



March 2025



# Impact Report for Federative Republic of Brazil



value  
balancing  
alliance

Financial Market Chapter



## Imprint Publisher

Authors: VBA Financial Market Chapter Dimitrij Euler and Magdalena Wottke, WifOR Institute Rita Maghularia and Lorenz Röttger. Layout and Format by Mirjeta Rexhaj, Value Balancing Alliance and Katja Wies, WifOR Institute.

Contact Information: Value Balancing Alliance e.V.; Bockenheimer Landstraße 22; 60323 Frankfurt am Main, Germany; Email: [info@value-balancing.com](mailto:info@value-balancing.com); Phone: +49 069 153293610; WifOR Institute; Rheinstraße 22, 64283 Darmstadt, Germany; Email [kontakt@wifor.com](mailto:kontakt@wifor.com); Phone +49 615 1501550.

Copyright and Licensing: This report is licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0).

License Deed: You are free to share and adapt the material for any purpose, even commercially, under the terms of this license. Please attribute appropriately, link to the license, and indicate if changes were made.

Notices: You are not required to comply with the license for elements of the material in the public domain or where an applicable exception or limitation permits your use.

No warranties are given. The license may not grant all permissions necessary for your intended use.

## Disclaimer

The Value Balancing Alliance e.V. and WifOR Institute strive to ensure that the information provided in this presentation is as complete and correct as reasonably possible. However, it assumes no responsibility or liability for the completeness, accuracy, or validity of the information provided.

All information, material, and content in this document are provided 'as is', without representation or warranty. The Value Balancing Alliance e.V. and WifOR Institute furthermore assume no responsibility or liability for any third-party content linked to or indirectly referenced.

The Value Balancing Alliance e.V. and WifOR Institute are not liable for direct or indirect damages, including loss of profit, that may arise from or in connection with the information in this presentation. Use of its contents is at your own risk, and the Value Balancing Alliance e.V. and WifOR Institute expressly disclaims liability for any use.

Copyright or trademark laws may apply to all product, company and service names mentioned herein.

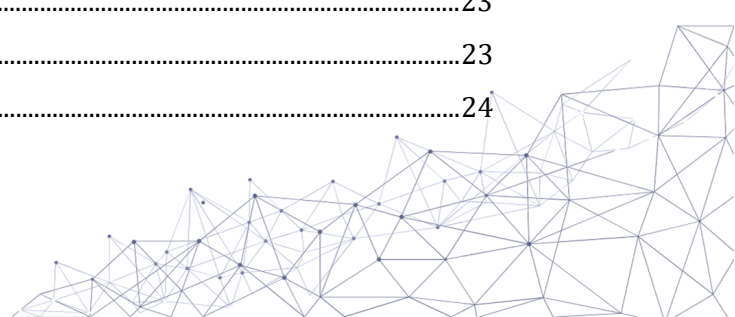
This report does not necessarily reflect the opinions of the individual members of the Working Group.

Date of Publication: 2025. Suggested Citation: VBA et WifOR., Impact Intensity Benchmarks, Impact Report Brazil, 2025, [www.value-balancing.com](http://www.value-balancing.com).



## Contents

Introduction.....	1
Responsibility of States .....	2
Responsibility of Business .....	2
Interplay .....	2
Impact Accounting.....	3
Benchmarks .....	3
Intensities .....	3
Sector Intensity Benchmarks.....	4
Agriculture, Forestry and Fishing (A) .....	4
Mining and Quarrying (B) .....	5
Manufacturing (C) .....	6
Electricity, Gas, Steam and Air Conditioning Supply (D).....	7
Water Supply; Sewerage, Waste Management and Remediation Activities (E).....	8
Construction (F) .....	9
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles (G).....	10
Transportation and Storage (H) .....	11
Accommodation and Food Service Activities (I).....	12
Information and Communication (J).....	13
Financial and Insurance Activities (K) .....	14
Real Estate Activities (L).....	15
Professional, Scientific and Technical Activities (M) .....	16
Administrative and Support Service Activities (N) .....	17
Public Administration and Defense; Compulsory Social Security (O) .....	18
Education (P).....	19
Human Health and Social Work Activities (Q).....	20
Arts, Entertainment and Recreation and Other Services and Activities (R&S).....	21
Overview .....	22
Environmental Impact BRA.....	22
Total.....	22
direct .....	23
upstream tier 1 .....	23
upstream tier 2 .....	24



upstream rest .....	24
Social Impact BRA.....	25
Total.....	25
direct .....	26
upstream tier 1 .....	26
upstream tier 2 .....	27
upstream rest .....	27
Application .....	29
Caveats .....	31
Data Accuracy.....	31
Impact Valuation .....	31
Double Counting.....	32
Economic Impact.....	32
Netting Impacts .....	32



## 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 Federative Republic of Brazil's NACE sectors.<sup>1</sup> The tables show the *direct impact* of companies' own operations as well as the *upstream impact* along their supply chains.<sup>2</sup> 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.<sup>3</sup> 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;<sup>4</sup> 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.<sup>5</sup> WifOR compiles the hybrid multi-regional model based on WIOD, EORA, and

---

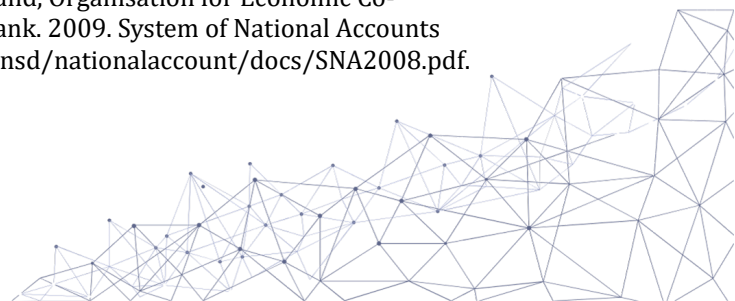
<sup>1</sup> Eurostat, NACE Rev. 2. Statistical classification of economic activities in the European Community, <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.pdf>.

<sup>2</sup> VBA, VBA Impact Statement, 11.2024, [https://www.value-balancing.com/\\_Resources/Persistent/6/b/e/c/6bec726b5e28d5f75e2e5f153db845a3bbb93f2e/VBA\\_Impact%20Statement\\_Final.pdf](https://www.value-balancing.com/_Resources/Persistent/6/b/e/c/6bec726b5e28d5f75e2e5f153db845a3bbb93f2e/VBA_Impact%20Statement_Final.pdf).

