



INSIGHTS

# Demystifying Scope 3 GHG Emissions

[acuitykp.com](https://acuitykp.com)



# Introduction to Scope 3 emissions and the categories

Scope 3 GHG emissions are the indirect value chain emissions of a company that are not covered as a part of Scope 1 and Scope 2 emissions and include both upstream and downstream emissions. These emissions are outside the operational control of the company that reports them and are the most difficult to accurately measure or estimate. These emissions are further classified into 15 categories covering both upstream and downstream value chain emissions.

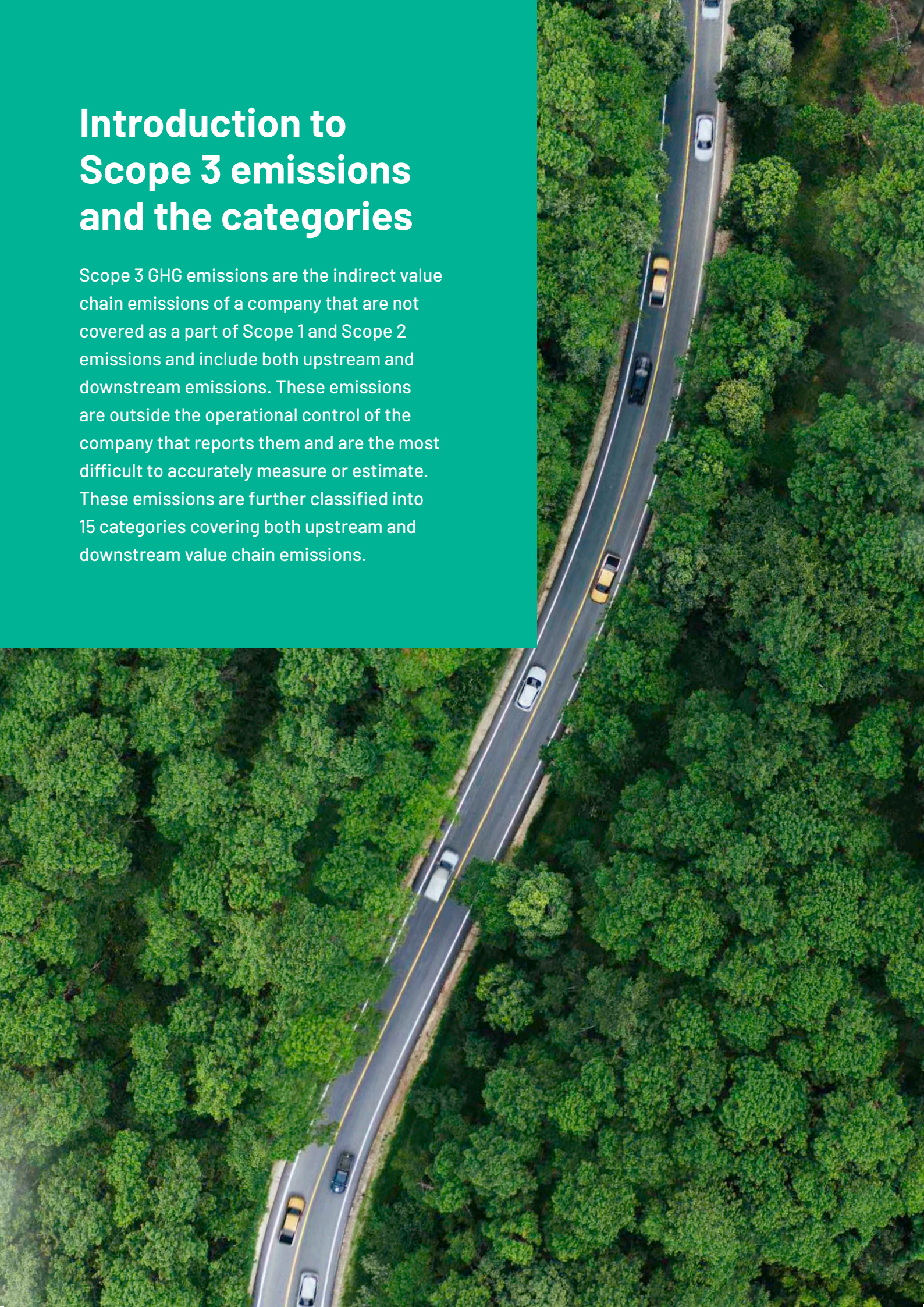


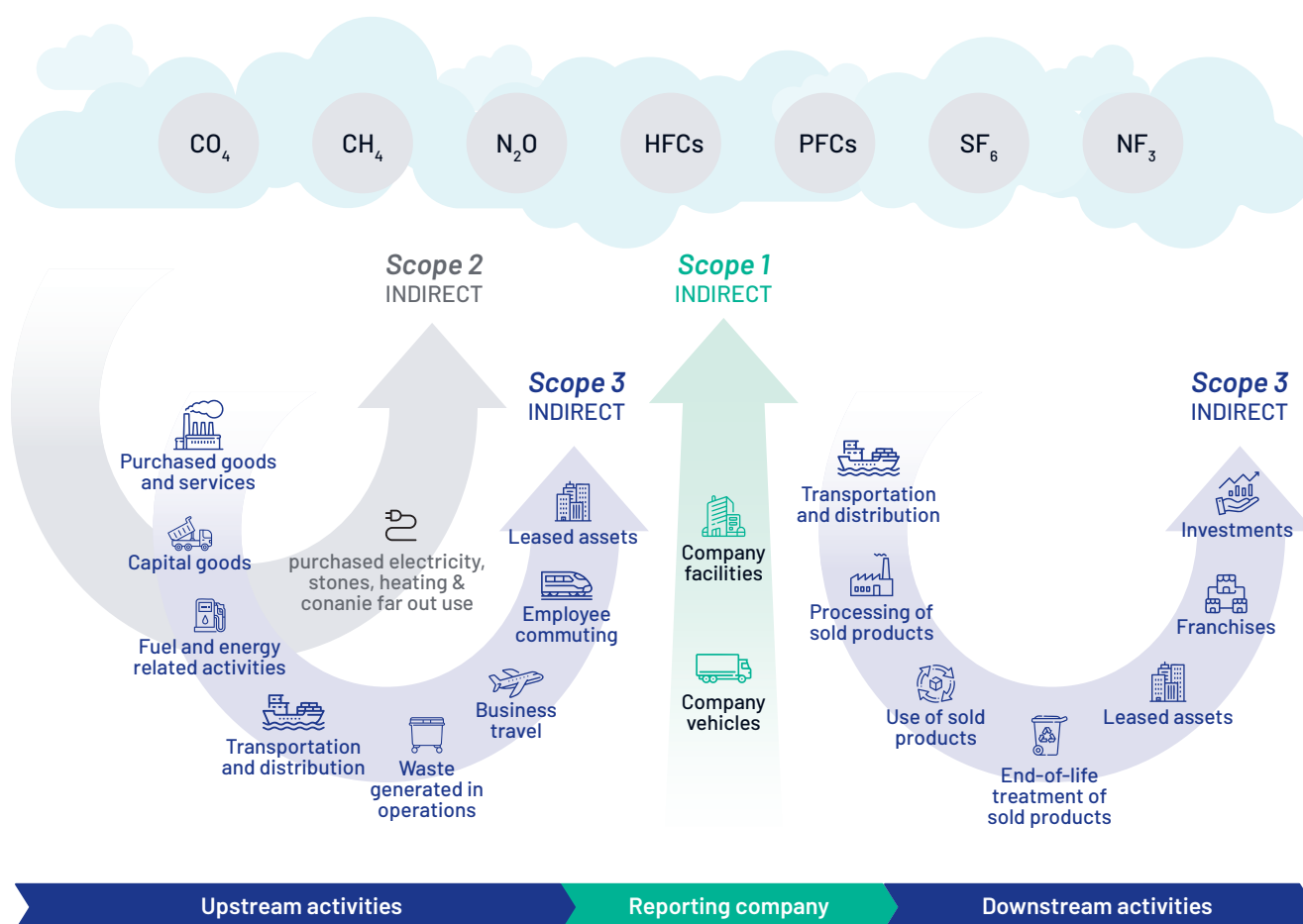


Figure 1 represents the categories that are briefly explained below:

Scope 3 category	Brief description
<b>Upstream Scope 3 emissions categories</b>	
Category 1: Purchased goods and services	Emissions from the production and transportation of goods and services purchased by the company in the reporting period
Category 2: Capital goods	Emissions from the production and transportation of capital goods purchased by the company in the reporting period
Category 3: Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	Emissions from the production and transportation of fuels and energy purchased by the company in the reporting period, not already accounted for in Scope 1 or Scope 2 emissions
Category 4: Upstream transportation and distribution	Emissions from the transportation and distribution of products purchased by the company in the reporting period, between a company's tier-1 suppliers and its own operations. This also includes inbound logistics, outbound logistics, and transportation and distribution between a company's own facilities
Category 5: Waste generated in operations	Emissions from the disposal and treatment of waste generated in the company's operations in the reporting period
Category 6: Business travel	Emissions from the transportation of employees for business-related activities during the reporting period
Category 7: Employee commuting	Emissions from the transportation of employees between their homes and their worksites during the reporting year
Category 8: Upstream leased assets	Emissions from the operation of assets leased by the company (lessee) in the reporting period and not included in Scope 1 and Scope 2 reported by lessee
<b>Downstream Scope 3 emissions categories</b>	
Category 9: Downstream transportation and distribution	Emissions from the transportation and distribution of products sold by the company in the reporting period between the company's operations and the end consumer, including retail and storage
Category 10: Processing of sold products	Emissions from the processing of intermediate products sold in the reporting period by downstream companies
Category 11: Use of sold products	Emissions from the end use of goods and services sold by the company in the reporting period

