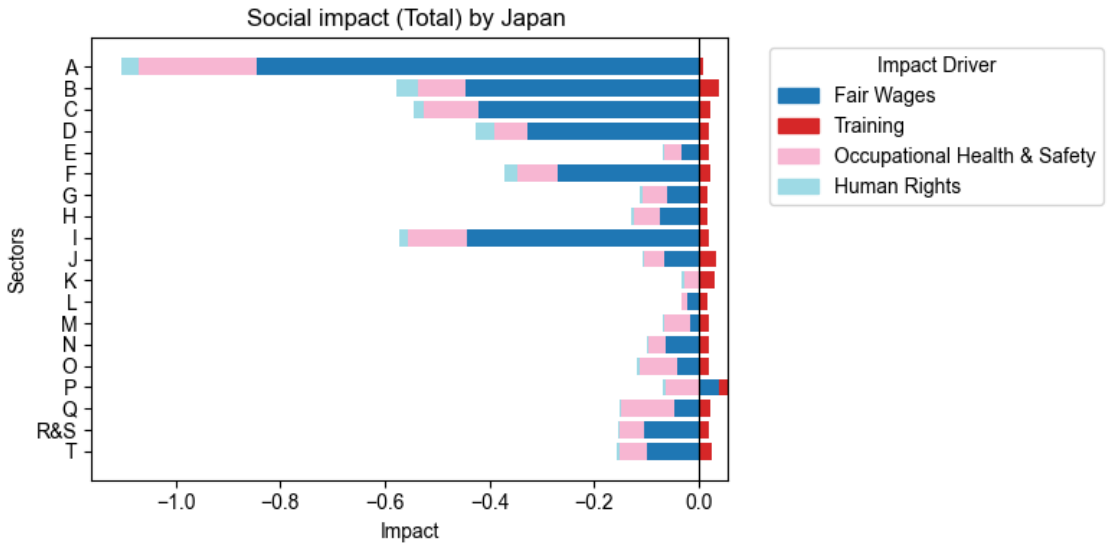
Source: VBA/WifOR, Overview of environmental impact, upstream rest in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

The environmental impact intensities across various NACE sectors in Japan reveal significant differences in their contributions to air emissions, greenhouse gases (GHG), water usage, waste generation, land use, and invasive species across different stages of the value chain.

Direct impacts tend to be more pronounced in sectors like Agriculture, Forestry, and Fishing, while upstream impacts, particularly in tier 1 and tier 2, show varying contributions from sectors such as Manufacturing and Transportation. Notably, upstream impacts often reflect the cumulative effects of multiple sectors, highlighting the interconnectedness of supply chains. The data indicates that while some sectors have high direct impacts, others may contribute more significantly through upstream activities, suggesting that addressing environmental concerns requires a holistic approach across the entire value chain. Overall, the analysis underscores the importance of targeting both direct and upstream impacts to mitigate environmental challenges effectively.

