



March 2025

# Impact Report for Republic of Türkiye



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.

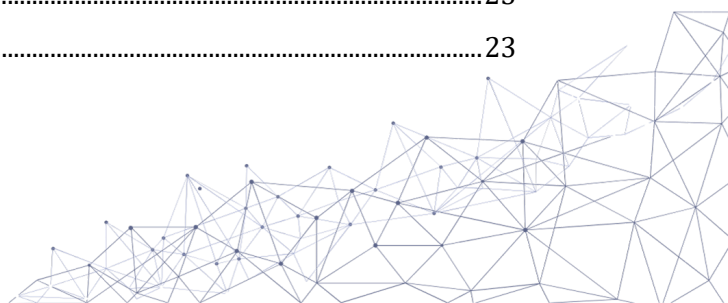
This report does not necessarily reflect the opinions of the individual members of the Working Group.

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



## Contents

Introduction .....	1
Responsibility of States .....	2
Responsibility of Business.....	2
Interplay .....	2
Accountability.....	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 TUR .....	22
Total.....	22
direct .....	23
upstream tier 1.....	23



upstream tier 2.....24

upstream rest.....24

Social Impact TUR.....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 Türkiye'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

---

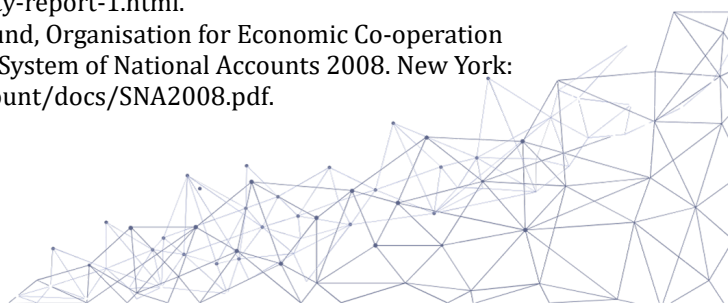
<sup>1</sup> Eurostat, NACE Rev. 2. Statistical classification of economic activities in the European Community, <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.pdf>.

<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.

## Accountability

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

## Benchmarks

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

## Intensities

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



## Sector Intensity Benchmarks

### Agriculture, Forestry and Fishing (A)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.07	-0.02	-0.01	-0.01	-0.1
Fair Wages	0.19	-0.07	-0.04	-0.05	0.04
GHG	-0.05	-0.01	-0.01	-0.01	-0.08
GVA	0.63	0.16	0.07	0.08	0.94
Human Rights	-0.05	-0.01	-0.00	-0.00	-0.07
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	-0.00	-0.01	-0.00	-0.00	-0.02
Occupational Health & Safety	-0.06	-0.02	-0.01	-0.01	-0.1
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.00
Waste	-0.00	-0.00	-0.00	-0.00	-0.01
Water	-0.22	-0.49	-0.24	-0.16	-1.12

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

In the Agriculture, Forestry and Fishing sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts across various environmental and social metrics, particularly in water usage, which has the highest total negative impact intensity of -1.118696 EUR per EUR output. Conversely, the Fair Wages variable shows a positive total impact intensity of 0.038718 EUR per EUR output, indicating a relatively better performance in this area compared to others. Overall, the sector exhibits a trend of negative impacts primarily driven by air emissions, greenhouse gas emissions, and water usage, while only a few areas, such as fair wages and training, reflect positive contributions.





## Mining And Quarrying (B)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.02
Fair Wages	0.02	-0.00	-0.02	-0.04	-0.04
GHG	-0.02	-0.01	-0.01	-0.01	-0.05
GVA	0.58	0.17	0.09	0.1	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	-0.02	-0.00	-0.00	-0.02
Occupational Health & Safety	-0.01	-0.01	-0.01	-0.01	-0.03
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.01	-0.00	-0.00	-0.00	-0.01
Water	-0.00	-0.00	-0.01	-0.04	-0.06

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

In the Mining and Quarrying sector of the Republic of Türkiye, the impact intensity table indicates substantial negative impacts across various environmental metrics, particularly in water usage, which has a total negative impact intensity of -0.056779 EUR per EUR output. The Fair Wages variable also reflects a significant negative total impact intensity of -0.038455 EUR per EUR output, suggesting challenges in equitable compensation within the sector. Overall, the sector is characterized by predominantly negative impacts, especially in air emissions, greenhouse gas emissions, and occupational health and safety, with only minor positive contributions observed in training.



## Manufacturing (C)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
<b>Air Emission</b>	-0.01	-0.02	-0.01	-0.02	-0.06
<b>Fair Wages</b>	0.03	-0.05	-0.07	-0.13	-0.22
<b>GHG</b>	-0.01	-0.02	-0.02	-0.03	-0.08
<b>GVA</b>	0.26	0.29	0.17	0.21	0.93
<b>Human Rights</b>	-0.00	-0.01	-0.00	-0.01	-0.02
<b>Invasive Species</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Land Use</b>	-0.00	-0.01	-0.01	-0.01	-0.02
<b>Occupational Health &amp; Safety</b>	-0.01	-0.02	-0.02	-0.02	-0.08
<b>Ocean Plastic</b>	-0.00	-0.00	-0.00	-0.00	-0.01
<b>Training</b>	0.00	0.00	0.00	0.00	0.01
<b>Waste</b>	-0.00	-0.00	-0.00	-0.00	-0.01
<b>Water</b>	-0.00	-0.3	-0.23	-0.22	-0.75

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

In the Manufacturing sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.750285 EUR per EUR output. Additionally, the Fair Wages variable shows a substantial negative total impact intensity of -0.215336 EUR per EUR output, indicating severe challenges in fair compensation practices within the sector. Overall, the sector is characterized by predominantly negative impacts across various environmental and social metrics, including air emissions and occupational health and safety, with only minor positive contributions observed in training.



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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
<b>Air Emission</b>	-0.05	-0.03	-0.01	-0.02	-0.11
<b>Fair Wages</b>	0.01	0.01	-0.00	-0.04	-0.02
<b>GHG</b>	-0.1	-0.05	-0.03	-0.03	-0.21
<b>GVA</b>	0.31	0.26	0.17	0.24	0.97
<b>Human Rights</b>	-0.00	-0.00	-0.00	-0.00	-0.01
<b>Invasive Species</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Land Use</b>	0.00	-0.00	-0.00	-0.00	-0.01
<b>Occupational Health &amp; Safety</b>	-0.00	-0.00	-0.00	-0.01	-0.02
<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>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Water</b>	-0.00	-0.00	-0.00	-0.03	-0.04

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

In the Electricity, Gas, Steam and Air Conditioning Supply sector of the Republic of Türkiye, the impact intensity table indicates significant negative impacts, particularly in greenhouse gas emissions, which have the highest total negative impact intensity of -0.208201 EUR per EUR output. Additionally, air emissions also contribute to a substantial negative total impact intensity of -0.107006 EUR per EUR output, highlighting environmental concerns associated with this sector. While there are minor positive contributions in areas like training, the overall trend is dominated by negative impacts across various environmental and social metrics, including fair wages and occupational health and safety.



## Water Supply; Sewerage, Waste Management and Remediation Activities

(E)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.04	-0.01	-0.01	-0.01	-0.07
Fair Wages	0.05	-0.00	-0.01	-0.04	-0.01
GHG	-0.24	-0.05	-0.01	-0.01	-0.31
GVA	0.76	0.1	0.05	0.07	0.98
Human Rights	-0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.01	-0.00	-0.00	-0.01	-0.02
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.00	-0.02	-0.02

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

In the Water Supply; Sewerage; Waste Management and Remediation Activities sector of the Republic of Türkiye, the impact intensity table highlights significant negative impacts, particularly in greenhouse gas emissions, which have the highest total negative impact intensity of -0.309510 EUR per EUR output. Additionally, air emissions also contribute notably to the negative impact, with a total intensity of -0.065984 EUR per EUR output, indicating environmental concerns in this sector. While there are some positive contributions in areas like fair wages and training, the overall trend is predominantly negative, reflecting challenges in both environmental and social metrics.



## Construction (F)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
<b>Air Emission</b>	-0.00	-0.01	-0.01	-0.01	-0.04
<b>Fair Wages</b>	0.02	0.00	-0.03	-0.07	-0.07
<b>GHG</b>	-0.00	-0.02	-0.01	-0.02	-0.06
<b>GVA</b>	0.43	0.22	0.13	0.15	0.94
<b>Human Rights</b>	-0.01	-0.00	-0.00	-0.00	-0.02
<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	-0.01
<b>Occupational Health &amp; Safety</b>	-0.02	-0.01	-0.01	-0.01	-0.05
<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>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Water</b>	-0.00	-0.01	-0.01	-0.04	-0.05

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

In the Construction sector of the Republic of Türkiye, the impact intensity table reveals notable negative impacts, particularly in fair wages, which have the highest total negative impact intensity of -0.072874 EUR per EUR output, indicating significant challenges in equitable compensation practices. Additionally, air emissions and greenhouse gas emissions also contribute to negative impacts, with total intensities of -0.038487 EUR and -0.059087 EUR per EUR output, respectively, highlighting environmental concerns associated with construction activities. While there are minor positive contributions in areas like training, the overall trend is dominated by negative impacts across various social and environmental metrics.



## 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	-0.00	-0.00	-0.01	-0.01
Fair Wages	0.05	0.01	-0.00	-0.03	0.02
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.6	0.22	0.08	0.08	0.97
Human Rights	-0.02	-0.00	-0.00	-0.00	-0.03
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	-0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.02	-0.00	-0.00	-0.01	-0.03
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.01	-0.03	-0.05

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

In the Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles sector of the Republic of Türkiye, the impact intensity table indicates a mix of positive and negative impacts, with fair wages showing a slight positive total impact intensity of 0.020925 EUR per EUR output, suggesting some progress in equitable compensation practices. However, significant negative impacts are observed in water usage, which has the highest total negative impact intensity of -0.046979 EUR per EUR output, alongside air emissions and greenhouse gas emissions, both contributing to environmental concerns with total intensities of -0.012161 EUR and -0.016710 EUR per EUR output, respectively. Overall, while there are some positive contributions, the sector is characterized by notable negative impacts across various environmental and social metrics.





## Transportation and Storage (H)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
<b>Air Emission</b>	-0.00	-0.00	-0.00	-0.01	-0.02
<b>Fair Wages</b>	0.03	0.01	-0.01	-0.03	-0.01
<b>GHG</b>	-0.01	-0.00	-0.01	-0.01	-0.03
<b>GVA</b>	0.51	0.2	0.11	0.1	0.92
<b>Human Rights</b>	-0.00	-0.00	-0.00	-0.00	-0.01
<b>Invasive Species</b>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Land Use</b>	0.00	-0.00	-0.00	-0.00	-0.00
<b>Occupational Health &amp; Safety</b>	-0.01	-0.00	-0.00	-0.01	-0.02
<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>	-0.00	-0.00	-0.00	-0.00	-0.00
<b>Water</b>	0.00	-0.00	-0.01	-0.05	-0.06

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

In the Transportation and Storage sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.061439 EUR per EUR output, indicating serious environmental concerns. Additionally, air emissions and greenhouse gas emissions also contribute to substantial negative impacts, with total intensities of -0.017016 EUR and -0.028287 EUR per EUR output, respectively, reflecting the sector's environmental footprint. While there is a minor positive contribution in fair wages with a total impact intensity of -0.009623 EUR per EUR output, the overall trend is dominated by negative impacts across various environmental and social metrics.



## Accommodation and Food Service Activities (I)

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	0.01	-0.04	-0.06	-0.07	-0.16
GHG	-0.00	-0.01	-0.01	-0.02	-0.04
GVA	0.44	0.25	0.13	0.13	0.95
Human Rights	-0.02	-0.01	-0.01	-0.00	-0.04
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	-0.02	-0.01	-0.01	-0.07
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.26	-0.49	-0.36	-1.11

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

In the Accommodation and Food Service Activities sector of the Republic of Türkiye, the impact intensity table highlights significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -1.110237 EUR per EUR output, indicating severe environmental concerns related to water consumption. Additionally, fair wages show a substantial negative total impact intensity of -0.161524 EUR per EUR output, reflecting serious challenges in equitable compensation practices within the sector. Overall, the sector is characterized by predominantly negative impacts across various environmental and social metrics, including air emissions and occupational health and safety, with only minor positive contributions observed in training.



## Information and Communication (J)

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	0.05	0.01	-0.01	-0.04	0.00
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.56	0.23	0.09	0.1	0.97
Human Rights	-0.01	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.01	-0.00	-0.00	-0.01	-0.02
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.03	-0.03

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

In the Information and Communication sector of the Republic of Türkiye, the impact intensity table indicates a mix of positive and negative impacts, with fair wages showing a slight positive total impact intensity of 0.002999 EUR per EUR output, suggesting some progress in equitable compensation practices. However, significant negative impacts are observed in water usage, which has a total negative impact intensity of -0.033796 EUR per EUR output, alongside air emissions and greenhouse gas emissions, contributing to environmental concerns with total intensities of -0.012507 EUR and -0.017556 EUR per EUR output, respectively. Overall, while there are some positive contributions, the sector is characterized by notable negative impacts across various environmental and social metrics, particularly in water and occupational health and safety.



## 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	0.04	0.01	-0.00	-0.02	0.02
GHG	-0.00	-0.00	-0.00	-0.01	-0.01
GVA	0.62	0.21	0.07	0.07	0.97
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.00	-0.00	-0.00	-0.00	-0.01
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.01	-0.03	-0.03

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

In the Financial and Insurance Activities sector of the Republic of Türkiye, the impact intensity table shows a mix of positive and negative impacts, with fair wages reflecting a slight positive total impact intensity of 0.021229 EUR per EUR output, indicating some progress in equitable compensation practices. However, significant negative impacts are evident in water usage, which has the highest total negative impact intensity of -0.033677 EUR per EUR output, alongside air emissions and greenhouse gas emissions, contributing to environmental concerns with total intensities of -0.008503 EUR and -0.011927 EUR per EUR output, respectively. Overall, while there are some positive contributions, the sector is characterized by notable negative impacts across various environmental and social metrics, particularly in water and occupational health and safety.



## 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	-0.01
Fair Wages	-0.04	0.00	-0.01	-0.02	-0.06
GHG	-0.00	-0.01	-0.01	-0.01	-0.03
GVA	0.84	0.07	0.04	0.04	0.98
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.00	-0.00	-0.00	-0.00	-0.01
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.00	-0.01	-0.02

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

In the Real Estate Activities sector of the Republic of Türkiye, the impact intensity table indicates significant negative impacts, particularly in fair wages, which have the highest total negative impact intensity of -0.062672 EUR per EUR output, reflecting serious challenges in equitable compensation practices within the sector. Additionally, water usage also shows a substantial negative impact with a total intensity of -0.018758 EUR per EUR output, alongside air emissions and greenhouse gas emissions, which contribute to environmental concerns with total intensities of -0.010339 EUR and -0.025388 EUR per EUR output, respectively. Overall, the sector is characterized by predominantly negative impacts across various social and environmental metrics, with only minor positive contributions observed in training.



## 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	-0.01	-0.01
Fair Wages	0.02	0.00	-0.01	-0.05	-0.04
GHG	-0.00	-0.01	-0.01	-0.01	-0.02
GVA	0.65	0.15	0.08	0.09	0.97
Human Rights	0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.01	-0.01
Occupational Health & Safety	-0.00	-0.01	-0.00	-0.01	-0.02
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.01	-0.02	-0.05	-0.08

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

In the Professional, Scientific and Technical Activities sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.076919 EUR per EUR output, indicating serious environmental concerns related to water consumption. Additionally, fair wages show a substantial negative total impact intensity of -0.037557 EUR per EUR output, reflecting challenges in equitable compensation practices within the sector. Overall, the sector is characterized by predominantly negative impacts across various environmental and social metrics, including air emissions and occupational health and safety, with only minor positive contributions observed in training.





## 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	0.03	0.01	-0.00	-0.02	0.01
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.58	0.21	0.09	0.08	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	-0.00	-0.00
Occupational Health & Safety	-0.00	-0.00	-0.00	-0.01	-0.02
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	0.00	-0.00	-0.01	-0.03	-0.04

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

In the Administrative and Support Service Activities sector of the Republic of Türkiye, the impact intensity table indicates notable negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.044365 EUR per EUR output, highlighting significant environmental concerns. Additionally, fair wages show a slight positive total impact intensity of 0.007781 EUR per EUR output, suggesting some progress in equitable compensation practices, although this is overshadowed by the negative impacts in other areas. Overall, the sector is characterized by predominantly negative impacts across various environmental and social metrics, including air emissions and occupational health and safety, with only minor positive contributions observed in training.



## Public Administration and Defense; Compulsory Social Security (O)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.00	-0.00	-0.01	-0.02
Fair Wages	0.12	-0.00	-0.01	-0.04	0.07
GHG	-0.00	-0.01	-0.01	-0.01	-0.02
GVA	0.59	0.19	0.09	0.1	0.96
Human Rights	0.00	-0.00	-0.00	-0.00	-0.01
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.01
Occupational Health & Safety	-0.07	-0.01	-0.00	-0.01	-0.09
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.03	-0.04	-0.05	-0.12

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

In the Public Administration and Defense; Compulsory Social Security sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.122685 EUR per EUR output, indicating severe environmental concerns. Additionally, the sector shows a substantial negative impact in occupational health and safety, with a total intensity of -0.086379 EUR per EUR output, reflecting challenges in ensuring safe working conditions. While fair wages exhibit a positive total impact intensity of 0.074873 EUR per EUR output, suggesting some progress in equitable compensation, the overall trend is dominated by negative impacts across various environmental and social metrics.



## Education (P)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.01	-0.00	-0.00	-0.00	-0.01
Fair Wages	0.17	0.00	-0.01	-0.02	0.15
GHG	-0.00	-0.00	-0.00	-0.01	-0.01
GVA	0.79	0.1	0.04	0.05	0.98
Human Rights	0.00	-0.00	-0.00	-0.00	-0.00
Invasive Species	-0.00	-0.00	-0.00	-0.00	-0.00
Land Use	0.00	-0.00	-0.00	-0.00	-0.00
Occupational Health & Safety	-0.05	-0.00	-0.00	-0.00	-0.06
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.01	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.01	-0.02	-0.03

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

In the Education sector of the Republic of Türkiye, the impact intensity table highlights significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.033342 EUR per EUR output, indicating serious environmental concerns. Additionally, the sector shows a notable negative impact in occupational health and safety, with a total intensity of -0.061322 EUR per EUR output, reflecting challenges in maintaining safe working conditions. While fair wages exhibit a positive total impact intensity of 0.147240 EUR per EUR output, suggesting progress in equitable compensation practices, the overall trend is characterized by substantial negative impacts across various environmental and social metrics.



## Human Health and Social Work Activities (Q)

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.00	-0.01	-0.01	-0.01	-0.02
Fair Wages	0.09	0.00	-0.02	-0.06	0.02
GHG	-0.00	-0.01	-0.01	-0.01	-0.03
GVA	0.51	0.23	0.1	0.12	0.97
Human Rights	-0.02	-0.00	-0.00	-0.00	-0.03
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	-0.05	-0.01	-0.01	-0.01	-0.07
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.02	-0.05	-0.07	-0.13

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

In the Human Health and Social Work Activities sector of the Republic of Türkiye, the impact intensity table reveals significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.132761 EUR per EUR output, indicating severe environmental concerns. Additionally, the sector shows notable negative impacts in occupational health and safety, with a total intensity of -0.072214 EUR per EUR output, reflecting challenges in maintaining safe working conditions for employees. While fair wages exhibit a positive total impact intensity of 0.015838 EUR per EUR output, suggesting some progress in equitable compensation practices, the overall trend is dominated by substantial negative impacts across various environmental and social metrics.



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

Variable	direct	upstream tier 1	upstream tier 2	upstream rest	Total
Air Emission	-0.02	-0.00	-0.00	-0.01	-0.03
Fair Wages	0.1	0.02	-0.00	-0.03	0.08
GHG	-0.00	-0.00	-0.00	-0.01	-0.02
GVA	0.54	0.25	0.1	0.09	0.97
Human Rights	-0.04	-0.01	-0.00	-0.00	-0.05
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	-0.02	-0.01	-0.00	-0.01	-0.04
Ocean Plastic	0.00	-0.00	-0.00	-0.00	-0.00
Training	0.00	0.00	0.00	0.00	0.01
Waste	-0.00	-0.00	-0.00	-0.00	-0.00
Water	-0.00	-0.00	-0.01	-0.04	-0.06

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

In the Arts, Entertainment and Recreation; Other Services sector of the Republic of Türkiye, the impact intensity table indicates significant negative impacts, particularly in water usage, which has the highest total negative impact intensity of -0.056926 EUR per EUR output, highlighting serious environmental concerns. Additionally, the sector shows notable negative impacts in air emissions and greenhouse gas emissions, with total intensities of -0.030486 EUR and -0.018678 EUR per EUR output, respectively, reflecting environmental challenges associated with these activities. While fair wages exhibit a positive total impact intensity of 0.081505 EUR per EUR output, suggesting some progress in equitable compensation practices, the overall trend is characterized by substantial negative impacts across various environmental and social metrics.

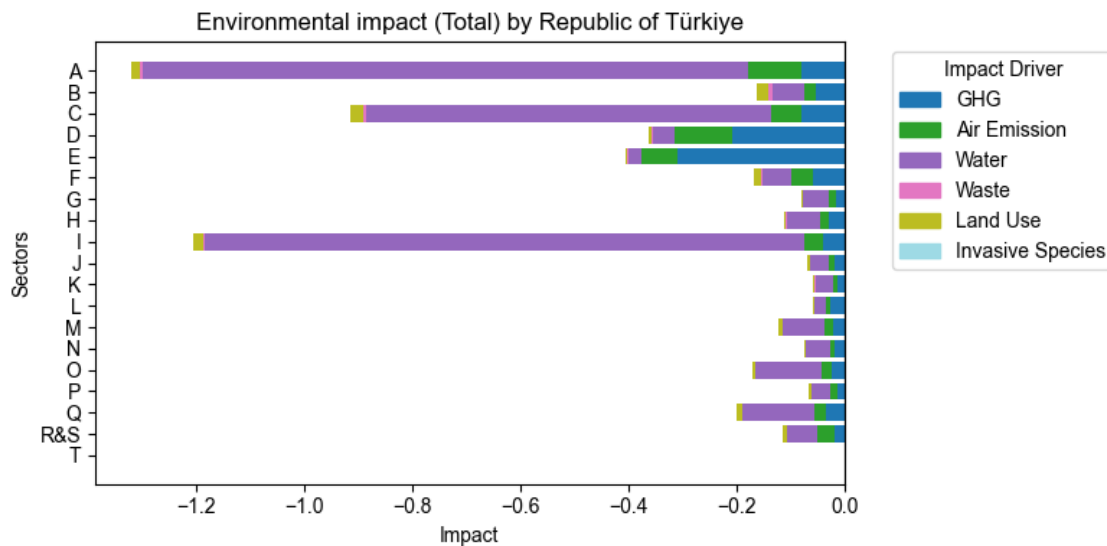


## Overview

The overall assessment of the Republic of Türkiye, based on the Value Balancing Alliance (VBA) methodology and WifOR's value factors, reveals a complex landscape of environmental and social impacts across various sectors. Environmental impact intensities indicate significant challenges, particularly in sectors like Agriculture, Manufacturing, and Human Health, where water usage, air emissions, and greenhouse gases are notably high, especially in upstream stages of the value chain. Social impacts reflect mixed outcomes, with fair wages showing some positive contributions, yet occupational health and safety and human rights issues remain areas of concern, particularly in sectors such as Construction and Administrative Services. The data underscores the need for targeted interventions to enhance sustainability and improve social equity, emphasizing the importance of addressing both direct and upstream impacts. Overall, the findings highlight the critical role of comprehensive impact assessments in guiding policy and business decisions towards a more sustainable future for Türkiye.

## Environmental Impact TUR

### Total

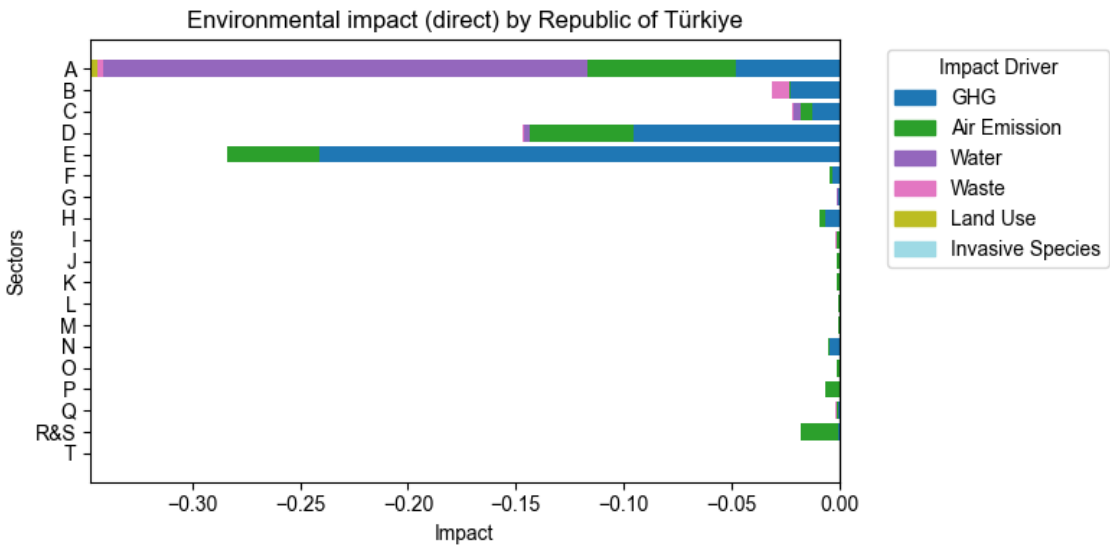


Source: VBA/WifOR, Overview of environmental impact, Total in Republic of Türkiye, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025