Category 12: End-of-life treatment of sold products	Emissions from the waste disposal and treatment of products sold by the company (in the reporting period) at the end of their life
Category 13: Downstream leased assets	Emissions from the operation of assets owned by the company (lessor) and leased to other entities in the reporting period, not included in Scope 1 and Scope 2 – reported by lessor
Category 14: Franchises	Emissions from the operation of franchises in the reporting period, not included in Scope 1 and Scope 2 – reported by franchisor
Category 15: Investments	Emissions from the operation of investments (including equity and debt investments and project finance) in the reporting period, not included in Scope 1 or Scope 2

Figure 1: Overview of GHG Protocol scopes and emissions across the value chain



Source: GHG Protocol

As per the GHG Protocol, the Scope 3 emissions categories are designed in a way that they are mutually exclusive to prevent a company from double counting emissions among categories. Also, the Scope 1, 2 and 3 emissions are mutually exclusive for any company. The Scope 3 emissions for a company are such that they occur from sources outside their ownership or control in the value chain and are direct emissions of another entity. There could be certain cases where multiple companies may report the same emissions under their Scope 3 in either the same or different categories. To quote an example from the GHG Protocol, the Scope 1 emissions of a power generator are the Scope 2 emissions of an electrical appliance user, which, in turn, are the Scope 3 emissions of both the appliance manufacturer and the appliance retailer. Each of these four companies has different and, often, mutually exclusive opportunities to reduce emissions. The power generator can generate power using lower-carbon sources. The electrical appliance user can use the appliance more efficiently. The appliance manufacturer can increase the efficiency of the appliance it manufactures and the product retailer can offer more energy-efficient product choices. By allowing this kind of accounting of the GHG emissions by several companies taking actions, there is a possibility to reduce emissions at a rapid pace. However, because of this double counting, aggregation of the Scope 3 emissions across companies could result in misleading totals.



## Importance/relevance of Scope 3 emissions

A CDP technical note titled “Relevance of Scope 3 Categories by Sector” highlights the importance of Scope 3 emissions, as across all sectors considered for the analysis. Scope 3 emissions account on average for 75% of the total Scope 1+2+3 emissions in the sample. It is important to note that not all categories under Scope 3 are applicable or relevant to all companies and industries. However, in most companies and industries, total Scope 3 emissions are considered to be important, as they are likely to constitute a major proportion of the total emissions. The below table highlights the relevant categories of Scope 3 emissions and their proportion of the total emissions for select sectors.

Sector	Relevant Scope 3 Categories	Scope 3 % Total Scope 1+2+3 Emissions
Agricultural commodities	<ol style="list-style-type: none"> <li>Category 1: Purchased goods and services</li> <li>Category 10: Processing of sold products</li> <li>Category 11: Use of sold products</li> </ol>	92%
Capital goods	<ol style="list-style-type: none"> <li>Category 11: Use of sold products</li> <li>Category 1: Purchased goods and services</li> </ol>	98%
Financial services	<ol style="list-style-type: none"> <li>Category 15: Investments</li> </ol>	~100%
Metals & mining	Mining: <ol style="list-style-type: none"> <li>Category 10: Processing of sold products</li> </ol> Processing Metals: <ol style="list-style-type: none"> <li>Category 1: Purchased goods and services</li> </ol>	92%
Oil & gas	<ol style="list-style-type: none"> <li>Category 11: Use of sold products</li> <li>Category 1: Purchased goods and services</li> </ol>	89%
Paper & forestry	Forestry: <ol style="list-style-type: none"> <li>Category 1: Purchased goods and services</li> <li>Category 10: Processing of sold products</li> <li>Category 12: End-of-life treatment of sold products</li> <li>Category 9: Downstream transportation and distribution</li> </ol> Processors: <ol style="list-style-type: none"> <li>Category 1: Purchased goods and services</li> <li>Category 9: Downstream transportation and distribution</li> <li>Category 4: Upstream transportation and distribution</li> </ol>	59%

Agricultural commodities	Building developers:	93%
	1. Category 2: Capital goods	
	2. Category 3: Fuel- and energy-related activities	
	3. Category 11: Use of sold products	
	4. Category 4: Upstream transportation and distribution	
	5. