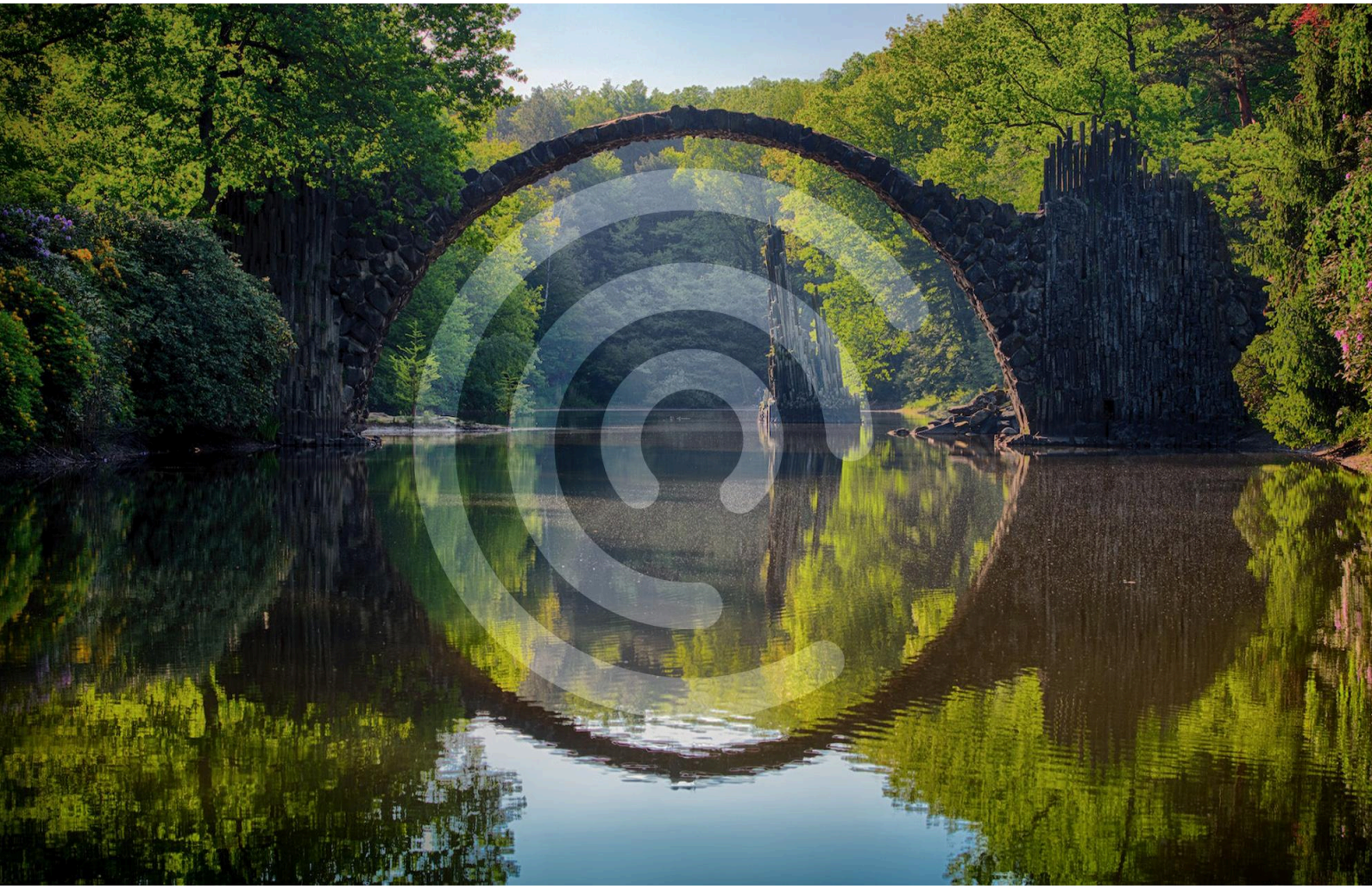

Clarity AI - UN Sustainable Development Goals Alignment

Methodology Document

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Table of Contents

Version History 1
Table of Contents 1
Overview 2
Glossary of Terms 3
1. Analytical Framework 4
    1.1. Methodology Overview 4
    1.2. Detailed Assessment Approach 7
    1.3. Portfolio Aggregation 14
2. Rating Product Specifics 16
    2.1. Materiality Objectives and Dimensions 16
    2.2. Factor Scope and Specific Issues 16
    2.3. Key Performance Indicators (KPIs) 17
    2.4. EU Taxonomy Alignment 17
    2.5. Alignment with EU Reporting Standards 18
    2.6. Assessment Model 18
    2.7. International Agreement Alignment 20
    2.8. Industry Classification Standards 21
    2.9. Scientific Evidence 21
3. Data Sourcing and Quality 22
    3.1. Data Sourcing 22
    3.2. Data Quality and Reliability 23
    3.3. Data Revision Policy 24
    3.4. Missing Data and Estimations 24
    3.5. Handling of Major New Information 25
4. Artificial Intelligence (AI) Usage 25
    4.1. Methodology Implementation 25
    4.2. Data Collection 26
    4.3. Global Norms Screening 27

4.4. Data Estimations 27
5. Assumptions and Limitations 28
5.1. Key Assumptions 28
5.2. Limitations in Data Sources 29
5.3. Limitations in Methodologies and Models 29
6. Methodology Governance 30
Appendices 32
Indicators used to assess revenue contribution and operational performance 32
Operational indicators: Selection rationale and SDG mapping 49

Overview

Clarity AI's Sustainable Development Goals Alignment methodology evaluates corporate contributions to the United Nations framework by assessing both commercial activities and operational practices. Designed for asset managers and asset owners, this framework helps them build, monitor, and report on sustainable portfolios. It is also used by companies seeking to benchmark and disclose their own SDG alignment. The coverage spans approximately ninety-nine percent of firms within major global indices, enabling consistent comparison across companies and sectors.

The methodology measures a company's alignment towards the SDGs through two pathways alongside a global norms screen. First, revenue alignment quantifies the share of net revenue derived from products and services that advance or hinder specific development goals. Second, operational alignment benchmarks company performance across twenty quantitative and qualitative indicators against industry peers. Additionally, the global norms screen evaluates corporate conduct against internationally recognized standards, including the United Nations Global Compact and OECD guidelines.

The framework generates transparent outputs at multiple levels of aggregation. Companies receive a categorical classification of aligned, neutral, or misaligned at both the individual goal level and the total company level. The methodology also provides quantitative metrics representing the net aligned revenue share. At the portfolio level, these outputs aggregate into a weighted average of net revenue percentages and the total share of portfolio weight distributed across the three alignment categories.

Glossary of Terms

Term	Definition
Global Norms Screen	A screen that identifies companies with violations of the UN Global Compact (UNGC) principles or the OECD Guidelines for Multinational Enterprises, automatically assigning a Misaligned classification to those companies.
Aligned	Assessment for a company that passes the global norms screen and for which at least one of the following conditions applies: the company's net revenue alignment exceeding +5%, or top 20% performance on at least three applicable operational indicators of its sub-industry peer group, with no applicable operational indicators in the bottom 2% of its sub-industry peer group.
Neutral	Assessment for a company with net revenue alignment between -5% and +5%, <3 operational indicators in the top 20%, <3 in the bottom 2% of its sub-industry peer group, and that passes the global norms screen.
Misaligned	Assessment for a company with net revenue alignment below -5%, or at least three applicable operational indicators in the bottom 2% of its sub-industry peer group, or that does not pass the global norms screen.
Revenue Alignment	The share of a company's net revenue derived from products and services that contribute (positively or negatively) to relevant issues of each SDG.
Operational Alignment	A company's performance on 20 operational indicators relative to its sub-industry peers, restricted to indicators applicable to the sector.
Relevant Issue	Underlying issues that account for the top 80% of the issues covered by each SDG or those that are explicitly cited by the UN.
Applicability	A binary classification (1 = applicable, 0 = not applicable) determining whether a given operational indicator is applicable to a given sub-industry.
Geographic Filter	A filter that limits the revenue counted as aligned to revenue generated in regions where the underlying SDG issue is materially present.

Term	Definition
Contributing Activity	A product or service that either advances (positive contribution) or hinders (negative contribution) progress on a relevant issue.
SBTi	The Science Based Targets initiative (SBTi) is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in combating the climate crisis.
GICS	The Global Industry Classification Standard (GICS) is a standardized, four-tiered hierarchical taxonomy used by the global financial community to categorize public companies into principal business activities.
CO2e	CO2e refers to Carbon Dioxide Equivalent. It is the universal unit of measurement used in climate reporting to represent the total warming impact of all greenhouse gases (like methane and nitrous oxide) combined into a single, standardized number.

1. Analytical Framework

1.1. Methodology Overview

The United Nations Sustainable Development Goals (SDGs) are a framework of 17 interconnected goals adopted by UN member states in 2015 as part of the 2030 Agenda for Sustainable Development.

Spanning themes from climate action and clean energy to reduced inequalities and good health, they represent a globally agreed blueprint for addressing the world's most pressing social and environmental challenges.

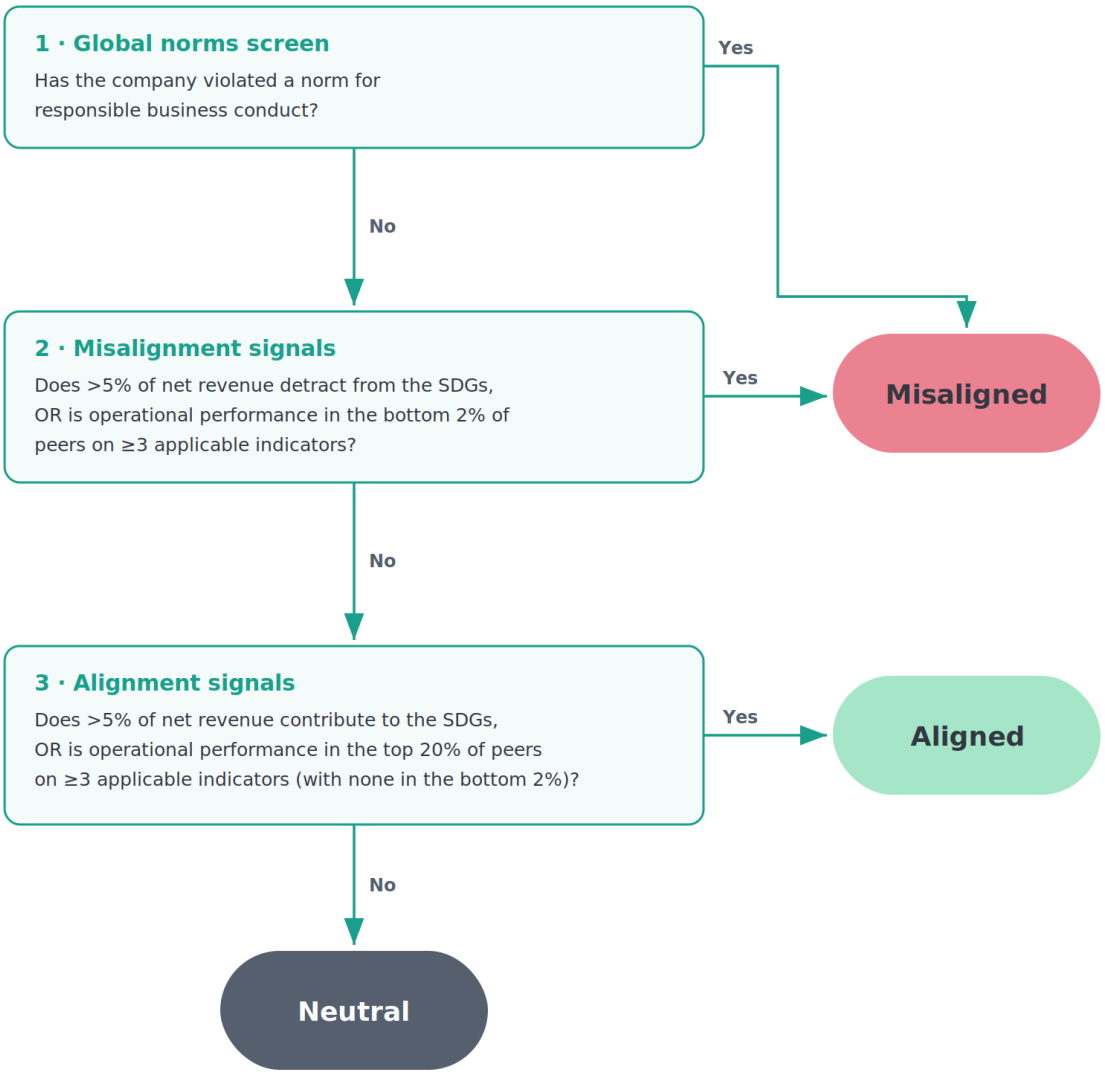
For sustainable investors, the SDGs provide a common language for assessing real-world impact. Unlike internal ESG policies or proprietary frameworks, the SDGs carry broad institutional legitimacy and are increasingly referenced by regulators, asset owners, and standard-setters as a benchmark for sustainable finance. This makes them a natural anchor for impact-oriented investment strategies.