<sup>3</sup> 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.

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

<sup>5</sup> 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,<sup>6</sup> enhanced by estimates based on *satellite accounts*, as outlined in the System of Environmental-Economic Accounting.<sup>7</sup> The modeled effects are then multiplied by publicly available context-specific value factors<sup>8</sup> to capture their societal impact.<sup>9</sup>

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.

---

<sup>6</sup> 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.

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

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

<sup>9</sup> 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.



## Impact Accounting

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 Federative Republic of Brazil'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, first in Federative Republic of Brazil and then across the country-specific value chain serving the Brazilian 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
<b>Air Emission</b>	-0.26	-0.02	-0.01	-0.01	-0.31
<b>Fair Wages</b>	-0.42	-0.03	-0.02	-0.05	-0.53
<b>GHG</b>	-0.38	-0.03	-0.01	-0.01	-0.43
<b>GVA</b>	0.59	0.14	0.09	0.1	0.91
<b>Human Rights</b>	-0.02	-0.00	-0.00	-0.00	-0.03
<b>Invasive Species</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Land Use</b>	-1.97	-0.29	-0.04	-0.02	-2.32
<b>Occupational Health &amp; Safety</b>	-0.14	-0.02	-0.01	-0.01	-0.18
<b>Ocean Plastic</b>	0.00	-0.00	-0.00	-0.00	-0.00
<b>Training</b>	0.00	0.00	0.00	0.00	0.01
<b>Waste</b>	-0.06	-0.00	-0.00	-0.00	-0.06
<b>Water</b>	-0.04	-0.01	-0.01	-0.01	-0.06

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, Fair Wages, and Land Use are significantly high, indicating substantial adverse effects associated with these variables, with Land Use showing the most severe intensity at -2.318117. Conversely, the positive impacts, such as Training, show minimal positive contributions, with a total impact intensity of only 0.008626, suggesting that efforts in this area are relatively minor compared to the negative impacts. Overall, the data reflects a concerning imbalance, where negative impacts dominate the sector's overall impact intensity profile.





## Mining and Quarrying (B)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.01	-0.01	-0.01	-0.05
Fair Wages	0.07	0.03	-0.00	-0.03	0.06
GHG	-0.05	-0.01	-0.01	-0.01	-0.07
GVA	0.62	0.17	0.07	0.07	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	-0.02
Occupational Health & Safety	-0.00	-0.01	-0.01	-0.01	-0.03
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.02
Waste	-0.1	-0.00	-0.00	-0.00	-0.11
Water	-0.00	-0.00	-0.00	-0.01	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, GHG, and Waste are notable, with Waste showing the highest negative intensity at -0.109965, indicating significant adverse effects associated with this variable. On the other hand, the Fair Wages variable presents a positive impact intensity of 0.057432, suggesting some beneficial contributions in this area, although it is overshadowed by the more substantial negative impacts. Overall, the data indicates a concerning trend where negative impacts dominate the sector's impact intensity profile, highlighting the need for improved sustainability practices.



## Manufacturing (C)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.06	-0.04	-0.02	-0.02	-0.14
Fair Wages	0.07	-0.08	-0.06	-0.10	-0.17
GHG	-0.02	-0.04	-0.02	-0.02	-0.10
GVA	0.18	0.31	0.17	0.19	0.84
Human Rights	-0.00	-0.01	-0.00	-0.01	-0.02
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.11	-0.05	-0.03	-0.19
Occupational Health & Safety	-0.03	-0.04	-0.02	-0.02	-0.11
Ocean Plastic	-0.00	-0.00	-0.00	-0.00	-0.01
Training	0.01	0.01	0.00	0.01	0.02
Waste	-0.00	-0.02	-0.01	-0.01	-0.03
Water	-0.00	-0.01	-0.01	-0.01	-0.03

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

In the Manufacturing sector of the Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, Fair Wages, and Land Use are significantly high, with Land Use showing the most severe negative intensity at -0.191643, indicating considerable adverse effects associated with this variable. Conversely, the Fair Wages variable reflects a negative impact intensity of -0.166499, suggesting that wage practices in this sector may be detrimental, overshadowing any potential positive contributions. Overall, the data highlights a troubling trend where negative impacts dominate the sector's impact intensity profile, emphasizing the need for enhanced sustainability and ethical practices in manufacturing.



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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.02	-0.01	-0.01	-0.07
Fair Wages	0.05	-0.02	-0.02	-0.06	-0.05
GHG	-0.02	-0.02	-0.01	-0.01	-0.06
GVA	0.32	0.25	0.14	0.15	0.86
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	-0.01	-0.02	-0.03
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	0.01	0.01	0.00	0.00	0.02
Waste	-0.00	-0.01	-0.00	-0.00	-0.02
Water	-0.00	-0.00	-0.00	-0.01	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, GHG, and Fair Wages are significant, with Fair Wages reflecting a notably high negative intensity of -0.052204, indicating adverse effects on wage practices. Additionally, the Land Use variable shows a negative impact intensity of -0.025303, suggesting environmental concerns related to land utilization in this sector. Overall, the data reveals a concerning trend where negative impacts are prevalent, highlighting the need for improved practices to mitigate these adverse effects.



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

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	0.24	0.00	-0.01	-0.03	0.21
GHG	-0.03	-0.01	-0.01	-0.01	-0.05
GVA	0.63	0.16	0.07	0.07	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	-0.00	-0.01	-0.02	-0.02
Occupational Health & Safety	-0.03	-0.01	-0.01	-0.01	-0.05
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	0.00	0.00	0.00	0.03
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 Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, GHG, and Land Use are notable, with Land Use showing a significant negative intensity of -0.022278, indicating environmental concerns related to land utilization. Conversely, the Fair Wages variable presents a positive impact intensity of 0.206814, suggesting that wage practices in this sector may have beneficial effects, despite the presence of negative impacts in other areas. Overall, the data reflects a mixed impact profile, where positive contributions in fair wages are overshadowed by significant negative impacts, particularly in environmental aspects.



## Construction (F)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.07	-0.02	-0.01	-0.1
Fair Wages	-0.07	0.01	-0.01	-0.05	-0.11
GHG	-0.00	-0.02	-0.01	-0.01	-0.04
GVA	0.46	0.20	0.11	0.12	0.9
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	-0.02	-0.04	-0.03	-0.09
Occupational Health & Safety	-0.03	-0.02	-0.01	-0.01	-0.08
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.01	0.00	0.00	0.02
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	0.00	-0.00	-0.00	-0.01	-0.01

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

In the Construction sector of the Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, Land Use, and Occupational Health & Safety are significant, with Land Use reflecting the highest negative intensity at -0.088630, indicating serious environmental concerns associated with construction activities. Additionally, the Fair Wages variable shows a negative impact intensity of -0.112584, suggesting that wage practices in this sector may be detrimental, further compounding the negative impacts. Overall, the data highlights a concerning trend where negative impacts dominate the sector's impact intensity profile, underscoring the need for improved sustainability and ethical practices in construction.



## 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	-0.00	-0.01	-0.02
Fair Wages	-0.08	0.02	-0.00	-0.02	-0.08
GHG	-0.00	-0.01	-0.00	-0.01	-0.02
GVA	0.64	0.18	0.06	0.06	0.95
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	-0.01	-0.02	-0.01	-0.04
Occupational Health & Safety	-0.05	-0.01	-0.01	-0.01	-0.08
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	-0.00	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, GHG, and Land Use are significant, with Land Use showing the highest negative intensity at -0.039013, indicating notable environmental concerns. Additionally, the Fair Wages variable reflects a negative impact intensity of -0.084159, suggesting that wage practices in this sector may be detrimental to workers, further compounding the negative impacts. Overall, the data reveals a concerning trend where negative impacts are prevalent, highlighting the need for improved sustainability and ethical practices within the sector.





## Transportation and Storage (H)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.00	-0.01	-0.01	-0.05
Fair Wages	0.25	0.05	-0.03	-0.07	0.20
GHG	-0.05	-0.01	-0.01	-0.01	-0.08
GVA	0.45	0.18	0.12	0.13	0.88
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	-0.01	-0.02	-0.03
Occupational Health & Safety	-0.05	-0.01	-0.01	-0.01	-0.09
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	-0.01	-0.00	-0.01
Water	-0.00	-0.00	-0.00	-0.01	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission, GHG, and Occupational Health & Safety are significant, with Occupational Health & Safety showing a notably high negative intensity of -0.086547, indicating serious concerns regarding worker safety in this sector. Additionally, the Land Use variable reflects a negative impact intensity of -0.026621, suggesting environmental issues related to land utilization in transportation and storage activities. Conversely, the Fair Wages variable presents a positive impact intensity of 0.198026, indicating some beneficial contributions in wage practices, although this is overshadowed by the more substantial negative impacts in other areas.



### Accommodation and Food Service Activities (I)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.02	-0.01	-0.04
Fair Wages	-0.36	0.00	-0.03	-0.04	-0.42
GHG	-0.00	-0.01	-0.02	-0.01	-0.05
GVA	0.51	0.18	0.11	0.10	0.90
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	-0.06	-0.04	-0.03	-0.13
Occupational Health & Safety	-0.06	-0.02	-0.02	-0.01	-0.11
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.02
Waste	-0.01	-0.00	-0.00	-0.00	-0.02
Water	-0.00	-0.01	-0.01	-0.01	-0.03

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Fair Wages and Land Use are particularly concerning, with Fair Wages reflecting a high negative intensity of -0.423266, indicating significant issues related to wage practices in this sector. Additionally, Land Use shows a substantial negative impact intensity of -0.134174, suggesting serious environmental implications associated with land utilization. Overall, while there are some positive contributions in areas like Training, the data highlights a troubling trend where negative impacts, especially in wages and environmental concerns, dominate the sector's impact intensity profile.



## Information and Communication (J)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
<b>Air Emission</b>	-0.00	-0.00	-0.00	-0.01	-0.01
<b>Fair Wages</b>	0.23	0.03	0.00	-0.03	0.24
<b>GHG</b>	-0.01	-0.01	-0.00	-0.01	-0.02
<b>GVA</b>	0.50	0.25	0.09	0.08	0.92
<b>Human Rights</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Invasive Species</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Land Use</b>	0.00	-0.00	-0.01	-0.01	-0.02
<b>Occupational Health &amp; Safety</b>	-0.01	-0.01	-0.01	-0.01	-0.04
<b>Ocean Plastic</b>	0.00	-0.00	-0.00	-0.00	-0.00
<b>Training</b>	0.03	0.01	0.00	0.00	0.04
<b>Waste</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Water</b>	-0.00	-0.00	-0.00	-0.00	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.011473, indicating minor environmental concerns compared to other sectors. However, the Fair Wages variable presents a positive impact intensity of 0.242253, suggesting that wage practices in this sector are relatively favorable, contributing positively to the overall impact profile. Despite some negative impacts, the data indicates a generally positive trend in terms of fair wages, which may help mitigate the effects of other negative impacts 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	-0.00	-0.01
Fair Wages	0.22	0.06	0.01	-0.02	0.28
GHG	-0.00	-0.00	-0.00	-0.00	-0.01
GVA	0.60	0.22	0.07	0.05	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	0.04	0.01	0.00	0.00	0.05
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.00	-0.00

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are minimal, with Air Emission showing a total negative intensity of -0.005903, indicating relatively low environmental concerns compared to other sectors. The Fair Wages variable, however, presents a positive impact intensity of 0.275474, suggesting that wage practices in this sector are favorable and contribute positively to the overall impact profile. Despite some minor negative impacts, the data indicates a strong positive trend in fair wages, which may enhance the sector's social responsibility and mitigate the effects of other negative impacts.



## Real Estate Activities (L)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.00	-0.00
Fair Wages	-0.01	0.01	0.00	-0.00	-0.00
GHG	-0.00	-0.00	-0.00	-0.00	-0.00
GVA	0.92	0.04	0.01	0.01	0.99
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	-0.01
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	0.02	0.00	0.00	0.00	0.03
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.00	-0.00	-0.00

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.004880, indicating minimal environmental concerns. However, the Fair Wages variable presents a negative impact intensity of -0.001739, suggesting that wage practices in this sector may not be favorable, contributing to a less positive social impact. Overall, while the sector exhibits low environmental impacts, the negative trend in fair wages highlights the need for improved labor practices to enhance its overall impact profile.



### Professional, Scientific and Technical Activities (M)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.00	-0.01
Fair Wages	0.15	0.06	0.00	-0.02	0.19
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.57	0.21	0.08	0.07	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	-0.01	-0.01	-0.02
Occupational Health & Safety	-0.02	-0.01	-0.01	-0.01	-0.04
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	0.01	0.00	0.00	0.03
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 Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.008942, indicating minor environmental concerns. However, the Fair Wages variable presents a positive impact intensity of 0.188335, suggesting that wage practices in this sector are generally favorable, contributing positively to the overall impact profile. Despite the presence of some negative impacts, the strong positive trend in fair wages highlights the sector's potential for social responsibility and ethical practices.





### Administrative and Support Service Activities (N)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.00	-0.01
Fair Wages	0.20	0.02	-0.00	-0.02	0.19
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.71	0.14	0.05	0.05	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	-0.01	-0.01	-0.02
Occupational Health & Safety	-0.04	-0.01	-0.00	-0.01	-0.06
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	0.00	0.00	0.00	0.03
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 Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.011097, indicating minor environmental concerns. The Fair Wages variable, however, presents a positive impact intensity of 0.194420, suggesting that wage practices in this sector are generally favorable and contribute positively to the overall impact profile. Despite some negative impacts, the strong positive trend in fair wages highlights the sector's potential for enhancing social responsibility and ethical labor practices.



## 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	-0.00	-0.01
Fair Wages	0.53	0.03	-0.00	-0.02	0.54
GHG	-0.00	-0.00	-0.00	-0.00	-0.02
GVA	0.71	0.15	0.05	0.04	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	-0.02
Occupational Health & Safety	-0.07	-0.01	-0.00	-0.01	-0.08
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	0.01	0.00	0.00	0.03
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 Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.009508, indicating minor environmental concerns. The Fair Wages variable, however, presents a notably high positive impact intensity of 0.538424, suggesting that wage practices in this sector are significantly favorable and contribute positively to the overall impact profile. Despite some negative impacts, the strong positive trend in fair wages highlights the sector's potential for enhancing social responsibility and ethical labor practices.



## Education (P)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.00	-0.01
Fair Wages	0.90	0.02	-0.00	-0.02	0.90
GHG	-0.00	-0.00	-0.00	-0.00	-0.01
GVA	0.77	0.12	0.04	0.04	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	-0.09	-0.01	-0.00	-0.00	-0.10
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	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	-0.00	-0.01

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

In the Education sector of the Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively low, with Air Emission showing a total negative intensity of -0.008357, indicating minor environmental concerns. However, the Fair Wages variable presents a notably high positive impact intensity of 0.896899, suggesting that wage practices in this sector are significantly favorable and contribute positively to the overall impact profile. Despite some negative impacts, the strong positive trend in fair wages highlights the sector's potential for enhancing social responsibility and ethical labor practices, making it a standout area in terms of positive social impact.



## Human Health and Social Work Activities (Q)

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	0.49	0.02	-0.01	-0.04	0.45
GHG	-0.00	-0.01	-0.00	-0.01	-0.02
GVA	0.62	0.19	0.07	0.06	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	-0.00	-0.01	-0.02	-0.03
Occupational Health & Safety	-0.06	-0.02	-0.01	-0.01	-0.10
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.02	0.01	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	-0.01

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are relatively significant, with Air Emission showing a total negative intensity of -0.014681, indicating notable environmental concerns. The Fair Wages variable, however, presents a positive impact intensity of 0.454822, suggesting that wage practices in this sector are generally favorable and contribute positively to the overall impact profile. Despite the presence of several negative impacts, the strong positive trend in fair wages highlights the sector's potential for enhancing social responsibility and improving labor conditions, which is crucial in the context of health and social services.



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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.03
Fair Wages	-0.69	-0.05	-0.05	-0.11	-0.89
GHG	-0.16	-0.01	-0.01	-0.01	-0.19
GVA	0.51	0.23	0.09	0.09	0.92
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	-0.00	-0.01	-0.02	-0.03
Occupational Health & Safety	-0.06	-0.02	-0.01	-0.02	-0.10
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.01	0.00	0.00	0.03
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.01	-0.02	-0.03

Source: WifOR / VBA, Table for Federative Republic of Brazil - 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 Federative Republic of Brazil, the impact intensities for negative impacts such as Air Emission and GHG are significant, with Air Emission showing a total negative intensity of -0.027475, indicating considerable environmental concerns associated with this sector. The Fair Wages variable presents a notably high negative impact intensity of -0.892547, suggesting that wage practices in this sector are severely unfavorable, which could have detrimental effects on workers' livelihoods. Overall, while there are some positive contributions in areas like Training, the data reveals a concerning trend where negative impacts, particularly in wages and environmental aspects, dominate the sector's impact intensity profile, highlighting the need for improvements in both labor practices and sustainability efforts.