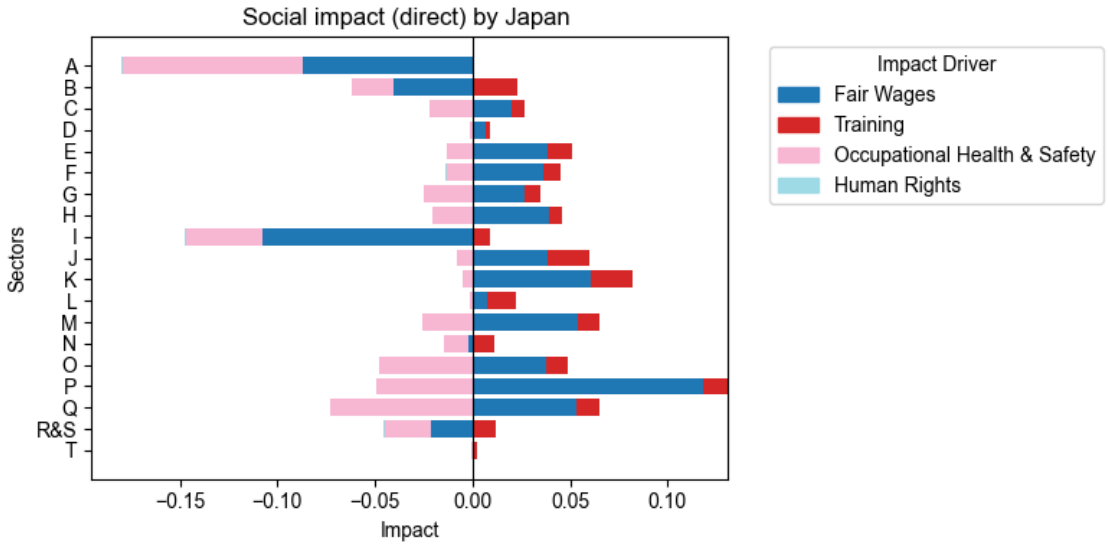
Social Impact JPN

Total



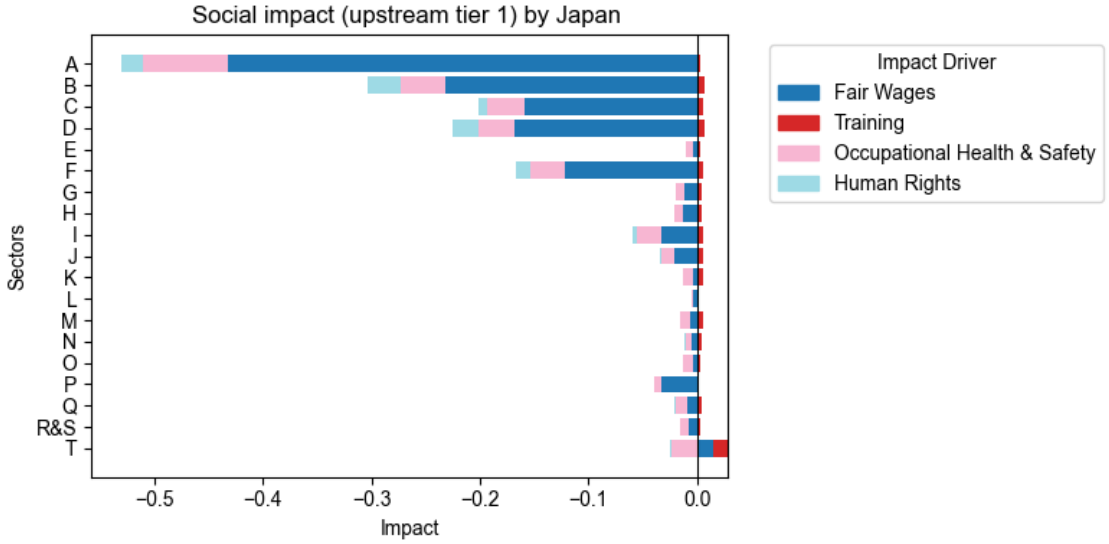
Source: VBA/WifOR, Overview of social impact, Total in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