At the portfolio level, SDG alignment offers a structured way to identify companies whose products, services, and operations contribute meaningfully to sustainable development outcomes — or conversely, those that hinder them. As capital allocation increasingly factors in long-term sustainability risks and opportunities, the SDGs help investors articulate not just what they are avoiding, but what they are actively financing. For asset managers and institutional investors subject to growing disclosure requirements, SDG alignment also provides a consistent, internationally recognised framework for reporting on sustainability contributions.

The objective of **Clarity AI's SDG Alignment methodology** is to evaluate the contribution (positive, negative, or neutral) of companies towards the SDGs, at both the individual goal level and the overall company level. The assessment evaluates each company across three independent dimensions:

1) **Revenue Alignment:** the extent to which the company's products and services, as reflected in its revenue, align or misalign with the SDGs.
2) **Operational Alignment:** the extent to which the company's operational practices align with the SDGs.
3) **Global Norms Screen:** the company's record of violations of global norms.

Companies receive an alignment rating based on their performance across these criteria, both for individual SDGs and at an aggregate level. This evaluation follows an ordinal scale as follows:



The methodology applies to public and private corporations across all sectors covered by Clarity AI's universe. The parent company's data is used as a proxy for a subsidiary when (i) the subsidiary does not report sufficient data, and (ii) the parent company holds a controlling stake of more than 50%. This proxy is applied only for Revenue Alignment, not Operational Alignment or the Global Norms Screen.

The SDG Assessment considers 16 of the 17 SDGs, excluding SDG 17 (Partnerships for the Goals). The goal targets international cooperation, cross-border financing mechanisms, and policy coordination between governments, areas where individual companies have limited and largely indirect influence through their products and services, or their operations.

The methodology is predominantly backward-looking. Operational indicators use the most recent company reported or Clarity AI estimated data, typically from the prior fiscal year. Revenue

Alignment is calculated from the most recent reported revenue available to Clarity AI. The SBTi approved-target indicator under SDG 13 is an exception: it captures a forward-looking commitment, but it is used solely to trigger positive operational alignment.

Our ratings are updated and made available to users at regular intervals through the Clarity AI platform, following the data release process and calendar (typically every two weeks, aligned with underlying data updates). A change in an entity's rating between scheduled updates will only occur if new entity-specific information becomes available or if there is a material change to the methodology.

1.2. Detailed Assessment Approach

1.2.1. Revenue Alignment

Under this pillar we quantify the extent to which a company's **business activities contribute to or detract from each SDG.** For each contributing activity identified, Clarity AI calculates its share of total company revenue. These revenue shares are then aggregated first at the individual SDG level, and subsequently across all SDGs to produce a company-level alignment score.

At each level of aggregation — individual SDG, and total company — **three metrics** are determined: the positively aligned revenue share, the negatively aligned revenue share, and a **net revenue alignment** figure, calculated as the difference between the two.

The net revenue alignment score ranges from -100% to 100% and serves as a **key input** into the overall SDG classification. A net alignment of +5% or above is one of several conditions required for a company to be classified as Aligned, while a net alignment of -5% or below is one of several conditions that may result in a classification of Misaligned.

Beyond the exclusion of SDG 17 (Partnerships for the Goals) already explained above, the Revenue Alignment Assessment does not consider SDG 10 (Reduced Inequalities). This goal addresses income inequality, social and political inclusion, and migration policy, areas driven primarily by government fiscal policy and regulation rather than corporate revenue activities.

Clarity AI's methodology for determining a company's revenue alignment towards Sustainable Development Goals follows a four-step process.

Step 1: Mapping relevant sustainability issues to Sustainable Development Goals

The UN SDG Revenue Alignment methodology begins with identifying the sustainability issues that companies can meaningfully contribute to through their core business activities. To establish this universe, Clarity AI conducted a comprehensive review of all SDG targets to determine which are actionable at the company level — that is, where a company's products or services can generate a direct, measurable impact.

For each actionable target, the specific issues driving progress toward that target were identified. In practice, a single SDG may encompass a broad range of contributing factors, not all of which are equally material. To ensure analytical rigor, Clarity AI applies the following three criteria to determine issue relevance:

- **Quantitative relevance threshold:** Where empirical data is available, issues are ranked by their relative contribution to the SDG and those collectively accounting for the top 80% of total contributions are included. Issues falling below this threshold are excluded on the basis that their individual impact is too marginal to be meaningfully addressed through a company's products or services.
- **Qualitative assessment:** Where sufficient quantitative data is unavailable to apply the 80% threshold, relevant issues are identified through a systematic review of authoritative sources, including the World Health Organization (WHO), United Nations agencies, and other recognized international bodies.
- **Explicit target reference:** Issues directly cited within an SDG target are included irrespective of their relative contribution share. For instance, diabetes is captured under SDG 3 (Good Health and Well-being), Target 3.4 (Noncommunicable Diseases and Mental Health), regardless of its quantitative weight.

For example, for SDG 13 (Climate Action), Clarity AI uses global greenhouse gas emissions data by sector to identify which emission sources are most relevant for companies. All sources are ranked from largest to smallest contribution, and only those within the cumulative top 80% are considered relevant. Applying this filter, we identified the emission sources that together account for the top 80% of global greenhouse gas emissions.

A full list of the relevant issues identified per SDG is provided in the Appendix.

Step 2: Identify contributing activities

Once the material issues have been established, the methodology assesses which products and services either advance or hinder progress toward those issues. These are defined as **contributing activities**.

A contributing activity is classified as **positively aligned** where the product or service directly addresses one of the relevant issues identified in Step 1 — that is, where it demonstrably reduces, mitigates, or resolves that issue. Conversely, an activity is classified as **negatively aligned** where it exacerbates or perpetuates the issue in question. In both cases, the classification reflects the intrinsic nature of the activity itself, independent of company intent, stated commitments, or policies. The **revenue attributable** to each contributing activity is then used to quantify the degree of SDG alignment. The contributing activities mapped to each issue and SDG are listed in the Appendix.

To illustrate: electric vehicle manufacturing and mass transit operations directly address road transport emissions — a key driver of climate change — and are therefore classified as positively

aligned activities. Upstream suppliers, such as battery manufacturers or rail equipment manufacturers, contribute indirectly to the same outcome. This value chain perspective allows the methodology to capture a more complete picture of corporate SDG alignment beyond direct product impacts alone.

Step 3: Map contributing activities to companies

Having defined the universe of contributing activities, the methodology maps these to companies on the basis of their disclosures on revenues and business lines. For each contributing activity identified in the prior step, Clarity AI assesses the share of a company's revenue attributable to that activity. For example, in the case of an automotive manufacturer, this would capture the proportion of revenues derived specifically from electric vehicle production.

Step 4: Identify priority geographies by issue based on incidence

Clarity AI has established that the contributing activities for certain issues (e.g. climate change) are effective regardless of their geographical location. For instance, any sale of an electric vehicle aids in combating climate change through emission reduction, as this is a borderless issue. However, for other issues, such as increasing water access, not every activity contributes to the solution. For example, building sanitation infrastructure in areas in which such systems are already well developed does not meaningfully contribute to increased access and availability of sanitation services.

In those cases, we employ geographic filters to limit the revenue that is recognized as aligned. In regions where the incidence of an issue is higher, it is more likely that the product sold contributes to solving the issue. Thus, Clarity AI accounts for revenue derived from those regions, while discounting revenue generated from outside those regions. When the same business line contributes to solving multiple issues, the least restrictive geographical filter is applied.

Table 1: Summary and example of Clarity AI's UN SDG Revenue Alignment methodology

Step	Description	Example applied to SDG 13
1 - Identify relevant issues for SDGs	Identify and quantify relevant issues for each SDG to define a limited scope of environmental and social issues to tackle	Road transport is a leading cause of GHG emissions, which relates to SDG 13 (Climate Action)
2 - Identify contributing activities	For each of the relevant issues identified, Clarity AI determines the contributing activities that tackle them	EV manufacturers can directly provide a cleaner transportation alternative, while battery suppliers can contribute indirectly
3 - Map activities to companies	Map the contributing activities to companies' revenue lines	Revenue derived from EV manufacturing is mapped as positively aligned with SDG 13
4 - Apply geographic filtering	Ensure that contributing activities actually address needs in the relevant geographies	The GHG reduction potential of an EV does not change based on site of sale; emissions reductions have borderless benefits. No filtering applied

1.2.2. Operational Alignment

While revenue alignment assesses the SDG impact of a company's products and services, operational alignment measures how a company manages its business operations with respect to the SDGs — irrespective of what it sells.

Clarity AI evaluates operational alignment **using a set of 20 indicators** selected for their relevance to SDG targets, grounded in academic and public body research, and mapped to metrics as defined by the Global Reporting Initiative (GRI). These span a range of environmental, social, and governance dimensions, including CO2e emissions, share of women in management, and total injury rate. The complete indicator set is provided in the Appendix; the rationale for each indicator's inclusion is also detailed in the Appendix.

Clarity AI systematically collects data on these indicators for a broad universe of global companies, sourced from publicly available corporate disclosures as described in Section 3.1 Data Sourcing. Data is processed and normalized to enable consistent peer comparisons across the coverage universe[1].

Each indicator is benchmarked against sub-industry peers and assessed at three levels: indicator, SDG, and company.

[1] CO2e emissions, water and energy consumption, waste, hazardous waste, and water pollutants generation, Research and Development expenditure, and total cost of air pollutants indicators are normalized using the company's revenues. Women employees, employees with disabilities, and average training hours are normalized using the total number of company's employees. The total injury rate is normalized using the hours worked by the workforce in millions.

SDG exclusions for Operational Alignment

Operational indicators are applied across 13 of the 17 SDGs. Beyond the exclusion of SDG 17 (Partnerships for the Goals) already explained, the remaining three are excluded from operational assessment for the following reasons:

- **SDG 2 (Zero Hunger) and SDG 15 (Life on Land):** Company-level operational metrics for these goals are not yet reported consistently or at sufficient scale to support reliable peer benchmarking.
- **SDG 16 (Peace, Justice and Strong Institutions)**: Operational indicators are not the appropriate instrument for assessing this goal. It is instead evaluated through the global norms screen, which directly assesses corporate conduct against international governance and institutional standards.

Indicator applicability

Not all companies are assessed against all 20 operational indicators. Applicability is determined by a company's primary business activity, reflecting the principle that not every indicator is equally relevant across industries. The indicators are divided into two groups:

1) Industry-agnostic indicators

The following indicators are considered material irrespective of the sub-industry:

- Net headcount growth rate
- Average training hours per employee
- Women in managerial positions (%)
- Women employees (%)
- Gender pay gap (%)
- R&D expenditure intensity in low and lower-middle income countries
- Employees with disabilities (%)
- Science-Based Targets initiative approved target

These indicators reflect dimensions of workforce management, human capital, and corporate commitments where all companies, regardless of industry, have the capacity to improve performance and contribute meaningfully to the relevant SDGs. No sub-industry is excluded from assessment on these indicators.

2) Industry-specific indicators

The following indicators are assessed only for sub-industries where they are deemed material:

- Carbon emissions intensity
- Energy consumption intensity
- Renewable energy use (%)
- Energy consumption growth rate (%)

- Air pollutant emissions cost intensity
- Water consumption intensity
- Water recycled ratio
- Water pollutant emissions intensity
- Waste generation intensity
- Hazardous waste intensity
- Waste recycled ratio
- Total injury rate

For these 12 indicators, applicability is determined at the sub-industry level. The underlying principle is that companies in industries with a negligible contribution to a given issue have limited operational leverage to drive impact on that issue. Restricting applicability to material sub-industries ensures the assessment focuses on sectors where operational improvements translate into relevant impact.

The approach for assigning applicability draws on the same framework used in revenue alignment to identify relevant issues. Sub-industries are selected based on their share of total global contribution to the metric by volume (e.g., for the carbon emissions intensity indicator, we evaluate each sector's share of total CO2e emissions in tons). Applicability can also be informed by issues explicitly cited in SDG targets and by a review of authoritative sources. Where neither of these approaches is sufficient, applicability is determined by industry expertise.

However, the 80% cutoff used for revenue alignment is not appropriate for operational indicators. We use a 90% threshold for operational indicators to ensure that no relevant industry is dropped for each issue (e.g., the 90% threshold allows including aviation and shipping as relevant industries for making meaningful contributions to CO2e emission reductions).

Operational Alignment Scoring

- At the indicator level, a company is classified as Aligned if it performs **within the top 20% of its sub-industry peer group, and Misaligned if it falls within the bottom 2%.**
- At the company level, a company **must have at least three applicable Misaligned indicators** to result in an overall Misaligned classification. To qualify as Aligned, a company **must have at least three applicable Aligned indicators** and **no Misaligned ones**.

The three-indicator threshold was established through calibration testing. Higher thresholds were found to overly restrict alignment to a marginal subset of the universe, while lower thresholds diluted the signal. The current calibration ensures that operational alignment reflects a structurally meaningful and positive performance profile across a company's operations (see more details in the subsection 2.6. Assessment Model). In order to provide a meaningful assessment, we require at least 5 companies per sub-industry peer group with available data for the applicable indicators.

1.2.3. Global Norms Violations

This methodology leverages results from Clarity AI's assessment of companies' violations of global norms. Our Global Norms Screening Methodology establishes a robust, transparent, and criteria-driven framework for assessing corporate alignment with internationally recognized standards on sustainable business conduct. The methodology is grounded in granular evaluation criteria aligned with the specific expectations set out in:

- United Nations Global Compact (UNGC) Principles,
- OECD Guidelines for Multinational Enterprises (the Global Norms), and
- UN Guiding Principles on Business and Human Rights (UNGP) Principles.

These frameworks cover labor and human rights, corruption, tax avoidance, and other categories of corporate misconduct. Examining both direct and indirect company involvement, the assessment evaluates each company against a defined set of parameters: the scale and scope of harm, the nature of the company's involvement, the origin of the allegation, the status of any official investigation, and the company's response, to determine one of three outcomes:

- Violation,
- Watchlist[2], or
- No Violation.

This determination follows a sequential review process combining automated AI screening with independent expert verification and formal committee sign-off, ensuring that every confirmed violation is substantiated by publicly available evidence and correctly applied against the frameworks in scope.

The SDG Assessment uses the comprehensive global norms profile rather than the targeted one. This profile covers a broader range of topics, captures both direct and indirect company involvement, and considers grave and critical violations, which aligns with the breadth of issues and types of harm the SDGs are concerned with. Further details about our norms screening approach can be found in Clarity AI's Global Norms Screening Methodology Document.

Scoring

For the purpose of determining SDG Alignment, **any violation of** a single UNGC, OECD or UNGP norm results in a **Misaligned** classification, regardless of the company's Revenue or Operational Alignment status. For the purposes of the assessment, Watchlist is considered as a No Violation.

1.2.4. SDG Alignment Ratings

Revenue Alignment, Operational Alignment and results from the Global Norms Violation screening are used to classify companies as Aligned, Misaligned or Neutral with respect to an individual SDG and across all SDGs (company-level).

[2] A controversy is placed on the Watchlist when it satisfies all Violation conditions with one exception: either the investigation is ongoing rather than closed with findings, or the company response meets the resolution threshold (Exit, Awaiting Company Response, or Remediation combined with Changes in Policies).

A company is considered **Misaligned** if **any of the following** criteria are met:

Criteria	Conditions at Company-level	Conditions at SDG-level
Revenue Contribution	Net alignment below −5%	Net alignment for that SDG below −5%
Operational Performance	≥3 applicable indicators in bottom 2% of the sub-industry peer group	≥50% of the applicable indicators for the SDG in bottom 2% of the sub-industry peer group
Global Norms Violation	A confirmed norms violation	Not applicable

A company is considered to be **Aligned** when it **does not meet any of the Misalignment criteria** and when **any of the following** criteria are met:

Criteria	Conditions at Company-level	Conditions for individual SDGs
Revenue Contribution	Net revenue alignment above +5%	Net revenue alignment for that SDG above +5%
Operational Performance	≥3 applicable indicators in top 20% of the sub-industry peer group and no applicable indicators in the bottom 2% of the sub-industry peer group	≥50% of the applicable indicators for the SDG in top 20% of the sub-industry peer group

In all other cases not classified as Aligned or Misaligned, a company is assigned a **Neutral** SDG alignment.

To illustrate, consider a company that derives 25% of its revenues from renewable energy technologies and 50% from the manufacturing of firearms. The net revenue alignment is -25% (25% positive minus 50% negative), which falls below -5%, resulting in a Misaligned rating for Revenue alignment. This company will get a Misaligned total SDG score no matter its Operational Alignment Assessment or whether it passes the Global Norms screen.

1.3. Portfolio Aggregation

The Revenue Alignment output aggregates to the portfolio level as the weighted average of holdings' net revenue percentages. The three categorical outputs aggregate as the share of portfolio weight classified as Aligned, Neutral, or Misaligned.

The four holdings below illustrate how each dimension of the assessment contributes independently to the classification.

Holding A (40%) has strong SDG-relevant revenue from renewable energy (+20% of revenue), partially offset by coal mining activities (-5%), yielding a net revenue alignment of +15%. Three operational indicators rank in the top 20% of its peer group. No norms violations are recorded. It is Aligned across all outputs.

Holding B (30%) generates a small share of revenue from medical devices (+1% net), has neutral operational performance across all indicators, and has no norms violations. No dimension is strong enough to trigger Aligned, so it is Neutral across all outputs.

Holding C (20%) generates revenue from generic medicines (+2%) but has significant tobacco-related revenue (-10%), yielding a net revenue alignment of -8%. Its operational performance is neutral and no norms violations are recorded. The negative revenue exposure triggers Misaligned for all revenue-sensitive outputs, while its Operational Alignment remains Neutral.

Holding D (10%) has no material SDG-relevant revenue activities and neutral operational performance, but has a confirmed UNGC violation. The norms screen triggers Misaligned for all outputs that include a norms component, regardless of its neutral standing on other dimensions.

Table 2: Summary and example of Clarity AI's UN SDG Alignment Assessment aggregation at portfolio level

	Holding A	Holding B	Holding C	Holding D	Portfolio
Portfolio weight	40%	30%	20%	10%	100%
Assessment					
Revenue Contribution	Renewable energy: +20%, Coal mining: -5% (net: +15%)	Medical devices: +1% (net: +1%)	Generic medicines: +2%, Tobacco: -10% (net: -8%)	No SDG-relevant activities (net: 0%)	—
Operational Performance	Three metrics aligned (CO2e, Gender Pay Gap, Ren. Energy Use)	Neutral metrics	Neutral metrics	Neutral metrics	—
Global Norms Screen	No	No	No	Yes	—
Outputs					

	Holding A	Holding B	Holding C	Holding D	Portfolio
Revenue Contribution	Net: +15%, Positive: +20%, Negative: -5%	Net: +1%, Positive: +1%, Negative: 0%	Net: -8%, Positive: +2%, Negative: -10%	Net: 0%, Positive: 0%, Negative: 0%	Net: +4.7% (= 40%x15% + 30%x1% + 20%x-8%), Positive: +8.7%, Negative: -4.0%
Revenue Alignment	Aligned	Neutral	Misaligned	Misaligned	40% Aligned / 30% Neutral / 30% Misaligned
Operational Alignment	Aligned	Neutral	Neutral	Misaligned	40% Aligned / 50% Neutral / 10% Misaligned
SDGs Alignment	Aligned	Neutral	Misaligned	Misaligned	40% Aligned / 30% Neutral / 30% Misaligned

2. Rating Product Specifics

2.1. Materiality Objectives and Dimensions

The UN SDGs Alignment methodology assesses impact. It measures the extent to which a company contributes, positively or negatively, to the environmental and social outcomes targeted by the 17 SDGs and their 169 underlying targets. We exclude SDG 17 from the assessment because its focus on international governmental cooperation and cross-border financing falls outside the direct influence of individual companies. The methodology **does not assess financial materiality** and is not intended as a measure of ESG risk to the rated entity.

The methodology measures the contribution a company makes to society and the environment through (i) the products and services it sells (Revenue Alignment) and (ii) the way it operates (Operational Alignment). The full set of issues covered spans poverty, hunger, health, education, gender equality, water and sanitation, energy, decent work, infrastructure, sustainable cities, responsible consumption, climate action, life below water, life on land, and peace and justice.

2.2. Factor Scope and Specific Issues

The rating covers an aggregated set of environmental and social factors structured around the UN Sustainable Development Goals. Governance topics enter the assessment only indirectly, through the global norms screen (which incorporates corruption, tax avoidance, and other governance-related controversies under the UNGC and OECD frameworks).

Themes covered across the SDGs include:

1. **Environmental themes:** climate change, clean water and sanitation, affordable and clean energy, responsible consumption and production, life below water, life on land, sustainable cities (air pollution and transport emissions).

2. **Social themes:** poverty alleviation and access to finance, food security, health and well-being, education, gender equality, decent work, industrial and infrastructure development, reduced inequalities, peace and justice.

The rating is not restricted to a single specific issue. Because the SDGs span multiple themes, the methodology covers all of them collectively rather than concentrating on one (e.g., it is not a "climate-only" or "net-zero alignment" rating).

2.3. Key Performance Indicators (KPIs)

Three sets of KPIs feed the alignment classification:

1. **Revenue Alignment KPIs**. For each SDG, the methodology measures the net percentage of a company's revenue contributing towards the particular goal. Goal-specific definitions of contributing activities are provided in the Appendix.

2. **Operational Alignment KPIs**. 20 operational indicators are used across covered SDGs. Each indicator is benchmarked against sub-industry peers. The full list, with metric descriptions, is included in the Appendix; the rationale for inclusion (including alignment to UN SDG targets, GRI standards, and SFDR PAI indicators) is also provided in the Appendix.

3. **Global Norms KPIs.** A binary classification of whether the company has violated any global norm or not.

No weighting at the indicator level is applied. Revenues are aggregated at company level, while operational indicators are evaluated independently against sub-industry peer distributions.

2.4. EU Taxonomy Alignment

EU Taxonomy percentage alignment under Regulation (EU) 2020/852 is used as an input to the Revenue Alignment pillar in the small share of cases (fewer than 1% of companies in the rated universe) where a company's reported revenues are not granular enough to be reliably mapped to individual SDGs. In these cases, the reported EU Taxonomy alignment provides additional granularity, and it is used in place of the standard SDG calculation.

EU Taxonomy data is only used for SDG 3 (Good Health and Well-being), SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water), SDG 15 (Life on Land) since those are the only goals for which the activities reported under the EU Taxonomy alignment are relevant.

Across all rated companies, there is a positive but moderate correlation between EU Taxonomy alignment and both Revenue Alignment and overall SDG Assessment. EU Taxonomy values tend to be lower than SDG alignment values because the EU Taxonomy framework covers only environmental activities and excludes social issues such as poverty, health, education, and gender equality. Additionally, EU Taxonomy data is not used as an input for Operational Alignment.

2.5. Alignment with EU Reporting Standards

The methodology covers multiple ESG topics across the SDGs. The table below maps these topics to the topical standards under Article 29b of Directive 2013/34/EU (CSRD / ESRS).

Table 3: SDG-related to CSRD / ESRS topics mapping

SDG-related topic in methodology	CSRD / ESRS topic
Climate Action (SDG 13), Sustainable Cities transport emissions (SDG 11)	Climate Change: Mitigation and adaptation
Clean Water and Sanitation (SDG 6), Life Below Water (SDG 14)	Water & Marine Resources
Responsible Consumption and Production (SDG 12)	Circular Economy
Air pollution (SDG 3, SDG 11), water pollutants (SDG 6)	Pollution
Life on Land (SDG 15), Life Below Water (SDG 14)	Biodiversity
Gender Equality (SDG 5), Reduced Inequalities (SDG 10)	Equal Opportunity
Decent Work (SDG 8), Total Injury Rate (SDG 3, SDG 8)	Working Conditions
Norms violations screen via UNGC and OECD	Human Rights, Business Conduct
Norms violations screen via UNGC and OECD	Risk Management, Business Conduct, Political Engagement, Relationship Management

Not all CSRD topics are covered directly by the methodology. Corporate Oversight, for example, is addressed only indirectly through the norms-violations screen.