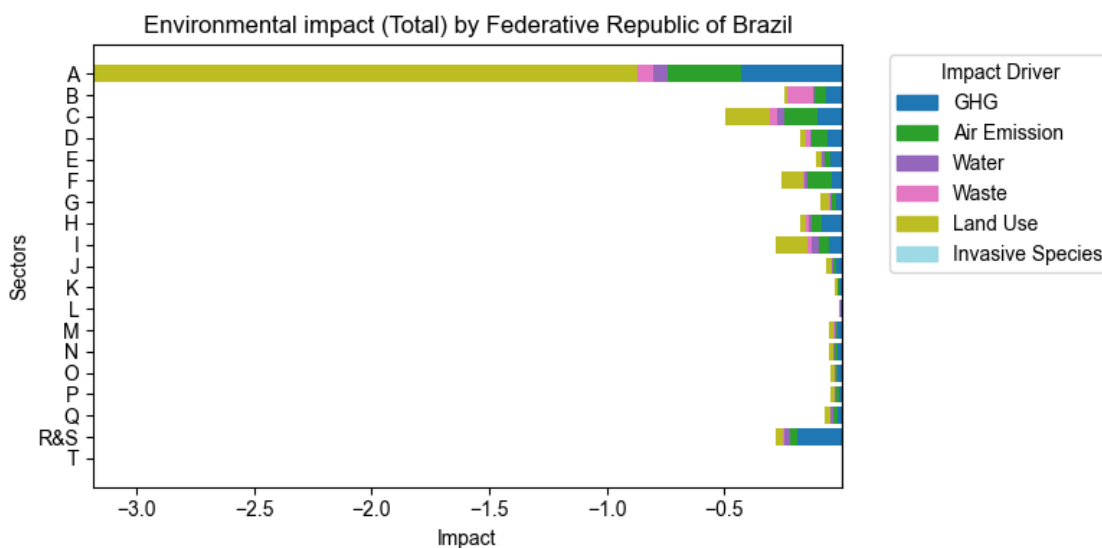


## Overview

The overall assessment of the Federative Republic of Brazil, based on the Value Balancing Alliance methodology and WifOR's value factors, reveals a complex landscape of both environmental and social impacts across various NACE sectors. Environmental impact intensities indicate significant negative contributions, particularly in sectors such as Agriculture, Manufacturing, and Arts, Entertainment, and Recreation, where air emissions, land use, and waste management are critical concerns. Social impact assessments highlight favorable trends in fair wages within sectors like Education and Professional Services, yet also reveal substantial negative impacts in areas such as Human Rights and Occupational Health & Safety, particularly in sectors like Construction and Agriculture. The data underscores the interconnectedness of sectors, emphasizing the need for comprehensive strategies that address both environmental sustainability and social responsibility throughout the value chain. Overall, Brazil faces challenges that require targeted interventions to enhance sustainability and improve social outcomes, aligning economic activities with broader societal and environmental goals.

## Environmental Impact BRA

### Total

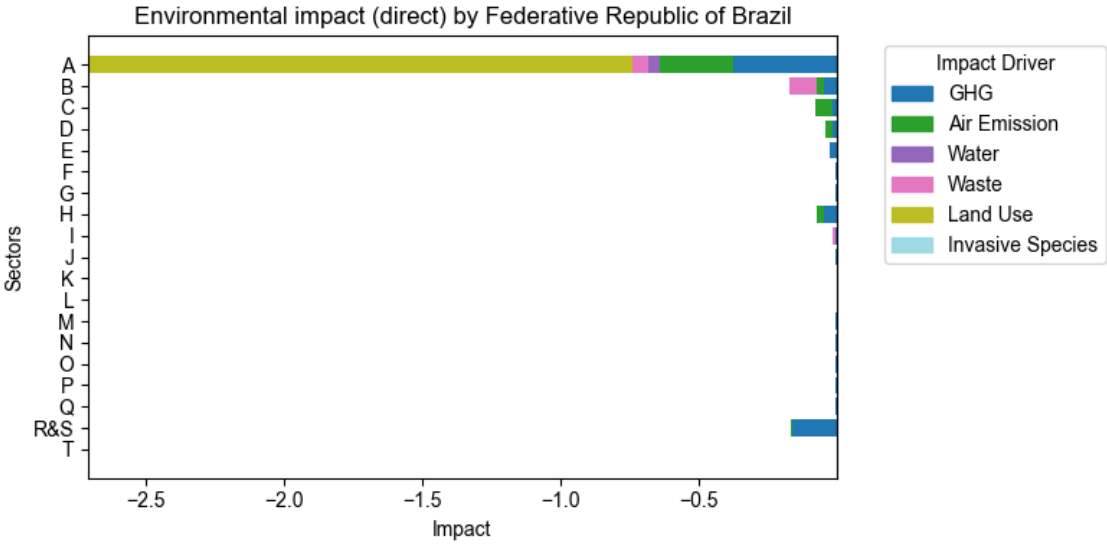


Source: VBA/WifOR, Overview of environmental impact, Total in Federative Republic of Brazil, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025