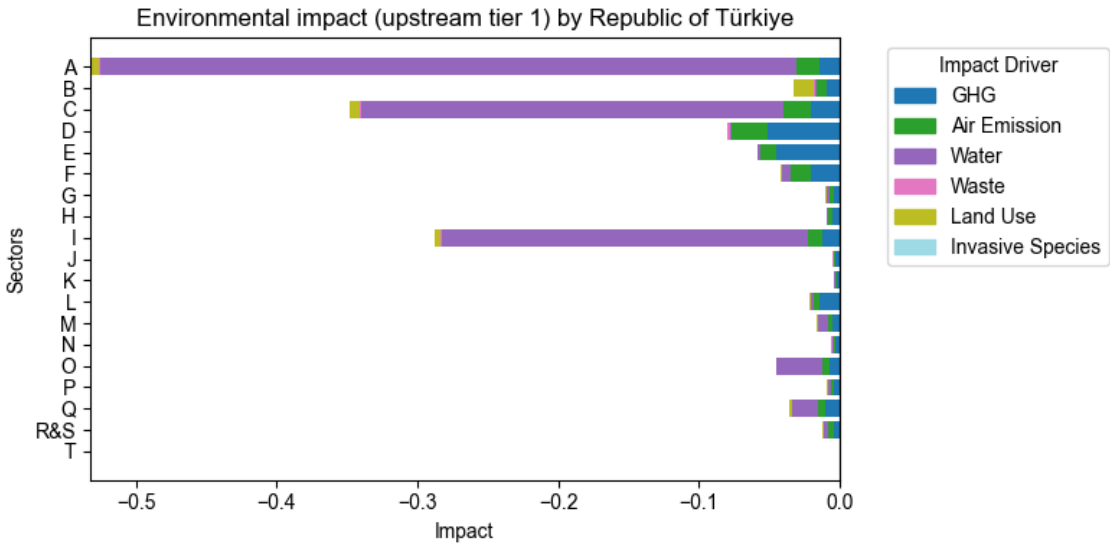


direct



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

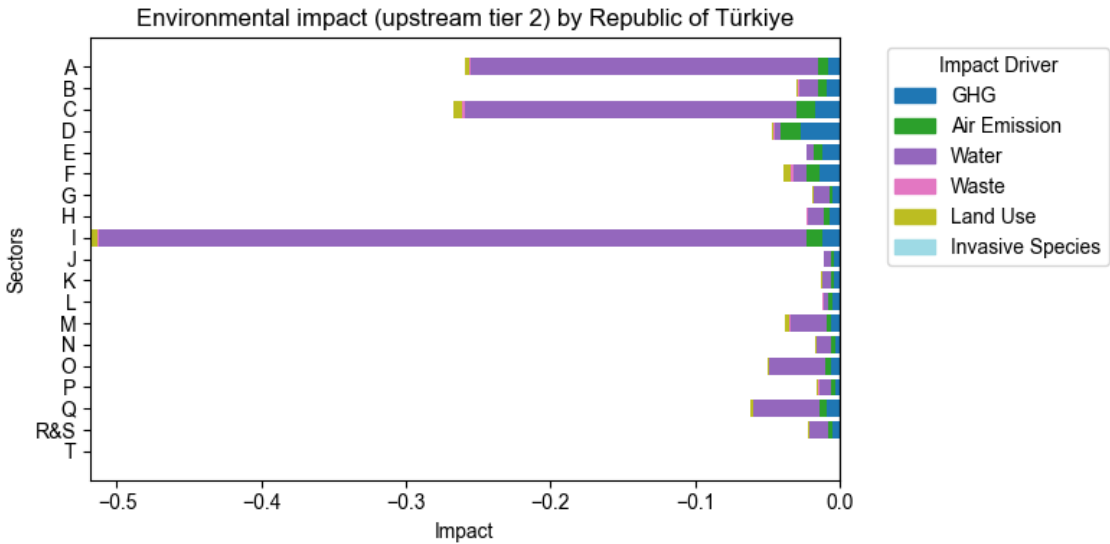
upstream tier 1



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

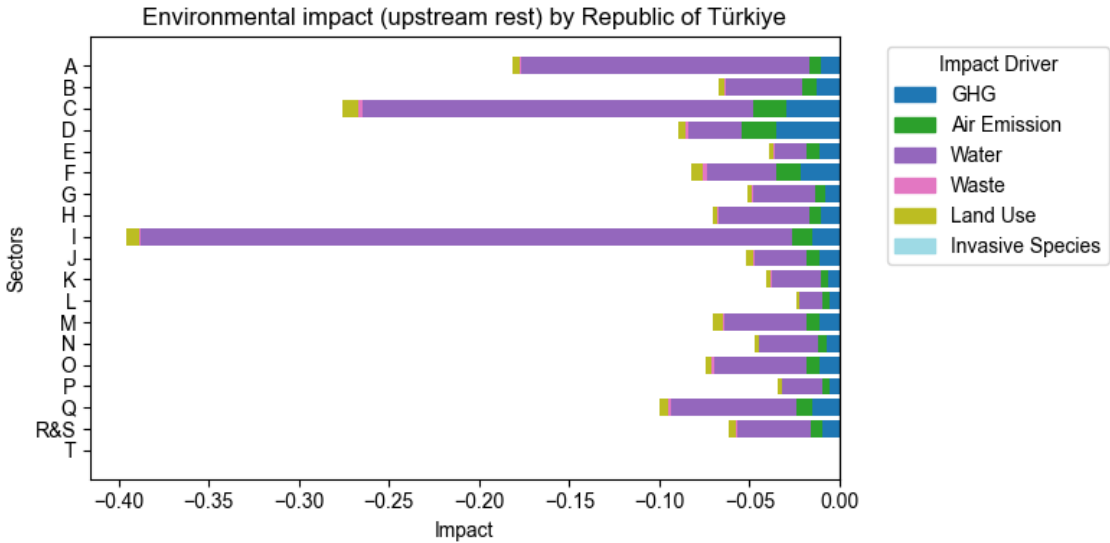


upstream tier 2



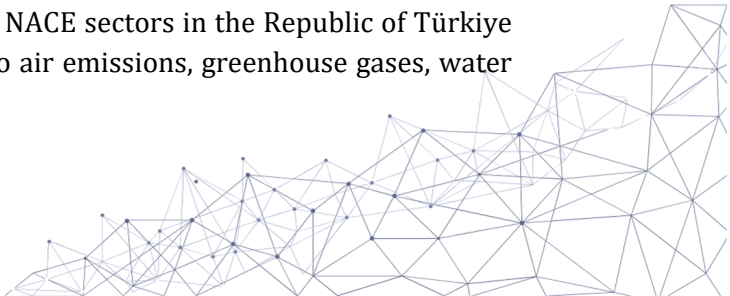
Source: VBA/WifOR, Overview of environmental impact, upstream tier 2 in Republic of Türkiye, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream rest



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

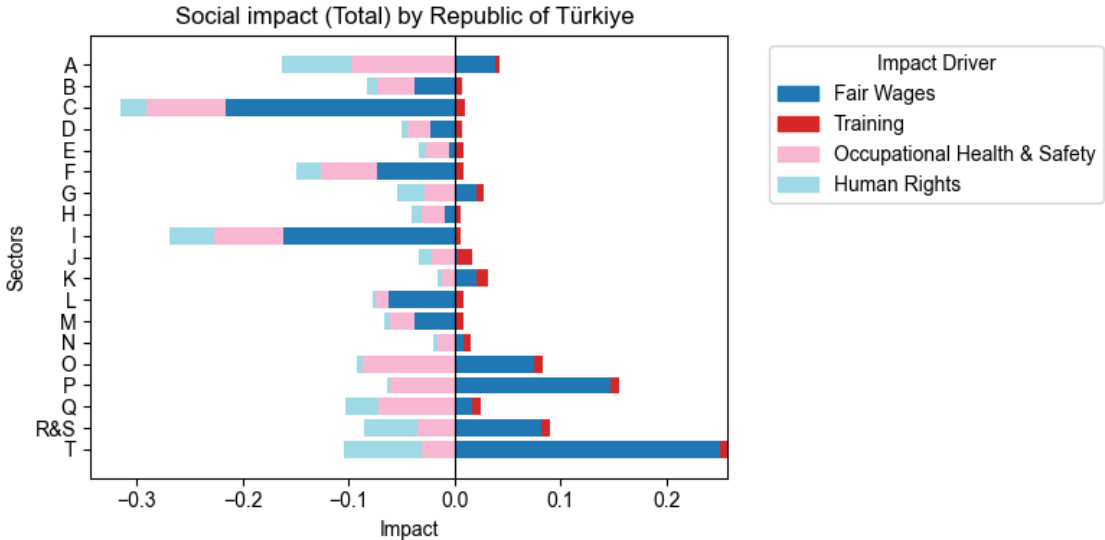
The environmental impact intensities across various NACE sectors in the Republic of Türkiye reveal significant differences in their contributions to air emissions, greenhouse gases, water



usage, and waste 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 supply chain activities amplify environmental burdens. For instance, sectors like Agriculture, Forestry, and Fishing show substantial negative impacts in upstream stages, particularly in water and greenhouse gas emissions, indicating that the sourcing and production processes are more environmentally taxing than the direct operations. Conversely, some sectors, such as Information and Communication, exhibit relatively lower upstream impacts, suggesting that their supply chains are less resource-intensive. Overall, the data highlights the importance of addressing environmental impacts not just at the operational level but throughout the entire value chain to achieve sustainability goals.