2.6. Assessment Model

The methodology combines absolute and relative thresholds, each calibrated against the full company universe. Calibration optimised for two things: a balanced distribution of classifications (the number of companies Aligned and Misaligned are neither too large to be meaningful nor too small to be useful), and results consistent with what a company's core business would lead one to expect, based on the nature of its operations and its products and services (no counterintuitive outcomes, such as a tobacco company classified as Aligned on the strength of a marginal medical products line).

Revenue Alignment thresholds (±5%)
The ±5% revenue thresholds are absolute and apply uniformly across all industries and geographies. They are not derived from a regulatory definition but from an analysis of the revenue distribution across the full company universe.

The calibration tested a range of thresholds, weighing the two errors that arise from setting the threshold incorrectly:

- Set too high, the threshold leaves companies with substantial SDG-aligned or SDG-harmful revenue classified as Neutral, understating material exposure.
- Set too low, it captures companies whose SDG revenue is incidental to their business, overstating alignment or misalignment.

At 5%, the threshold captures companies where SDG-relevant revenue is a structurally meaningful share of the business, while excluding companies where it is marginal. Critically, the 5% floor also prevents edge cases where a company with a predominantly harmful core business is classified as Aligned due to a small SDG-contributing product line.

Operational Alignment thresholds (top 20% / bottom 2%)
Operational thresholds are relative, benchmarked within sub-industry peer groups. This design reflects the fact that operational sustainability performance is inherently context-dependent: what constitutes strong emissions management differs between a utilities company and a software firm.

The specific percentile cutoffs were set by testing candidate values and examining the resulting number and composition of Aligned and Misaligned companies across the universe. Both thresholds apply per indicator, and a company must be beyond the threshold on at least three applicable indicators to be classified — Aligned or Misaligned. The two cutoffs are deliberately asymmetric:

- The top 20% threshold for Alignment is set at the quintile level. Because a company must rank in the top 20% of its peer group on at least three indicators at once, a materially lower percentile would leave very few companies able to meet the bar on three indicators simultaneously. The quintile cutoff produces an amount of Aligned companies that is selective but still large enough to be meaningful.

- The bottom 2% threshold for Misalignment is far tighter. Misalignment is intended to flag genuinely severe operational underperformance, so the cutoff is set to capture only companies that are extreme outliers within their peer group. Even requiring three indicators, a wider threshold (e.g. the bottom quintile) would pull in too many companies that are merely below-average rather than severe laggards, diluting the signal. The 2% cutoff isolates the most serious cases.

Both thresholds were validated by reviewing the resulting Aligned and Misaligned sets and confirming the classifications matched what each company's operations and business profile would lead one to expect, and were consistent with independent assessments of sustainability performance.

Global norms screen

The global norms screen is absolute: any verified violation of UN Global Compact principles or OECD Guidelines for Multinational Enterprises triggers a Misaligned classification, irrespective of revenue or operational assessments. No calibration is applied; the screen reflects a binary compliance standard.

Combined classification

The final company-level classification — Aligned, Neutral, or Misaligned — is an ordinal label derived from the combination of these thresholds. The calibration process treated the overall distribution of classifications as a quality check: a methodology producing implausibly few Aligned or Misaligned companies, or generating classifications inconsistent with well-understood company profiles, was taken as evidence that a threshold required adjustment.

Minimum scoring requirements

For a company to receive an overall SDG Alignment assessment, Clarity AI must always have global norms data available, together with data for at least one of the two alignment pillars: either products and services data for Revenue Alignment, or operational and fundamental company data (total revenues or number of employees) for Operational Alignment.

Revenue Alignment relies on data from a third-party provider that covers ~60,000 companies. Without revenue data, a Revenue Alignment score cannot be produced.

Operational alignment relies on data collected or estimated by Clarity AI. For companies within Clarity AI's data collection universe, the full set of applicable operational indicators is considered. For companies where only modelled estimates are available, assessment is limited to six estimable metrics: carbon emissions (Scope 1 + Scope 2) intensity, energy intensity, hazardous waste intensity, total waste intensity, cost of air pollutants intensity, and water consumption intensity. Where no reported or estimated data is available an Operational Alignment assessment cannot be produced

2.7. International Agreement Alignment

The methodology is directly aligned with the UN Sustainable Development Goals (2015). It uses the SDG targets and indicators as the structural basis for identifying the most relevant issues, and how companies can contribute towards them via their operations or their products and services.

The methodology also classifies companies with violations of the United Nations Global Compact, the OECD Guidelines for Multinational Enterprises, or the United Nations Guiding Principles on Business and Human Rights principles and guidelines as misaligned, regardless of the alignment status of their products, services, or operations.

The methodology assesses contribution (i.e., observable behavior and revenue) rather than commitment (i.e., declared targets). The Science Based Targets initiative (SBTi) approved-target indicator under SDG 13, which directly aligns business emissions reduction goals with the Paris Agreement, is the only commitment-based signals used. It is applied only as a positive

(alignment-triggering) signal in the context of specific company operations, and it is never used as a basis for misalignment.

2.8. Industry Classification Standards

Company-to-sector mapping is facilitated through Clarity AI's proprietary internal classification system, which comprises 169 sub-industries. This system is technically anchored in the Global Industry Classification Standard (GICS[3]) level 4, but features refined categorizations designed to more granularly capture specific sustainability and impact characteristics in key carbon-intensive industries.

2.9. Scientific Evidence

We prioritise aligning our methodology and selecting metrics in accordance with science-based standards. Where such scientific standards are lacking, we rely on recognised industry standards wherever possible. Any gaps or ambiguities in standards are addressed on the basis of scientific findings from reputable publications.

The methodology is anchored in the UN Sustainable Development Goals framework (2015) and its 169 targets. Beyond this, the selection of relevant issues, contributing activities, and operational indicators draws on a wide range of authoritative sources, including:

- UN agencies and reports: WHO, UNICEF (in collaboration with FAO, UNHCR, WFP, and WHO), UNFCCC, UN Global Compact, UNGPs, UNCTAD, UNEP, UN Convention against Corruption.
- Standard-setting and industry bodies: Global Reporting Initiative (GRI), Science Based Targets initiative (SBTi), ILO, OECD, World Bank, IMF, IEA, EU Eurostat, IRENA, ESMAP, IPCC.
- Academic and research literature: The methodology references peer-reviewed publications on topics including poverty and employment dynamics, the health impacts of air pollution, the relationship between training investment and worker outcomes, the impact of microfinance on financial inclusion, and the environmental impact of plastic production.
- Public-body datasets: Our World in Data, the EPA's Toxics Release Inventory, the World Bank's Rural Access Index and country-income classifications, and EU water footprint studies.

[3] The Global Industry Classification Standard (GICS) is an industry taxonomy developed by MSCI and Standard & Poor's (S&P).

3. Data Sourcing and Quality

3.1. Data Sourcing

Clarity AI sources company data from a combination of corporate disclosures, third-party data providers, research from subject-matter experts, and proprietary estimation models. The mix of sources differs across the three pillars of the methodology — Revenue Alignment, Operational Alignment, and the Global Norms screen — reflecting the differing nature and availability of the underlying data. The sections below describe the data sourcing for each.

Revenue Alignment

Revenue Alignment requires a breakdown of company revenue across its different business activities. Because companies rarely disclose revenue at the level of granularity the methodology requires, revenue alignment figures are, in most cases, estimated rather than directly reported. In these cases, our third-party provider maps a company's reported business segments to granular product and service categories and assigns a revenue share to each.

The primary source is a third-party data provider that licenses activity-level revenue segmentation to Clarity AI. Where company disclosures permit, these estimates are refined using regulatory and reported sources, including the EU Taxonomy disclosures referenced earlier in this methodology (Subsection 2.4. EU Taxonomy Alignment), which provides a directly reported basis for certain environmentally aligned activities. Research from subject-matter experts supplements these sources where neither third-party segmentation nor company disclosure is sufficient, allowing Clarity AI's research teams to assign revenue to contributing activities on a case-by-case basis.

Operational Alignment

Operational Alignment compares companies against sub-industry peers across the operational indicators set out in the Appendix. The data underlying these indicators is a mixture of reported and estimated values, depending on the indicator and on company disclosure.

Where companies disclose the relevant metric — for example, CO2e emissions, water consumption, or gender pay gap — the reported value is used. These disclosures are drawn from sustainability reports, integrated reports, and regulatory filings prepared under frameworks such as the Corporate Sustainability Reporting Directive (CSRD), among others; these reports may or may not have been subject to external assurance.

Reported data is collected through Clarity AI's proprietary data collection platform, which combines automated extraction (natural language processing) with human collectors. Human collection uses a mix of outsourced and internal resources, with internal teams responsible for quality control and for collecting more complex data that requires in-depth expertise or carries a high error rate when outsourced. The platform embeds quality controls supported by machine learning models and a range of workflows (e.g., double manual entry; comparison of automated extraction against manual entry) to ensure only high-quality inputs are processed further (see more details on this in subsection 3.2. Data Quality and Reliability). For the intensity-related indicators (e.g., energy

consumption intensity), we use revenue and number of employees data provided by a third-party provider to calculate the intensity from the collected raw data.

Where a company does not disclose a required operational metric, the value is estimated using machine learning models (see more details in subsection 3.4. Missing Data and Estimations). Estimation models are only used for the following indicators: carbon emissions (Scope 1 + Scope 2) intensity, cost of air pollution intensity, energy consumption intensity, waste generation intensity, hazardous waste generation intensity, and water consumption intensity.

Global Norms screen
The Global Norms screen relies on Clarity AI's Global Norms dataset, which captures media-reported ESG incidents globally and is sourced entirely from news information provided by a specialist news provider, LexisNexis. You can find more details in the Clarity AI - Global Norms Screening Methodology.

The methodology does not explicitly assess the credibility of corporate climate transition plans. SDG 13 alignment is captured through operational performance (carbon emissions intensity, energy use intensity, renewable energy (%)) and the SBTi approved-target indicator, but no separate transition-plan assessment is produced.

Where third-party data providers are relied upon, their selection and oversight follows a defined outsourcing procedure. Clarity AI performs a lifecycle assessment of each provider to ensure competent, duly authorized, and capable provider selection and supervision, alongside effective monitoring and control of the outsourced activity and its associated risks.

3.2. Data Quality and Reliability

Clarity AI operates a data validation and quality control framework applied at each stage of the data ingestion, processing, and release process. The framework covers pre-release validation of raw data, validation of ratings, a defined remediation process, and a policy for the revision of historical data. The validation process is reviewed and updated at least annually.

Prior to each data release, the dedicated Raw Data Team performs a validation of the candidate raw data dataset proposed for release. The validation covers all metrics in scope for the release. The following checks are applied:

- Coverage checks: unexpected losses in metric, provider, or entity coverage relative to the prior release are investigated. Losses affecting priority metrics are treated as release blockers.
- Value range checks: data points are verified against pre-defined acceptable ranges for each metric. Points outside those ranges are flagged for review.
- Absolute value change checks: individual data point values are compared between the candidate release and the version in production. Unexpected deviations are flagged for review.

- Historical series consistency: Z-scores are calculated per metric for each entity across all available years. Year-on-year changes are also monitored, with large deviations between consecutive years triggering a flag on both affected data points.
- Related metrics consistency: internal consistency across logically related metrics is verified, for example, by checking that the sum of component values does not exceed the corresponding total.
- Policy metric checks: transitions in policy values or targets are monitored, with particular attention to losses of previously reported policies. Data points inconsistent with the prevailing industry profile are subject to sample-based review.

Data points that fail validation checks are added to a provisional blacklist, blocking them from the release. All blocked data points are documented and tracked in dedicated tickets. Issues that cannot be resolved within the validation window result in a rollback to the previously released version of the affected dataset, on a case-by-case basis. Following raw data validation, relevant experts perform additional product-level checks on ratings, which include, but are not limited to, coverage checks, data freshness, methodology alignment, and in depth review of sampled data.

Data is updated through full releases and targeted releases. Full releases follow the complete validation process described above, while targeted releases cover specific datasets or corrections and follow an accelerated validation timeline. Urgent corrections addressing factual errors in the data are incorporated on an ad hoc basis through the quality inventory, subject to prioritization and verification.