direct



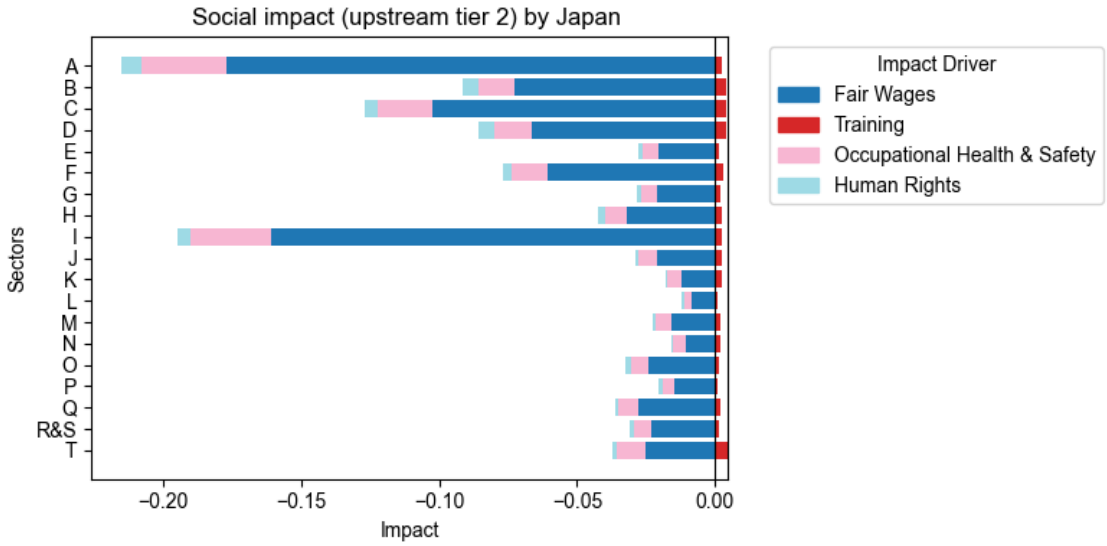
Source: VBA/WifOR, Overview of social impact, direct in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream tier 1



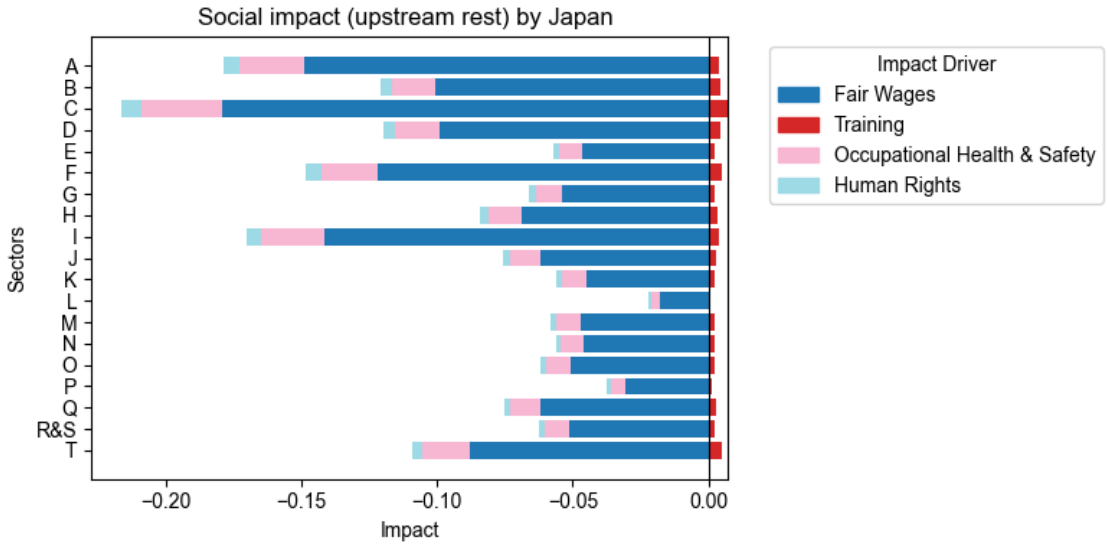
Source: VBA/WifOR, Overview of social impact, upstream tier 1 in Japan, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream tier 2



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

upstream rest



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

The impact intensities of environmental impacts across various NACE sectors in Japan, as assessed by the Value Balancing Alliance (VBA) and WifOR methodologies, highlight significant variations in contributions at different stages of the value chain. Direct impacts tend to

be more concentrated in sectors such as Agriculture and Manufacturing, where operational activities lead to higher air emissions and greenhouse gas outputs. In contrast, upstream impacts, particularly in tier 1 and tier 2, reveal the cumulative effects of supply chain activities, emphasizing the importance of considering indirect contributions from suppliers and service providers. The methodologies underscore the need for a comprehensive approach to environmental management that encompasses both direct operations and upstream activities, allowing for a more accurate assessment of total environmental impacts. This holistic perspective is crucial for developing effective strategies to mitigate environmental challenges across all stages of production and service delivery.

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 1000[11] 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 health

[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.

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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