**Social Impact TUR**

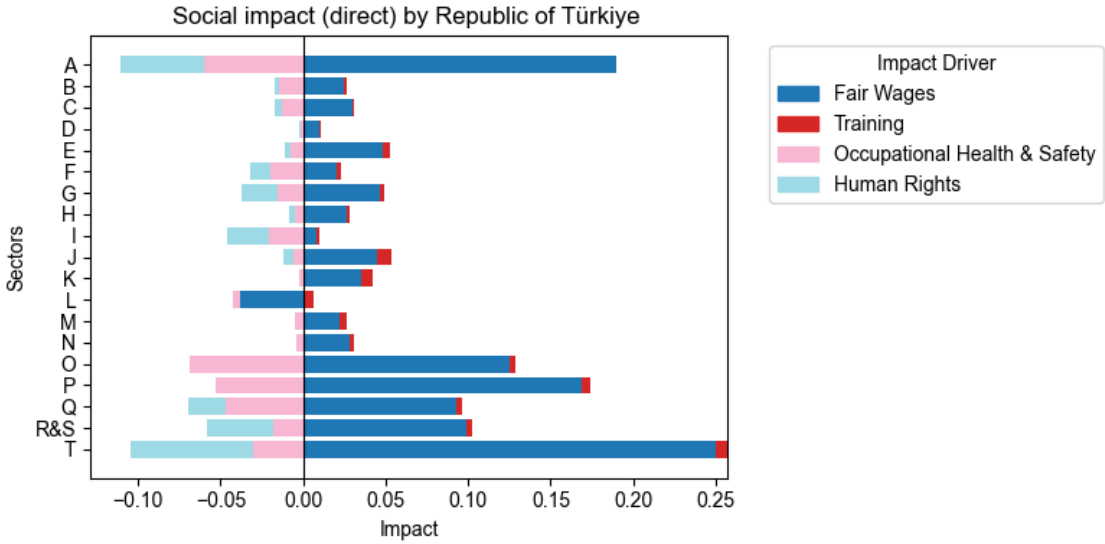
**Total**



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

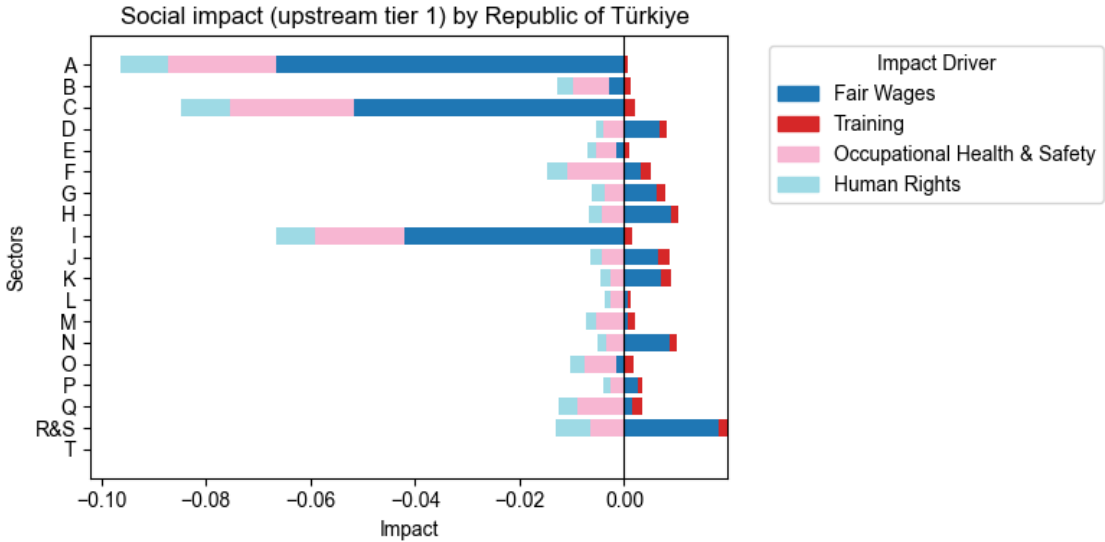


direct



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

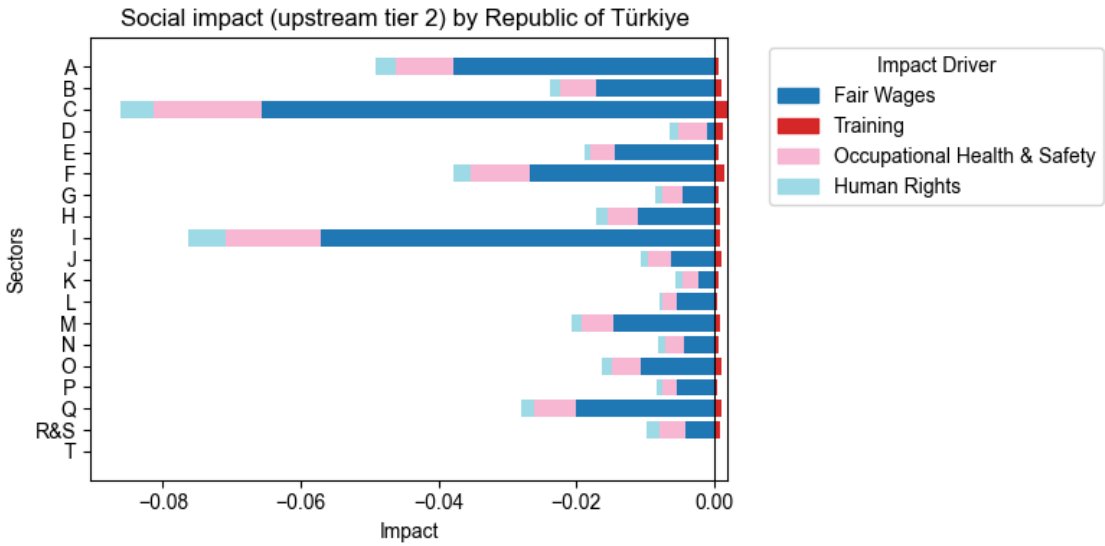
upstream tier 1



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

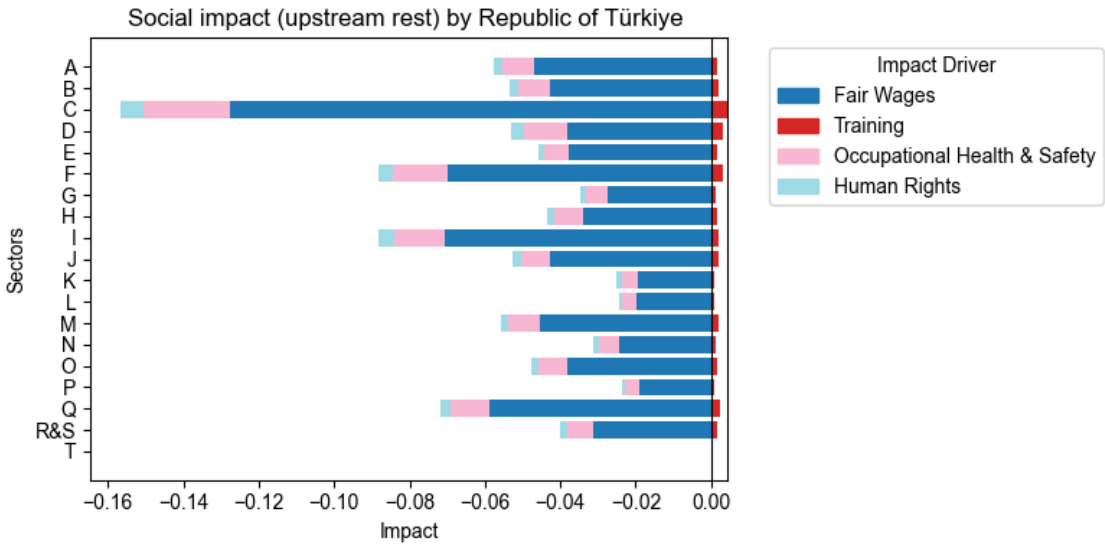


upstream tier 2



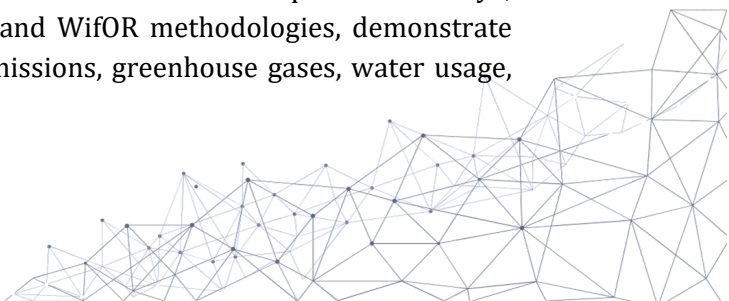
Source: VBA/WifOR, Overview of social impact, upstream tier 2 in Republic of Türkiye, 2024, Calculated based on WifOR Institute, WifOR Value Factors, Version February 2025

upstream rest



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

The environmental impact intensities across various NACE sectors in the Republic of Türkiye, as assessed by the Value Balancing Alliance (VBA) and WifOR methodologies, demonstrate significant variations in their contributions to air emissions, greenhouse gases, water usage,



and waste at different stages of the value chain. The VBA methodology emphasizes the importance of understanding both direct and upstream impacts, revealing that upstream stages, particularly tier 1 and tier 2, often exhibit higher negative intensities due to the cumulative effects of supply chain activities. For instance, sectors like Agriculture and Manufacturing show pronounced upstream impacts, indicating that resource extraction and processing contribute significantly to environmental degradation. In contrast, sectors such as Information and Communication tend to have lower upstream impacts, suggesting more efficient supply chains. Overall, these methodologies highlight the necessity of addressing environmental impacts throughout the entire value chain to enhance sustainability and mitigate negative effects on the environment.