3.3. Data Revision Policy

Clarity AI maintains a policy for the revision of historical data, reflecting the fact that companies regularly restate previously reported figures. Restatements are classified by reason — corrections, methodology updates, boundary updates, fiscal year adjustments, or unspecified — and are identified systematically during the collection process. For GHG emissions metrics, automated tooling is used to detect restated values at source. For other metrics, the standard approach is to collect the first published value, with restatements incorporated upon identification. All restatements are documented and traceable, and restated values undergo the same quality controls as current-year data before being reflected in the platform. Where a restatement is material, it may trigger a broader review of affected ratings.

3.4. Missing Data and Estimations

For metrics where reported data is not available, Clarity AI uses advanced machine learning (ML) models. These models learn from reported data to identify complex patterns between a company's relevant metric and core characteristics like its business activities, geographical footprint, financial revenue, or employee headcount. To ensure fair comparisons across different organizations, the model calculates the estimates as an intensity ratio relative to company size (measured in revenues).

To guarantee high output quality, the model is built in collaboration with sustainability experts and undergoes strict validation. It is rigorously tested on a hidden dataset of real company information to evaluate performance on completely unseen data. All estimates are stored in a specific database

with full traceability of different models' versions.

Estimation is applied to a defined set of quantitative metrics, including:

- Carbon emissions intensity (Scope 1 and Scope 2)
- Energy consumption intensity
- Water consumption intensity
- Waste and pollutants (waste total intensity, hazardous waste intensity, air pollutant emissions cost intensity)

The cost of air pollutants model leverages Clarity AI estimation models to estimate the tons of air pollutants per million USD of revenue emitted by a company across different gases (nitrogen oxides, sulfur oxides, particulate matter to air, and volatile organic compounds) and it is then transformed to the cost of air pollution per revenue using pollutant-specific conversion factors[4].

3.5. Handling of Major New Information

The valid time horizon of the rating is defined as the time between Clarity AI data releases. Please note that our ratings are rules-based, rather than analyst-driven assessments. They are updated and made available to users at regular intervals through the Clarity AI platform, following the data release process and calendar (typically every two weeks, aligned with underlying data updates). A material change to an individual rating is triggered by the ingestion of updated corporate disclosures, including updated revenues, significant modifications to the rules-based analytical framework, or the systematic remediation of identified data errors.

4. Artificial Intelligence (AI) Usage

4.1. Methodology Implementation

Clarity AI integrates AI-assisted software development tools to facilitate the translation of approved ESG rating methodologies into production-ready code. In this capacity, AI functions as an engineering support tool to optimize efficiency and code quality by assisting with logic drafting, unit test generation, refactoring, and the systematic identification of potential edge cases or implementation defects.

AI is not deployed as an autonomous decision-maker; it does not independently define or modify rating methodologies. All methodology design and final deployment decisions remain the sole responsibility of our engineers and methodology owners, governed by established review protocols.

The integration of AI into methodology implementation introduces specific risks, including potential misinterpretation of requirements, subtle calculation errors, or the creation of technical debt through unmaintainable logic. Furthermore, there is a risk of over-reliance leading to insufficient

[4] These conversion factors are calculated by our specialized research team using different academic sources on the impact of pollution to human life.

independent validation or reduced traceability if implementation decisions are not rigorously documented and peer-reviewed.

These implementation risks are systematically mitigated through our standard software development lifecycle (SDLC) and rigorous engineering controls.

Human Accountability and Review: All AI-assisted implementations are fully owned and validated by Clarity AI engineers. AI tools are prohibited from approving code or deploying changes. Every methodology-related code change undergoes mandatory peer review to ensure correctness against approved requirements, architectural consistency, and data integrity.

Testing and Validation: AI-assisted code must adhere to a comprehensive testing pyramid, including unit tests for specific calculations, integration tests for data pipelines, and regression tests to ensure historical stability. Deterministic logic is validated against predefined test cases and controlled datasets to confirm the implementation aligns with the intended methodology behavior.

Good Engineering Practices: We apply standardized MLOps and engineering safeguards, such as version control, continuous integration, and static analysis. By enforcing small, reviewable pull requests and clear ownership of code changes, we maintain high standards of transparency and allow for the rapid rollback of production changes if anomalies are detected.

Traceability and Governance: Every technical implementation is transparently linked back to its underlying methodology documentation and acceptance criteria. AI-generated suggestions are only promoted if they are traceable to approved inputs, ensuring that AI remains a constrained tool within our broader methodology governance framework.

4.2. Data Collection

Clarity AI uses AI, specifically Large Language Models (LLMs), to support the extraction of ESG data points from unstructured corporate disclosures (e.g., annual and sustainability reports). This extraction process is always grounded in the underlying source document.

The use of AI in this context involves inherent limitations and risks. These include the risk of "hallucination" (producing a plausible but unsupported value), "misinterpretation" (confusing units or materially different figures), and performance degradation over time ("drift") as reporting formats or the underlying LLMs evolve. Additionally, accuracy may be uneven across different sectors, languages, or company sizes (disparate performance). Extractors are also limited by the quality and content of the source documents provided.

These risks are systematically mitigated by designing our internal data extraction platform around the principle that AI outputs must be measured, reviewed, traceable, and reversible.

Quality and Consistency: Every new extractor version is rigorously tested against human-verified "ground-truth" annotations before deployment. All extractors running in production are under ongoing human monitoring, with review intensity adapted based on the extractor's historical

performance. This continuous monitoring helps us catch drift and disparate performance proactively.

Transparency and Governance: Every value is transparently linked back to its source; most values are returned with the supporting quote and page location, ensuring full traceability. Strict human oversight on the extractor version is enforced through a two-stage workflow where only designated experts can approve and deploy an extractor version. This creates an auditable record of which AI configuration produced any given data point at any time, and allows for the quick disabling or downgrading of an extractor if input distributions change.

4.3. Global Norms Screening

Our SDG Assessment methodology integrates a specialized AI/ML pipeline to monitor global news and convert unstructured text into structured sustainability signals. The system processes high volumes of news through distinct models that handle entity extraction, company attribution, controversy detection, category mapping, severity scoring, and episode clustering to prevent double-counting. Additionally, large language models (LLMs) filter borderline content, summarize events, and evaluate data quality.

While highly efficient, using AI for controversy tracking involves inherent limitations. These include potential false positives or negatives, ambiguity in mapping multi-company news, source coverage gaps, and LLM-specific risks like hallucination. These limitations could present operational risks, such as score volatility, bias against highly covered organizations, or incomplete information due to misattribution or missed controversies.

To safeguard data integrity and mitigate these risks, we combine technical and human-in-the-loop validation. Structurally, all AI models are benchmarked against human-labeled datasets, alternative approaches are systematically logged, and company names are masked during training to eliminate brand bias. Performance is continuously tracked using automated quality dashboards.

In addition, a dedicated team of subject-matter experts performs daily reviews of incidents using documented methodologies. For global norm violation cases, we enforce a strict four-eyes review and a formal 3-tier review process. Human expert labels permanently override model predictions, correcting immediate data points while simultaneously retraining and refining future AI model iterations.

4.4. Data Estimations

The deployment of advanced Machine Learning (ML) models is necessary to close data gaps, introducing specific methodological risks which we manage through a standardized operational and Data Governance framework designed to systematically validate model outputs.

Advanced ML models, while highly accurate, capture complex relationships but can sometimes obscure the reasoning behind an output (the "black box" problem). To ensure auditability and trust, we enforce strict documentation protocols and invest in systematic explainability tools. Furthermore, every automated validation check is mapped back to clear, real-world domain knowledge, ensuring the rejection or flagging of any estimate can be diagnosed.

We actively prevent the generation of unreliable data for industries with low public disclosure by enforcing strict minimum reporting thresholds. If an industry falls below the required data volume, the ML estimate is automatically suppressed to prevent unwarranted statistical extrapolation.

To prevent algorithms from predicting impossible scenarios, we integrate "Essential" validation checks that enforce physical constraints, automatically blocking outputs that violate physical realities, such as estimations of negative waste generation.

To ensure stable historical trends for financial applications, we apply temporal validations that detect and cap extreme year-on-year variations against expected industry distributions. This prevents artificial volatility and enforces trend consistency.

Finally, to actively mitigate the risk of algorithmic bias that could inadvertently facilitate greenwashing, our models are not solely optimized to minimise the error in their predictions. Instead, we prioritize the accurate differentiation between industry leaders and laggards (relative rank preservation). We only deploy a complex ML model if it achieves a substantial performance gain (defaulting to a >20% improvement) over simpler, existing methods, ensuring the investment in complexity is justified.

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5. Assumptions and Limitations

5.1. Key Assumptions

The methodology rests on the following key assumptions:

- Net revenue threshold: A 5% net revenue threshold meaningfully distinguishes companies that derive a substantial share of revenue from contributing activities from those that do not.
- Operational performance thresholds: A top-20% threshold for alignment and a bottom-2% threshold for misalignment, set relative to sub-industry peers, meaningfully distinguish operational leaders and severe laggards from the companies performing in line with their sub-industry peers.
- Global norms screen: Global norms violations, as identified and verified through Clarity AI's controversies model, are assumed to serve as a reliable proxy for identifying organizations not following responsible business practices as defined in the UN Global Compact (UNGC) principles or the OECD Guidelines for Multinational Enterprises.
- Proportional impact assumption: Revenue derived from a contributing activity is assumed to translate into proportional impact. This holds well for products with clear physical impact (e.g., kWh of renewable energy generated) but the link might be weaker for indirect contributors (e.g., wiring used in a renewable energy installation).

- Sub-industry peer distributions: Sub-industry peer distributions are a valid reference for identifying operational leaders and laggards. Additionally, it assumes that companies within the same sub-industry face comparable operational realities. For diversified conglomerates, this may understate or overstate true performance relative to a more precise peer set.

5.2. Limitations in Data Sources

The methodology is subject to the following data limitations:

- Reporting coverage: Operational indicators rely on company disclosures. Where companies do not report or are not within Clarity AI's universe of actively collected companies, estimation models are applied, but estimation introduces statistical uncertainty.
- Reporting lags: Sustainability reports are typically published annually. The most recent reported value for an indicator may reflect activity from one to two years prior.
- Disclosure bias: Companies may disproportionately report on areas where their performance is favorable, while under-reporting areas where it is not.
- Revenue segmentation granularity: Revenue Alignment depends on the granularity of segmentation reported by the company or available through third-party providers. Aggregated segmentation can blur contributing and non-contributing activities.
- Controversy' coverage: The norms-violations screen relies on news coverage, which is uneven across geographies and languages. Violations not reported in monitored sources may not be detected.

5.3. Limitations in Methodologies and Models

The methodology is subject to the following limitations:

- Indicator coverage of social SDGs: Operational indicators for some social SDGs (e.g., SDG 2: Zero Hunger, SDG 16: Peace, Justice and Strong Institutions) are limited or unavailable. The same is true for the Revenue Alignment assessment for some SDGs where no relevant issues actionable through products and services can be identified (e.g., SDG 17: Partnerships for the Goals). In these cases, no Revenue or Operational Alignment classification is produced for the SDG.
- Indirect treatment of governance: Governance issues are addressed only through the global norms screen. They are not separately measured at the company level.
- Backward-looking bias: The methodology relies predominantly on the most recent reported or estimated data. With the limited exception of the SBTi indicator under SDG 13, it does not provide a forward-looking assessment.
- Static thresholds: The Revenue Alignment thresholds (±5%) and Operational Alignment thresholds (top 20%, bottom 2%) are fixed. They do not adapt to shifts in sector-level performance distributions over time.

- Country-level geographic filters: Geographic filters operate at the country level without accounting for the regional variability that might exist within countries.
- Focus on most relevant issues: We focus on business activities that account for the top 80% of an SDG's burden. Excluding the remaining issues can mean overlooking activities that contribute tangentially, positively or negatively, towards the SDGs.
- Binary industry applicability: Operational indicators are assessed only for sub-industries deemed relevant to a given issue, with applicability determined at the sub-industry level using a 90% share-of-global-contribution threshold. This creates a binary cut-off: sectors falling just below the threshold are excluded entirely, so any operational impact they do have is not captured.
- Results volatility: The peer comparisons used in the Operational Assessment can be volatile. However, the mean % of changes in Operational Alignment assessment for each data update is below 1%. Furthermore, during the pre-release data validations, a subject matter expert always reviews changes in the Overall Alignment assessment to ensure that they are driven by meaningful updates in the underlying raw data of a company.
- Scope 3 emissions are not captured: The SDG 13 (Climate Action) operational indicators cover only Scope 1 and Scope 2 emissions, not Scope 3 (value-chain) emissions. For sectors where Scope 3 is the large majority of climate impact, such as financial services, retail, and technology, the operational assessment may understate a company's true climate footprint.