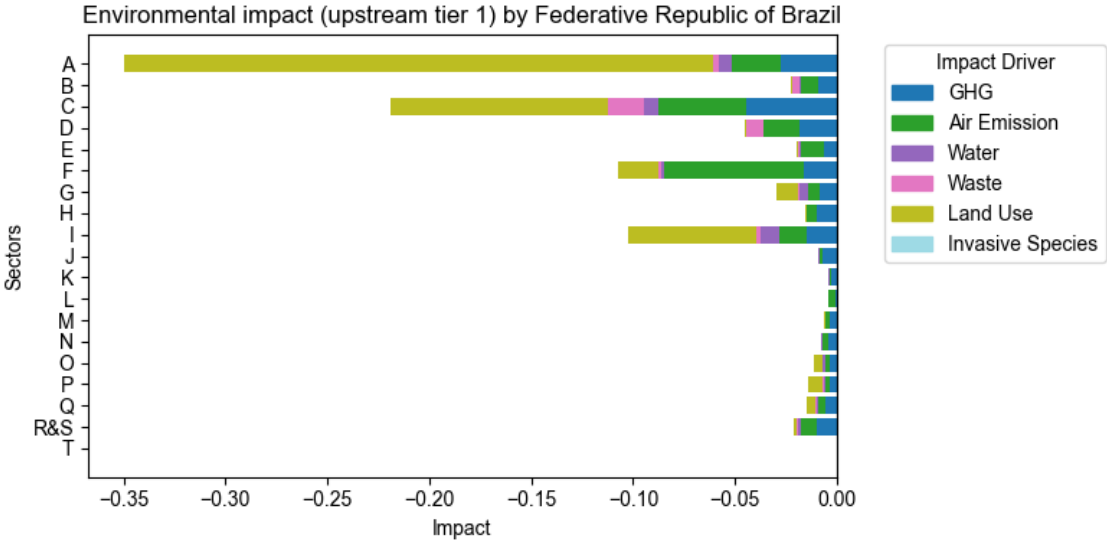


direct



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

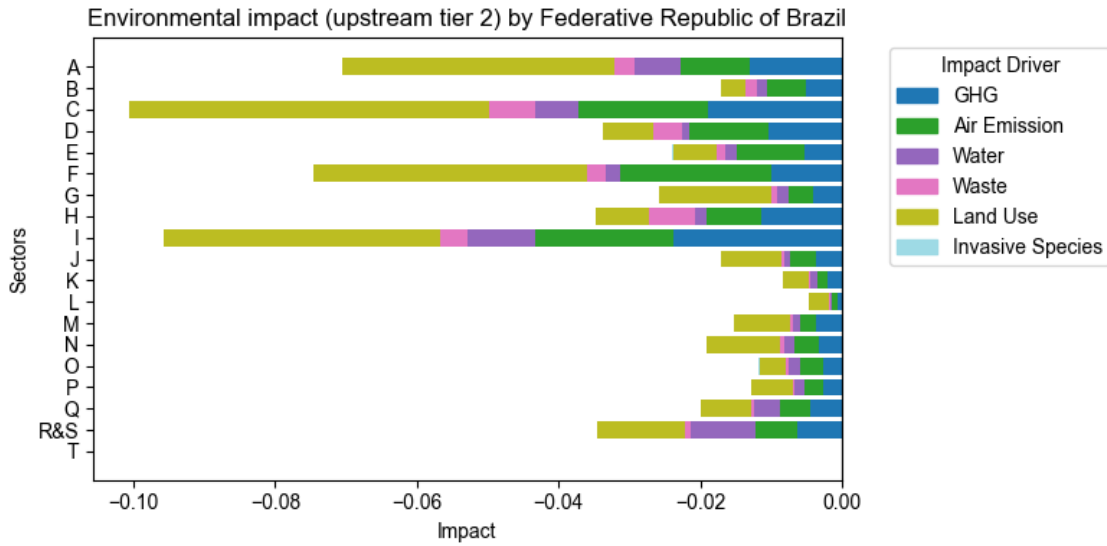
upstream tier 1



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

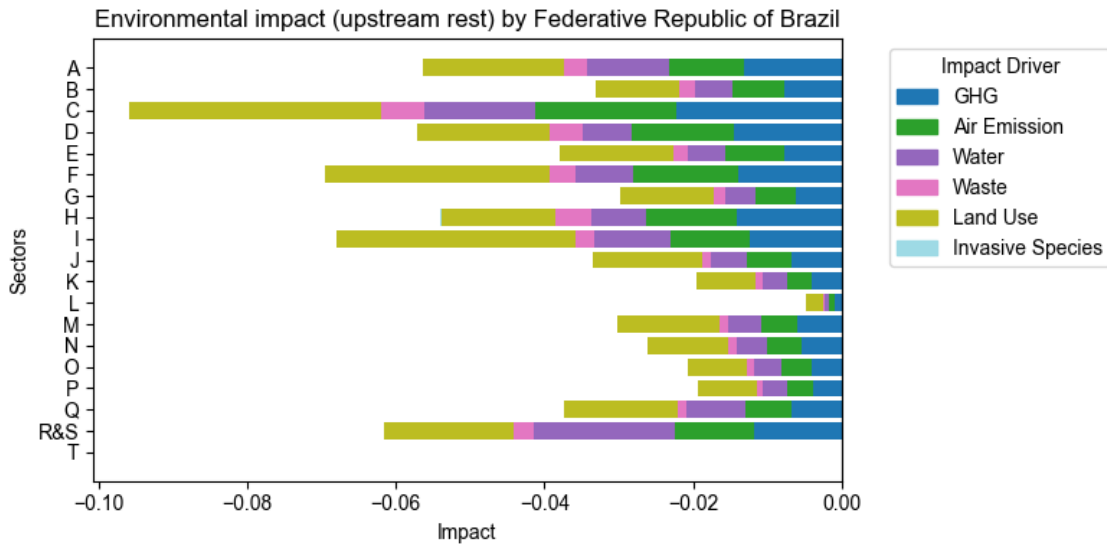


upstream tier 2



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

upstream rest



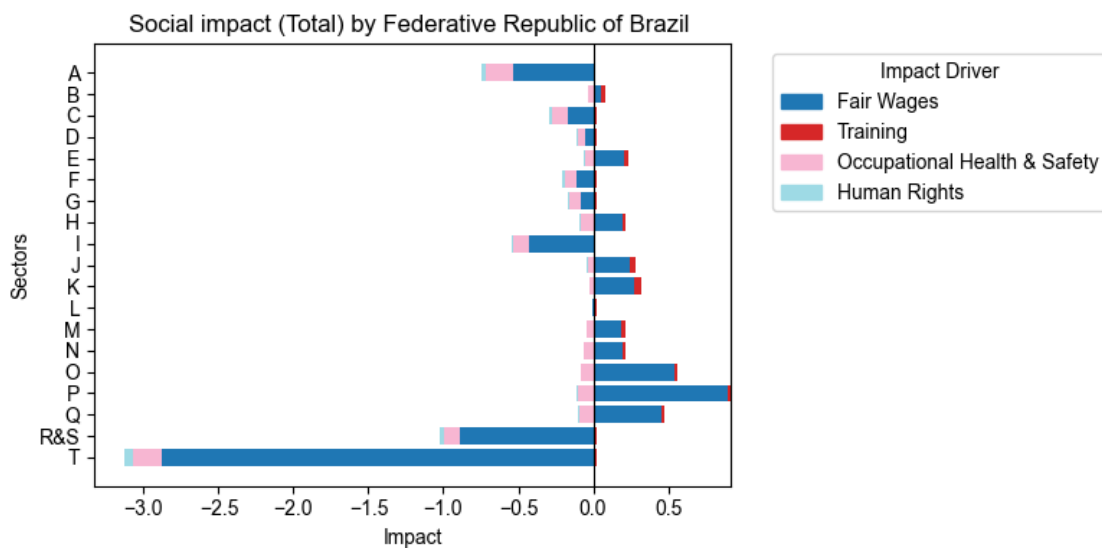
Source: VBA/WifOR, Overview of environmental impact, upstream rest in Federative Republic of Brazil, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025



The environmental impact intensities across various NACE sectors in the Federative Republic of Brazil reveal significant differences in how these impacts manifest at different stages of the value chain. Direct impacts tend to be lower compared to upstream impacts, particularly in upstream tier 1 and tier 2 stages, where the cumulative effects of activities from suppliers and other upstream entities contribute to higher intensities of air emissions, land use, and waste. Sectors such as Agriculture, Forestry, and Fishing exhibit notably high negative impacts, particularly in land use and water, while sectors like Education and Professional Services show relatively lower environmental impacts. Additionally, the upstream stages highlight the interconnectedness of sectors, where the environmental burdens from one sector can significantly affect others, emphasizing the need for a holistic approach to sustainability. Overall, the data underscores the importance of addressing environmental impacts not only at the direct operational level but also throughout the entire value chain.