## 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>

Beyond internal assessments, Impact Intensities encourage collaboration with suppliers and partners, fostering sustainability improvements across shared supply chains. By identifying

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



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.

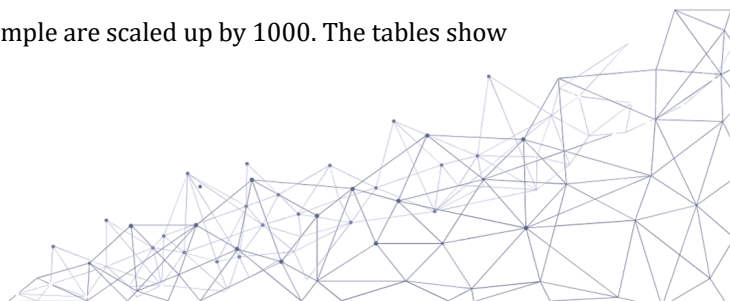
To illustrate how these benchmarks can be applied in practice, consider the following example: In Australia’s Consumer Goods sector, an increase of EUR 1000<sup>11</sup> in production results in an average negative impact of EUR 6.98 from greenhouse gas (GHG) emissions within a company’s own operations. 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:

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

<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.

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





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.

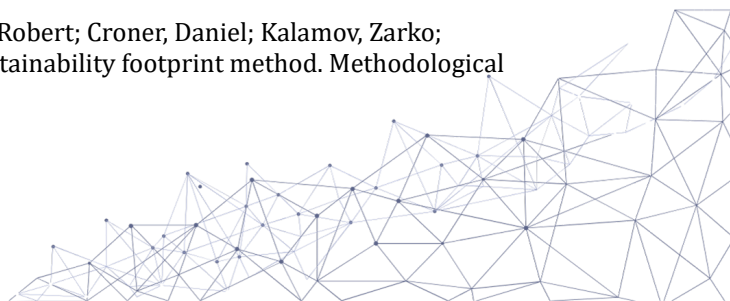
### Impact Valuation

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 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

---

<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.



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

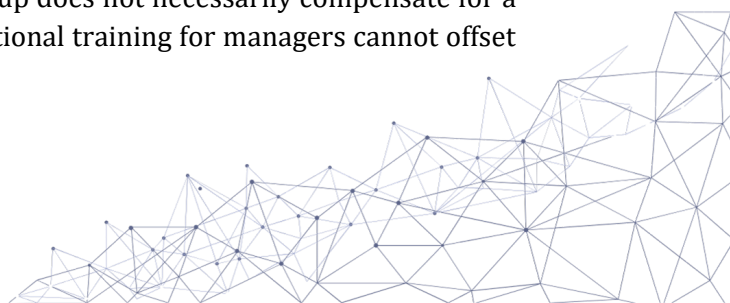
Gross Value Added (GVA) is a key metric for assessing a company's economic contribution across value chains. It represents the economic value generated through company operations after deducting the cost of inputs and services used in production. Often, the total GVA across the entire value chain approximately 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