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6. Methodology Governance

Clarity AI maintains a robust methodology governance framework designed to ensure that all rating methodologies remain independent, rigorous, systematic, and impartial. To uphold these core principles, Clarity AI subjects its methodologies to a structured development, review, and approval process overseen by dedicated internal governance bodies, in line with our ESG Ratings Governance Policy.

Process and Frequency for Revising Methodologies
Methodologies are reviewed on a regular basis and at least annually to verify that they remain fit for purpose, aligned with emerging regulatory requirements, and reflective of market trends. The revision process follows a systematic approach divided into three core phases: Preparation, Development & Testing, and Review & Approval.

The Review & Approval Phase includes a formal peer review and mandatory final approval by the Methodology Committee before any update can be deployed.

Clarity AI is committed to transparent communication to users and rated entities, and makes information about its methodologies publicly available. The Chief Research Officer (CRO) oversees that methodology related documentation intended for disclosure meets external transparency requirements.

Clarity AI does not run market consultations in respect to its methodologies. However, once the methodologies are disclosed, users, rated entities and other stakeholders may submit their feedback in respect thereof via the existing communication channels.

Conditions for Determining a Revision

Clarity AI has established specific conditions that trigger an official review and potential material modification of its rating methodologies. A review is initiated when there are updates to external sustainability standards or regulatory frameworks that directly impact the assessment criteria. It can also be driven by the availability of new or improved data sources, or conversely, by modifications, additions, or the discontinuation of data from third-party providers. Furthermore, enhancements to internal quantitative engines or underlying assessment models necessitate a review. Lastly, the governance framework mandates that formal complaints or external stakeholder feedback are reviewed by the Methodology Committee to determine if specific methodological adjustments are required.

Assessing Rating Impact

To prevent arbitrary adjustments, changes to existing methodologies are implemented via new or adapted algorithms and are automatically applied across the entire rated sample, including corporate, financial instruments, or sovereign scores. When a methodology modification is deemed material, Clarity AI mandates that a comprehensive impact assessment be conducted prior to the scheduled data release. This ensures that any subsequent rating shifts are fully traceable to verifiable data processing or predefined methodological adjustments rather than qualitative overrides. Information about material changes to the methodologies is made available to users and rated entities, accompanied by a clear explanation of the change's motivation and its expected impact analysis.

Engagement Process

The methodology is applied to the assessed universe on an unsolicited basis, relying exclusively on publicly available information. Rated items do not participate in the assessment process. Once the rating is issued, Rated items can access Clarity AI’s platform for free to review it, including the underlying data used to calculate the rating, and to submit complaints in case there are any errors.

Appendices

Indicators used to assess revenue contribution and operational performance

This appendix lists all indicators used in the assessment of Revenue Contribution and Operational Performance, organized by SDG.

For revenue activities, (+) denotes contribution to positive alignment and (−) denotes contribution to negative alignment. Activities subject to geographic filtering are identified by the applicable country grouping: LI countries (low income countries), LLM countries (low and lower-middle income countries), or LMIC (low, lower-middle, and upper-middle income countries).

For operational performance indicators, the (+) and (−) symbols denote the directionality of each metric, indicating whether higher values correspond to a positive or negative contribution to SDG alignment. For example, GHG emissions intensity is assigned a (−) because higher emissions indicate poorer operational performance, whereas renewable energy use (%) is assigned a (+) because a higher share indicates better operational performance.

Both revenue activities and operational indicators may map to multiple SDGs where they are material to more than one goal. For example, the operational indicator injury rate maps to SDG 3 and SDG 8, while the activity of renewable fuels manufacture contributes to SDGs 7, 11, and 13. However, when aggregating results at the company level, activities and indicators are not double-counted. Each activity or indicator is included only once in the overall company score, regardless of the number of SDGs to which it is mapped. Similarly, an activity that maps to multiple issues within a single SDG is counted only once when calculating the company SDGs Alignment. For example, "Water infrastructure construction and operation" maps to more than one issue under SDG 6 but is still counted only once.

SDG 1: No Poverty

Revenue Contribution	
Issue	**Activity**
Finance Accessibility	Educational loans (+)
	Microlending (+)
	Remittances and other electronic payment processing (+) (LLM countries)

Operational Performance

Metric	Metric Description
Net headcount growth rate (+)	Measured as the difference between total employee headcount in current year versus previous year, expressed as a percentage over the previous year's headcount. For instance, a firm that had 100 employees one year and 115 the next would have a 15% increase in new hires.

SDG 2: Zero Hunger

Revenue Contribution	
Issue	**Activity**
Food Productivity	Agricultural support products and services (+) (LLM countries)
	Agricultural production machinery manufacture (+) (LLM countries)
	Non-nitrogen-based fertilizers manufacture (+) (LLM countries)
Food Access	Grains production (+) (LLM countries)
	Low-carbon protein sources production (+) (LLM countries)
Obesity and Overweight	Fitness and athletics products and services (+)
	Production of high fat and sugar content foods[5] [6] [7] (-)
Diet Low in Fruit, Vegetables, Legumes and Others	Fruits and vegetables production (+)

Operational performance of SDG 2 is not assessed by any operational indicators.

SDG 3: Good Health and Well-being

Revenue Contribution	
Issue	**Activity**
Treatment Support Activities	Medical equipment and pharmaceuticals distribution (+)
	Emergency services (+)
	Healthcare industry software (+)

[5] WHO, 2022, Acceleration plan to stop obesity
[6] WHO, 2021, Obesity and overweight fact sheet
[7] WHO, 2021, Consumption of ultra-processed foods associated with weight gain and obesity in adults

	Healthcare research and development (+)
	Anesthesiology and surgical pharmaceuticals and devices manufacture (+)
	Essential medical devices and supplies manufacture (+)
	Medical imaging and diagnostic devices manufacture (+)
	Other essential pharmaceuticals manufacture (+)
	Hospitals and other medical facilities operation (+)
	Other healthcare services (+)
Mental and Substance Use Disorders	Low alcoholic content beverages manufacture[8] (-)
	Spirits and hard liquor beverages manufacture[9] (-)
	Alcoholic beverages distribution[10] (-)
	Tobacco and other nicotine delivery products manufacture and distribution[11] (-)
Unintentional Injuries	Vehicle safety devices manufacture (+)
	Occupational safety equipment manufacture (+)
Cardiovascular Diseases	Cardiovascular pharmaceuticals and devices manufacture (+)
	Tobacco and other nicotine delivery products manufacture and distribution[12] (-)
Respiratory Diseases	Respiratory pharmaceuticals and air quality devices manufacture (+)
	Tobacco and other nicotine delivery products manufacture and distribution[13] (-)
Sense Organ Diseases	Ophthalmology and otorhinolaryngology (ENT) pharmaceuticals and devices manufacture (+)
	Prescription frames and other vision health services manufacture (+)
Oncology and Hematology Diseases	Oncology and hematology pharmaceuticals and devices manufacture (+)

[8] WHO, 2020, WHO Methods and data sources for global burden of disease estimates
[9] WHO, 2020, WHO Methods and data sources for global burden of disease estimates
[10] WHO, 2020, WHO Methods and data sources for global burden of disease estimates
[11] WHO, 2023, WHO report on the global tobacco epidemic
[12] WHO, 2023, WHO report on the global tobacco epidemic
[13] WHO, 2023, WHO report on the global tobacco epidemic

	Tobacco and other nicotine delivery products manufacture and distribution[14] (-)
Maternal and Neonatal Health Access	Contraceptives and women's health products manufacture (+)
	Obstetric and gynaecological pharmaceuticals and devices manufacture (+)
Infectious and Parasitic Diseases	Antibacterial and antiviral pharmaceuticals manufacture (+)
	Immune system pharmaceuticals manufacture (+)
Diabetes	Diabetes pharmaceuticals and devices manufacture (+)
Musculoskeletal Diseases	Musculoskeletal pharmaceuticals and devices manufacture (+)
Digestive Diseases	Gastrointestinal pharmaceuticals and devices manufacture (+)

Operational Performance	
Metric	**Metric Description**
Air pollutant emissions cost intensity (-)	The monetized social cost of a company's air pollutant emissions (the economic value of the damage those emissions impose on society, including health impacts and ecosystem harm), divided by the company's revenue.
Total Injury Rate (-)[15]	Number of accidents per million hours worked.

[14] WHO, 2023, WHO report on the global tobacco epidemic

[15]The rate of accidents metric is adjusted to ensure that while the worst performers are penalized for underperformance, top performers are not rewarded as the vast majority of companies are not exposed to accident conditions on the basis of their industry characteristics.

SDG 4: Quality Education

Revenue Contribution	
Issue	**Activity**
Professional and Formal Education	Other educational services (+) (LMIC countries)
	Primary secondary and tertiary educational institutions (+) (LMIC countries)
Educational Resource	Educational tools and resources (+) (LMIC countries)

Operational Performance	
Metric	**Metric Description**
Average training hours per employee (+)	Number of hours of training provided by the employer to each employee on average.

SDG 5: Gender Equality

Revenue Contribution	
Issue	**Activity**
Reproductive Health Access	Contraceptives and women's health products manufacture (+)

Operational Performance	
Metric	**Metric Description**
Women in managerial positions (%) (+)[16]	Percentage of managerial positions within a company that are occupied by women.
Women employees (%) (+)	Percentage of company positions held by women.
Gender pay gap (%) (-)	The difference between the average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees.

[16]After analysis, we have decided not to include the metric "Women on the board of directors" in assessing SDG 5 alignment. While the metric can certainly offer valuable insights, the metric exhibited a significant bias toward larger companies with larger boards, distorting the overall results of the module.

SDG 6: Clean Water and Sanitation

Revenue Contribution	
Issue	**Activity**
Safely Managed Sanitation	Water infrastructure construction and operation (+)
	Water quality and filtration equipment manufacture (+)
	Low emission waste water systems construction and operation (+)
Basic Drinking Water	Water infrastructure construction and operation (+)
	Water quality and filtration equipment manufacture (+)
	Low emission waste water systems construction and operation (+)
Water and Liquid Waste Treatment	Water infrastructure construction and operation (+)
	Water quality and filtration equipment manufacture (+)
	Low emission waste water systems construction and operation (+)

Operational Performance	
Metric	**Metric Description**
Water consumption intensity (-)	Cubic meters of water used per million USD of company revenue.
Water Recycled Ratio (+)	Percentage of water recycled and reused by companies.
Water pollutant emissions intensity (-)	Tonnes of emissions to water generated by companies per million USD of company revenue.

SDG 7: Affordable and Clean Energy

Revenue Contribution	
Issue	**Activity**
Cleaner Energy Mix	Generation of power from bioenergy (+)
	Generation of power from geothermal energy (+)
	Generation of power from hydroelectric energy (+)
	Generation of power from mixed renewable sources (+)
	Generation of power from nuclear energy (+)
	Generation of power from solar energy (+)
	Generation of power from wind energy (+)
	Renewable energy technologies installation and maintenance (+)
	Equipment for emission reduction and control manufacture (+)
	Equipment for renewable energy generation manufacture (+)
	Manufacture of equipment for the production of hydrogen and other renewable fuels (+)
	Other renewable energy technologies manufacture (+)
	Renewable fuels manufacture (+)
	Energy storage (+)
	Generation of power from renewable fuels (+)
	Batteries manufacture (+)
	Mining and processing of vital resources for renewable energy technologies (+)
	Nuclear energy plants construction and operation (+)
	Hydrogen manufacture (+)
	Fossil fuels distribution (-)
	Manufacture of equipment for the distribution of fossil fuels (-)
	Fossil fuels exploration and production (-)
	Manufacture of equipment for fossil fuel exploration and production (-)

	Generation of power from fossil fuels[17] (-)
	Petroleum and other fossil fuels refining (-)
General Energy Efficiency	Consultancy and software services for emissions reduction and climate change adaptation (+)
	Energy efficiency equipment and components manufacture (+)
	Energy efficient buildings construction and operation (+)
	Energy efficient transmission and distribution of electricity (+)
	Energy efficient transmission and distribution of heat and cooling (+)
	Energy efficiency equipment installation and maintenance (+)
	Equipment for emission reduction and control manufacture (+)
Basic Electrification	Energy infrastructure construction and operation (+) (LI countries)
	Basic electrical systems and equipment manufacture (+) (LI countries)

Operational Performance	
Metric	**Metric Description**
Energy consumption intensity (-)	Total energy consumption in GWh per million USD of company revenue. Including energy produced and purchased (e.g., electricity, steam, oil).
Renewable energy use (%) (+)	Share of energy consumed from renewable sources versus non-renewable energy sources, expressed as a percentage of total energy consumption.
Energy consumption growth rate (%) (-)	Percentage of increase in total energy consumed by a company YoY. Total energy consumed includes energy produced and purchased (e.g., electricity, steam, oil). For utilities, raw materials are not included.