## Social Impact BRA

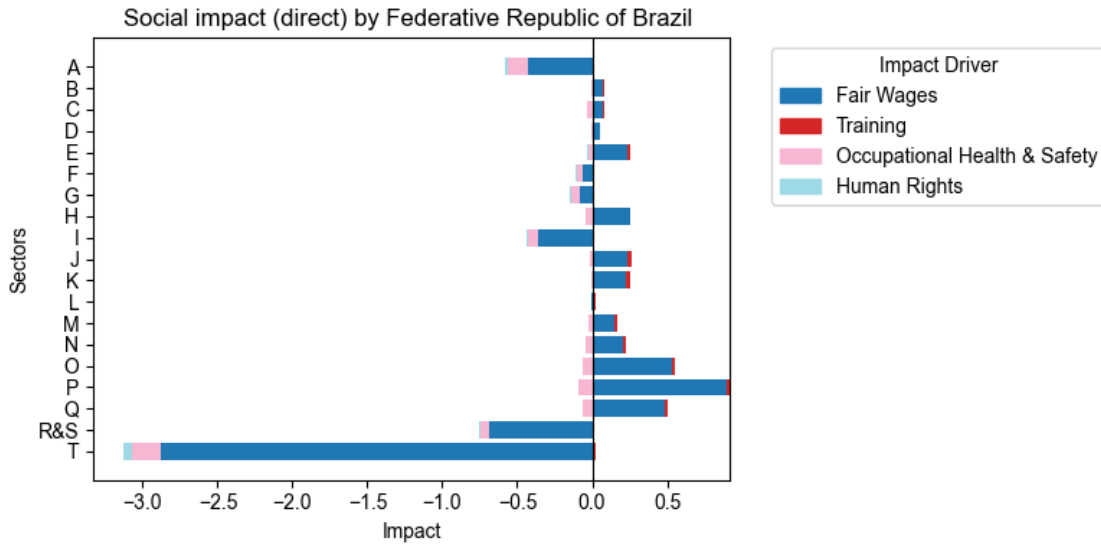
### Total



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

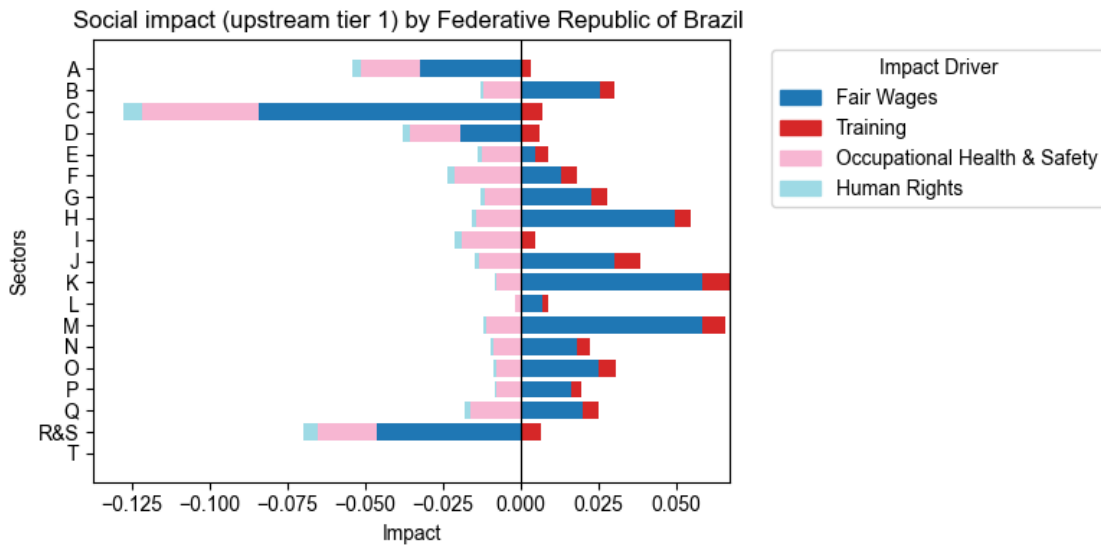


direct



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

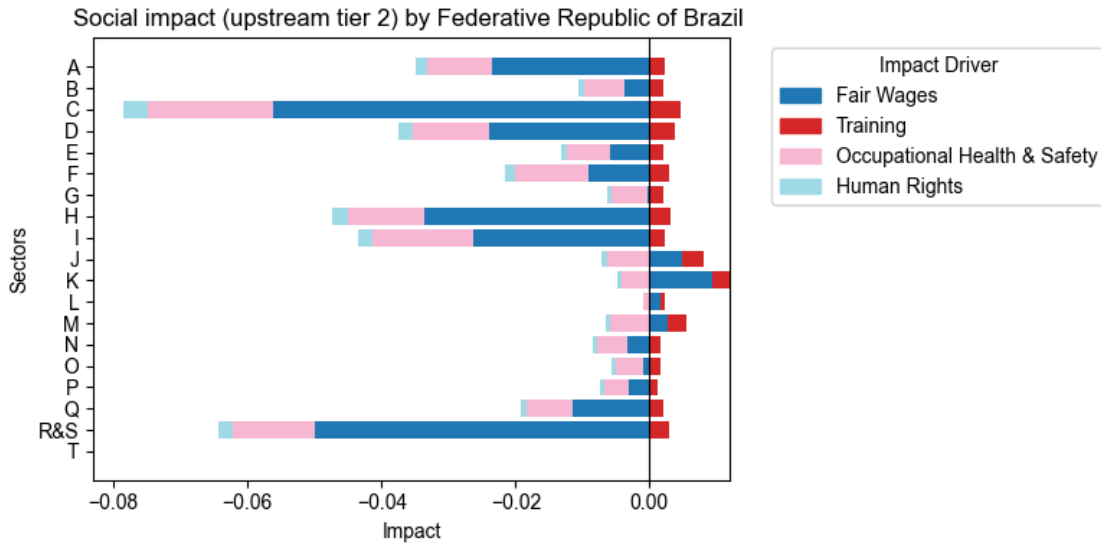
upstream tier 1



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

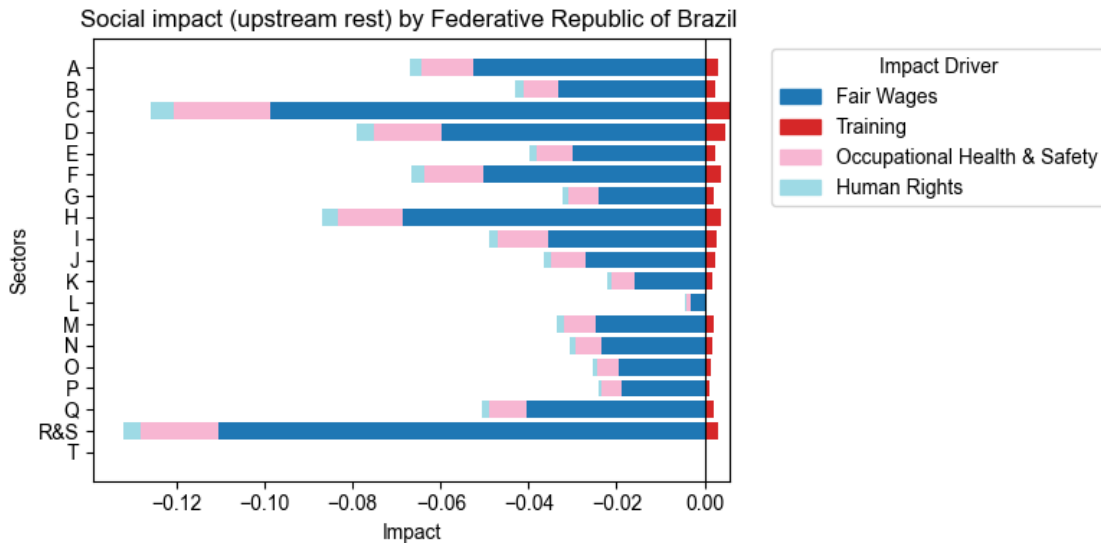


upstream tier 2



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

upstream rest



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



The impact intensities of environmental impacts across various NACE sectors in the Federative Republic of Brazil, as assessed by the VBA and WifOR methodologies, demonstrate significant variations at different stages of the value chain. Direct impacts are generally lower, reflecting the immediate operational activities of sectors, while upstream impacts—particularly in tier 1 and tier 2—show higher intensities due to the cumulative effects of suppliers and related activities contributing to air emissions, land use, and waste. Sectors such as Agriculture and Manufacturing exhibit pronounced negative impacts, highlighting the environmental burdens associated with their supply chains. The methodologies emphasize the importance of considering both direct and upstream impacts to understand the full scope of environmental effects, advocating for comprehensive strategies that address sustainability throughout the entire value chain. This holistic approach is essential for mitigating negative environmental impacts and promoting responsible practices across all sectors.





## 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
<b>Institution</b>	Ministries	Development Institutions	Development Banks	Insurance Entities