SDG 8: Decent Work and Economic Growth

Revenue Contribution	
Issue	**Activity**
Finance Accessibility	Educational loans (+)

[17] Our World in Data, 2020, Global greenhouse emissions by sector

Revenue Contribution	
	Microlending (+)
	Remittances and other electronic payment processing (+) (LLM countries)

Operational Performance	
Metric	**Metric Description**
Net headcount growth rate (+)	Measured as the difference between total employee headcount in current year versus previous year, expressed as a percentage over the previous year's headcount.
Total Injury Rate (-)[18]	Number of accidents per million hours worked.

SDG 9: Industry, Innovation and Infrastructure

Revenue Contribution	
Issue	**Activity**
Transport Infrastructure	Equipment and components for rail transport manufacture (+)
	Infrastructure for low-carbon air transport (+)
	Infrastructure for low-carbon personal transport (+)
	Infrastructure for low-carbon rail transport (+)
	Infrastructure for low-carbon road transport (+)
	Infrastructure for low-carbon water and sea transport (+)
	Transportation infrastructure construction and operation (+) (LMIC)
Telecommunications Infrastructure	Telecommunications infrastructure construction and operation (+) (LLM countries)
	Components for telecommunications infrastructure manufacture (+) (LLM countries)
	Telecommunication industry software (+) (LLM countries)
Finance Accessibility	Educational loans (+)

[18] The rate of accidents metric is adjusted to ensure that while the worst performers are penalized for underperformance, top performers are not rewarded as the vast majority of companies are not exposed to accident conditions on the basis of their industry characteristics.

Revenue Contribution	
	Microlending (+)
	Remittances and other electronic payment processing (+) (LLM countries)
Research and Development	Healthcare research and development (+)

Operational Performance	
Metric	**Metric Description**
R&D expenditure intensity in low and lower-middle income countries[19] (+)	Total research and development expenditures per million USD of company revenue. The expenditure is adjusted by the percentage of a company's revenue generated in low and lower-middle income countries.

SDG 10: Reduced Inequalities

After reviewing all targets within SDG 10, we find no revenue-generating activities with sufficient actionability to be mapped to this goal. SDG 10 targets address income inequality, social and political inclusion, and migration policy, areas driven primarily by government fiscal policy and regulation rather than corporate revenue activities.

Operational Performance	
Metric	**Metric Description**
Employees with disabilities (%) (+)	Percentage of total company employees with disabilities.

[19] The R&D expenditures (low and lower-middle income countries) metric is adjusted to ensure that while the best performers are rewarded for outperformance, the worst performers are not penalized merely for generating little revenue from low and lower-middle income countries. As such, while the best performing organizations can achieve alignment via this metric, relatively poor performance cannot trigger misalignment

SDG 11: Sustainable Cities and Communities

Revenue Contribution	
Issue	**Activity**
Transport Emissions	Infrastructure for electric vehicles construction (+)
	Electric and alternative fuel vehicles manufacture (+)
	Hydrogen manufacture (+)
	Renewable fuels manufacture (+)
	Vehicles for mass transit manufacture (+)
	Zero emission transit manufacture (+)
	Low-carbon mobility vehicles manufacture and operation (+)
	Batteries manufacture (+)
	Mass transit products and services (+)
	Low-carbon air transport (+)
	Low-carbon aircraft manufacture (+)
	Low-carbon freight transport (+)
	Rail freight transport (+)
	Manufacture of non-essential internal combustion engine vehicles[20] (-)
Transportation Services	Vehicles for mass transit manufacture (+)
	Zero emission transit manufacture (+)
	Rail freight transport (+)
	Equipment and components for rail transport manufacture (+)
	Low-carbon freight transport (+)
	Infrastructure for electric vehicles construction (+)
	Low-carbon mobility vehicles manufacture and operation (+)
	Mass transit products and services (+)

[20] Our World in Data, Where do CO2e emissions from Transport come from?

General Energy Efficiency	Consultancy and software services for emissions reduction and climate change adaptation (+)
	Energy efficiency equipment and components manufacture (+)
	Equipment for emission reduction and control manufacture (+)
	Energy efficient buildings construction and operation (+)
	Energy efficient transmission and distribution of electricity (+)
	Energy efficient transmission and distribution of heat and cooling (+)
	Energy efficiency equipment installation and maintenance (+)
Traffic Safety	Vehicle safety devices manufacture (+)
Affordable Housing	Affordable housing construction (+)

Operational Performance	
Metric	**Metric Description**
Air pollutant emissions cost intensity (-)	Quantifies the social cost of a company's air pollutant emissions — the monetary damages imposed on third parties through health impacts, ecosystem harm, and other effects not borne by the emitter, expressed per unit of revenue.

SDG 12: Responsible Consumption and Production

Revenue Contribution	
Issue	**Activity**
Waste Management	Waste to energy processing (+)
	Waste collection and disposal services (+)
	Recycling and processing services and equipment (+)
	Single use plastics manufacture[21] (-)
Water and Liquid Waste Treatment	Water infrastructure construction and operation (+)
	Low emission waste water systems construction and operation (+)
	Water quality and filtration equipment manufacture (+)
Metal Recycling	Manufacture of metals using recycled materials or low emission processes (+)

[21] World Bank Group, 2018, What a Waste 2.0 A Global Snapshot of Solid Waste Management to 2050

Operational Performance	
Metric	**Metric Description**
Waste generation intensity (-)	Total tonnes of waste generated by the company per million USD of company revenue.
Hazardous waste intensity (-)	Tonnes of hazardous and radioactive waste generated by the company per million USD of company revenue.
Waste Recycled Ratio (+)	Total recycled and reused waste produced divided by total waste produced.

SDG 13: Climate Action

Revenue Contribution	
Issue	**Activity**
Energy Production Emissions	Generation of power from bioenergy (+)
	Generation of power from geothermal energy (+)
	Generation of power from hydroelectric energy (+)
	Generation of power from mixed renewable sources (+)
	Generation of power from nuclear energy (+)
	Generation of power from solar energy (+)
	Generation of power from wind energy (+)
	Renewable energy technologies installation and maintenance (+)
	Equipment for emission reduction and control manufacture (+)
	Equipment for renewable energy generation manufacture (+)
	Manufacture of equipment for the production of hydrogen and other renewable fuels (+)
	Other renewable energy technologies manufacture (+)
	Renewable fuels manufacture (+)
	Mining and processing of vital resources for renewable energy technologies (+)

	Waste to energy processing (+)
	Nuclear energy plants construction and operation (+)
	Energy storage (+)
	Generation of power from renewable fuels (+)
	Batteries manufacture (+)
	Manufacture of chemicals through low emission processes (+)
	Fossil fuels distribution (-)
	Manufacture of equipment for the distribution of fossil fuels (-)
	Fossil fuels exploration and production (-)
	Manufacture of equipment for fossil fuel exploration and production (-)
	Generation of power from fossil fuels[22] (-)
	Petroleum and other fossil fuels refining (-)
Transport Emissions	Infrastructure for electric vehicles construction (+)
	Electric and alternative fuel vehicles manufacture (+)
	Hydrogen manufacture (+)
	Vehicles for mass transit manufacture (+)
	Zero emission transit manufacture (+)
	Rail freight transport (+)
	Equipment and components for rail transport manufacture (+)
	Infrastructure for low-carbon air transport (+)
	Infrastructure for low-carbon personal transport (+)
	Infrastructure for low-carbon rail transport (+)
	Infrastructure for low-carbon road transport (+)
	Infrastructure for low-carbon water and sea transport (+)
	Low-carbon air transport (+)
	Low-carbon freight transport (+)

[22] Our World in Data, 2020, Global greenhouse emissions by sector

	Low-carbon mobility vehicles manufacture and operation (+)
	Batteries manufacture (+)
	Low-carbon aircraft manufacture (+)
	Mass transit products and services (+)
	Renewable fuels manufacture (+)
	Manufacture of non-essential internal combustion engine vehicles[23] (-)
General Energy Efficiency	Consultancy and software services for emissions reduction and climate change adaptation (+)
	Energy efficiency equipment and components manufacture (+)
	Equipment for emission reduction and control manufacture (+)
	Energy efficient buildings construction and operation (+)
	Energy efficient transmission and distribution of electricity (+)
	Energy efficient transmission and distribution of heat and cooling (+)
	Energy efficiency equipment installation and maintenance (+)
Climate Change Adaptation	Consultancy and software services for emissions reduction and climate change adaptation (+)
	Climate change resilient infrastructure construction (+)
	Insurance against climate related perils (+)
	Several activities contributing to SDG 13 (+)[24]
Livestock and Manure	Low-carbon protein sources production (+)
	Beef and dairy production[25] (-)
Agricultural Soils	Equipment and services for soil remediation manufacture (+)
	Nitrogen based fertilizers manufacture (-)
Iron and Steel Emissions	Manufacture of metals using recycled materials or low emission processes (+)

[23] Our World in Data, Where do CO2e emissions from Transport come from?
[24] This activity is treated as a catch-all category. When leveraging EU Taxonomy data, companies do not always report at the individual activity level — in such cases, we assume the exposure belongs to "Several Activities" and classify it under Climate Adaptation. EU Taxonomy activities cover both Climate Adaptation and Climate Mitigation, and without granular company reporting, we cannot distinguish between the two
[25] Our World in Data, 2020, Focus on what you eat, not whether your food is local

Industrial Electrification	Industrial electric motors and batteries manufacture (+)

Operational Performance	
Metric	**Metric Description**
Carbon emissions intensity (-)	Tonnes of Scope 1 and 2 CO2e emissions generated by the company per million USD of company revenue.
Science Based Targets initiative approved target (+)	Whether the company has had an emissions reduction target approved by the Science Based Targets Initiative.

SDG 14: Life Below Water

Revenue Contribution	
Issue	**Activity**
Water and Liquid Waste Treatment	Water infrastructure construction and operation (+)
	Water quality and filtration equipment manufacture (+)
	Low emission waste water systems construction and operation (+)
Plastic Production	Single use plastics manufacture[26] [27] (-)
Waste Management	Waste collection and disposal services (+)

Operational Performance	
Metric	**Metric Description**
Waste generation intensity (-)	Total tonnes of waste generated by the company per million USD of company revenue.
Hazardous waste intensity (-)	Tonnes of hazardous and radioactive waste generated by the company per million USD of company revenue.
Water pollutant emissions intensity (-)	Tonnes of emissions to water generated by companies per million USD of company revenue.

[26] UN SDGs, indicator 14.1.1 (b) plastic debris density
[27] Lestari and Yulinah Trihadiningrum, "The Impact of Improper Solid Waste Management to Plastic Pollution."

SDG 15: Life on Land

Revenue Contribution	
Issue	**Activity**
Agricultural Soils	Equipment and services for soil remediation manufacture (+)
	Nitrogen based fertilizers manufacture (-)
Deforestation	Natural spaces management and restoration (+)

Operational performance is not assessed by any operational indicators under SDG 15.

SDG 16: Peace, Justice and Strong Institutions

Revenue Contribution	
Issue	**Activity**
Weapons Manufacture	Firearms and deadly military equipment manufacture[28] [29] (-)

Operational performance of SDG 16 and SDG 17 is not assessed by any operational indicators.

[28] WHO, 2019, Global study on homicide
[29] National Bureau of Economic Research, 2000, More Guns More Crime

Operational indicators: Selection rationale and SDG mapping

We leverage several indicators for measuring Operational Alignment. Below is a breakdown of the leveraged indicators, along with an accompanying justification of their inclusion. Note that some indicators are used to assess alignment to more than one goal.

Net headcount growth rate (SDG 1, SDG 8)

- This indicator is measured as the difference between total employee headcount in current year versus previous year, expressed as a percentage over the previous year's headcount. For instance, a firm that had 100 employees one year and 115 the next, would have a 15% increase in new hires.
- We source this information from corporate disclosure GRI Standard 401-1 within the framework of the Global Reporting Initiative (GRI) and use a third-party provider to fill in the coverage gaps.
- This indicator is directly aligned with the following SDG targets:
    - **SDG 1**: This indicator is aligned with target 1.2. Increased employment opportunities have been demonstrated to reduce the proportion of the population living in poverty according to relevant national definitions. A 1% increase in unemployment generates an increase in poverty rates of 0.4% to 0.7%[30].
    - **SDG 8**: The indicator is also directly aligned with target 8.5. and is a central measure of general contributions to full employment and employment growth.

Air pollutant emissions cost intensity (SDG 3, SDG 11)

- This indicator is measured as the external cost of direct and indirect air pollutants emissions (the economic value of the damage those emissions impose on society, including health impacts and ecosystem harm) per unit of revenue.
- Clarity AI leverages an estimation model to infer the cost of different air pollutants. The metric covers non-GHG air pollutants, typically NO_x, SO_x, PM2.5, PM10, VOCs, and NH3. Each pollutant quantity is multiplied by a social damage cost factor (expressed in $/ton) derived from epidemiological and economic research, which captures the harm that each pollutant causes to human health and ecosystems. The resulting costs across all pollutants are then summed into a single figure for the company.
- This indicator is directly aligned with the following SDG targets:
    - **SDG 3:** The indicator is directly related to the reduction of non-communicable disease (target 3.4) and to the reduction of deaths and illness from chemicals and environmental pollution (target 3.9). Outdoor air pollution has emerged as a severe cause of premature death[31] and is responsible for an estimated 8 million deaths annually (roughly 14% of global deaths)[32].
    - **SDG 11:** This indicator is also directly aligned with target 11.6 and is a key indicator of the environmental impact associated with urban centers, which experience far more

[30]Gorman, *Why Poverty Persists*
[31]OECD, *The Economic Consequences of Outdoor Air Pollution*
[32]Lelieveld, Haines, Burnett, Tonne, Klingmuller, Munzel, et al., "Air Pollution Deaths Attributable to Fossil Fuels: Observational and Modelling Study"

unhealthy air-quality days than rural regions due to the quantity and density of air pollution sources[33].

Total injury rate[34] (SDG 3, SDG 8)

- This indicator is measured as the number of accidents per million hours worked.
- We source this indicator from corporate disclosure GRI Standard 403-9-a.
- This indicator is directly aligned with the following SDG targets:
    - **SDG 3:** Total Injury Rate does not map directly to a single SDG 3 target, but relates to two targets within SDG 3:
        - Target 3.6 (halve deaths and injuries from road traffic accidents): while focused on road traffic, it establishes injury reduction as an explicit SDG 3 outcome. Occupational injury rates follow the same logic.
        - Target 3.9 (reduce deaths and illnesses from hazardous substances and pollution): relevant where injuries arise from exposure to hazardous materials or unsafe chemical environments, which is a subset of occupational injury contexts.
    - **SDG 8:** This indicator is directly aligned to target 8.8 and indicator 8.8.1 and is an indicator of companies' promotion of safe and secure working environments.

Average training hours per employee (SDG 4)

- This indicator is defined as the number of hours of training provided by an employer to each employee on average.
- We source this indicator from corporate disclosure GRI 404-1.
- The indicator is directly related to upskilling, technical, and vocational skills cited by targets 4.3 and 4.4. Investments in training generate substantial returns for employers[35] and empower upskilling for superior professional positioning[36].

Women in managerial positions (%)[37] (SDG 5)

- This indicator is defined as the Percentage of managerial positions within a company that are occupied by women.
- We source this information from corporate disclosure (GRI Standard 405-1).
- The indicator is directly aligned to target 5.5 and, even more specifically, indicator 5.5.2 (proportion of women in managerial positions). Women are outnumbered by men in senior leadership positions in all industries[38].

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[33]Strosnider, Kennedy, Monti, Yip, et al., *Rural and Urban Differences in Air Quality, 2008-2012, and Community Drinking Water Quality, 2010-2015 - United States*

[34]The rate of accidents metric is adjusted to ensure that while the worst performers are penalized for underperformance, top performers are not rewarded as the vast majority of companies are not exposed to accident conditions on the basis of their industry characteristics.

[35]Bartel, "Measuring the Employer's Return on Investments in Training: Evidence from Literature"

[36]Gallup, *The American Upskilling Study: Empowering Workers for the Jobs of Tomorrow*

[37]After analysis, we have decided not to include the metric "Women on the board of directors" in assessing SDG 5 alignment. While the metric can certainly offer valuable insights, the metric exhibited a significant bias toward larger companies with larger boards, distorting the overall results of the module.

[38]World Economic Forum, *Global Gender Gap Report 2023*

Women employees (%) (SDG 5)

- This indicator is defined as the percentage of positions within a company that are occupied by women.
- We source this information from corporate disclosure (GRI Standard 405-1).
- This indicator is aligned to target 5.1. Labor force participation among women remains significantly lower than that of men globally at 52.9% and 78.5%, respectively[39].

Gender pay gap (%) (SDG 5)

- Measured as the difference between the average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees.
- We source this information from corporate disclosure GRI Standard 405-2.
- The indicator is aligned to target 5.1. Gender-based pay gaps are strong barometers for global gender labor inequality. Data indicates that serious pay inequalities remain. In the EU, for example, the average gender pay gap sits at approximately 13.6%[40].

Water consumption intensity (SDG 6)

- Measured as cubic meters of water used per million USD of company revenue.
- We source this information from corporate disclosure GRI Standard 303-5-b and use a machine-learning estimation model to fill in the coverage gaps.
- The indicator is directly aligned to target 6.4 and is a measure of firms' overall water use efficiency. Global water consumption is increasing at a disproportionately rapid pace relative to population growth, and agricultural and industrial usage represents 89% of the global sum of all water consumption[41]. As such, significant efficiency gains are needed to reduce water scarcity and stress.

Water recycled ratio (SDG 6)

- Measured as the percentage of water recycled and reused by companies.
- We source this information from GRI 303-3 (water recycled and reused).
- The indicator is directly aligned to target 6.4 and is a measure of firms' responsible water use. Recycled water can drastically reduce water withdrawals, waste, and increase access to water for drinking and sanitation purposes[42].

Water pollutant emissions intensity (SDG 6, SDG 14)

- Measured as tonnes of emissions to water generated by companies per million USD of company revenue.
- We source this information from corporate disclosure GRI Standard 303-4.
- This indicator is directly aligned with the following SDG targets:

[39]The World Bank, *Female labor force participation over three decades*
[40]Eurostat, *Gender Pay Gap Statistics*
[41]Food and Agriculture Organization of the United Nations, *AQUASTAT - FAO's Global Information System on Water and Agriculture*
[42]Tortajada, "Contributions of recycled wastewater to clean water and sanitation sustainable development goals"

- **SDG 6:** The indicator is directly aligned to target 6.3 and is a measure of companies' contributions to industrial waste water flows and pollution. Industrial water pollution has a severe deleterious effect on environmental and human health[43].
- **SDG 14:** The indicator is also directly aligned to target 14.1.

Energy consumption intensity (SDG 7)

- Measured as the total energy consumption in GWh per million USD of company revenue. Including energy produced and purchased (e.g., electricity, steam, oil).
- We source this information from corporate disclosure GRI Standard 302-3 and use a machine-learning estimation model to fill in the coverage gaps.
- The indicator is directly aligned to target 7.3 and is a key measure of firms' overall energy efficiency.

Renewable energy use (%) (SDG 7)

- Measured as the share of energy consumed from renewable sources, expressed as a percentage of total energy consumption.
- We source this information from corporate disclosure GRI Standard 302-1.
- This indicator directly supports target 7.2 and is a measure of companies' promotion and use of a greener energy mix.

Energy consumption growth rate (%) (SDG 7)

- Measured as the percentage of increase in total energy consumed by a company YoY. Total energy consumed includes energy produced and purchased (e.g., electricity, steam, oil). For utilities, raw materials are not included.
- We source this information from corporate disclosure GRI Standard 302-4 and use a machine-learning estimation model to fill in the coverage gaps.
- The indicator supports target 7.3 and is a measure of a company's increasing or decreasing energy efficiency over time.

Research and development (R&D) expenditure intensity in low and lower-middle income countries (SDG 9)

- Measured as the total research and development expenditures per million USD of company revenue. This indicator is adjusted by the percentage of a company's revenue generated in low and lower-middle income countries.
- We source this information from corporate disclosures and annual reports, cross-referenced with World Bank country income classifications to determine the share of revenue generated in low and lower-middle income countries.
- The indicator is directly aligned to target 9.5. The indicator drives and measures enhanced scientific research and augmentation of technological capabilities of industrial sectors. R&D expenditures in emerging economies have been linked to significant economic growth, innovation, and general development.

[43]Ahmed, Thakur, Goyal, "Industrial Wastewater and Its Toxic Effects"

- The geographical filtering of total R&D expenditure by low and lower-middle income countries' (LLM) revenue share is grounded in SDG 9.5's call for increasing private R&D investment specifically in developing countries. In the absence of country-level R&D spending data, revenue share serves as a proxy: companies with greater economic presence in LLMs face stronger incentives to direct innovation toward those markets, making their proportional revenue a reasonable estimate of where R&D activity is most likely to generate local benefit.

Employees with disabilities (%) (SDG 10)

- Measured as the percentage of total company employees with disabilities.
- We source this information from corporate disclosure GRI Standard 405-1.
- The indicator is directly aligned to target 10.2 and is a measure of companies' promotion of economic inclusion among individuals with disabilities.

Waste generation intensity (SDG 12, SDG 14)

- Defined as total tonnes of waste generated by the company per million USD of company revenue.
- We source this information from corporate disclosure GRI Standard 306-2 and use a machine-learning estimation model to fill in the coverage gaps.
- This indicator is directly aligned with the following SDG targets:
    - **SDG 12:** The indicator is directly aligned to target 12.5 and is a key measure for evaluating companies' contributions to global waste generation.
    - **SDG 14:** It is also directly aligned with target 14.1. Global waste generation has a severe impact on marine ecosystems[44] [45].

Hazardous waste intensity (SDG 12, SDG 14)

- Defined as tonnes of hazardous and radioactive waste generated by the company per million USD of company revenue.
- We source this information from corporate disclosure GRI Standard 306-2 and use a machine-learning estimation model to fill in the coverage gaps.
- This indicator is directly aligned with the following SDG targets:
    - **SDG 12:** This indicator is directly aligned to target 12.5 and is a key measure for evaluating companies' contribution to hazardous waste generation. Hazardous waste has a differentiated effect on health and the environment relative to non-hazardous waste[46]. Thus, an isolated indicator is necessary.
    - **SDG 14:** This indicator is also directly aligned with target 14.1.

Waste recycled ratio (SDG 12)

- Measured as total recycled and reused waste produced divided by total waste produced.
- We source this information from corporate disclosure GRI Standard 306-2.

[44]Beaumont, Aanesen, Austen, Börger, Clark, Cole, Hooper, et al., 2019. "Global Ecological, Social and Economic Impacts of Marine Plastic."
[45]Lestari and Yulinah Trihadiningrum, "The Impact of Improper Solid Waste Management to Plastic Pollution."
[46]Exposto and Sujaya, *The Impacts of Hazardous and Toxic Waste Management: A Systematic Review*

- This indicator is directly aligned to target 12.5 and is a key indicator to assess companies' contribution to indicator 12.5.1, which addresses recycling rates.

Carbon emissions intensity (SDG 13)

- Measured as tonnes of scope 1 and scope 2 CO2e emissions generated by the company per million USD of company revenue.
- We source this information from corporate disclosures GRI Standards 305-1 and 305-2, and use a machine-learning estimation model to fill in the coverage gaps.
- This indicator contributes to Target 13.2, which calls for integrating climate change measures into national policies and strategies. While 13.2 is framed around government action, corporate emissions intensity is a direct measure of a company's contribution to, or mitigation of, climate change, and reducing it is central to achieving the collective ambition 13.2 represents.

SBTi approved target (SDG 13)

- Defined as whether a company has had an emissions reduction target approved by the Science Based Targets initiative. This indicator is only considered to trigger alignment, and not misalignment. As such, companies without an approved target are not punished.
- We source this information from the SBTi Companies Taking Action database.
- This indicator contributes to Target 13.2, which calls for integrating climate change measures into national policies and strategies. Having a Science Based Target approved means a company has embedded credible, Paris-aligned emissions reduction commitments into its strategy, the corporate-level equivalent of what 13.2 aims to achieve at the national level.

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