<b>Vision of application</b>	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
<b>Institution</b>	Public-Private Partnerships	Trade Ministries	Consumer Protection Agencies	Export Credit Agencies
<b>Vision of application</b>	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.<sup>10</sup>

<sup>10</sup> VBA et al., Valuing Impact Materiality 2025, 2025, [www.value-balancing.com](http://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.

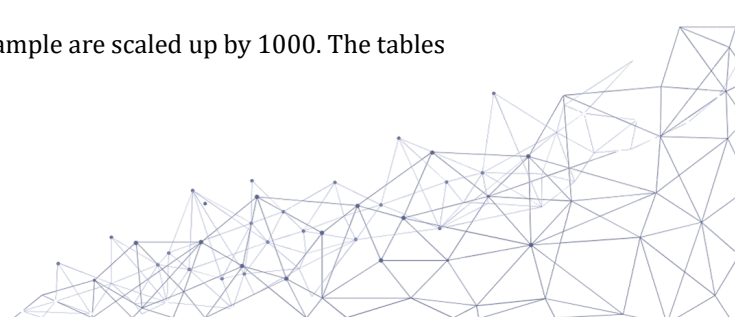
As sustainability becomes increasingly important and disclosure regulations evolve, assessment and reporting methodologies must keep pace. Impact Intensity benchmarks offer valuable guidance for improving practices, refining sustainability reporting, sharpening decision-making, and optimizing resource 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<sup>11</sup> 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:

---

<sup>11</sup> 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.<sup>13</sup> 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.

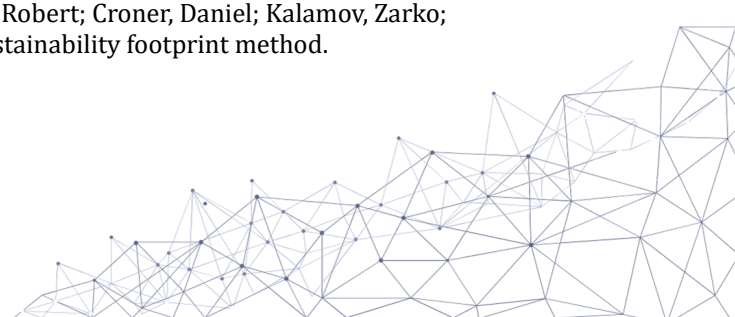
### Impact Valuation

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

<sup>12</sup> c = country of operation; v = value chain level

<sup>13</sup> 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.



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 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.

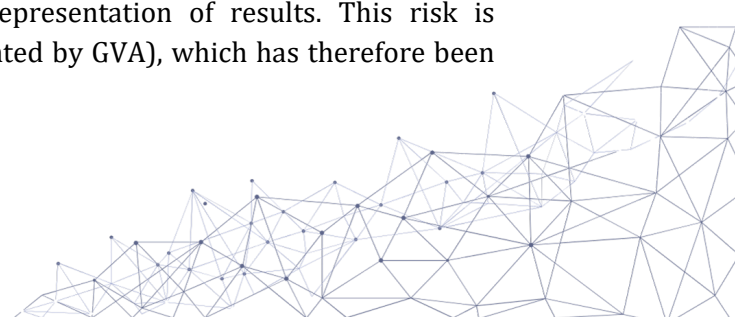
### Economic Impact

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).





Visit us at <http://www.value-balancing.com>  
Contact us at [info@value-balancing.com](mailto:info@value-balancing.com)

Value Balancing Alliance e.V.  
Bockenheimer Landstraße 22  
60323 Frankfurt am Main, Germany  
Phone: +49 (0)69 153 29 36 - 10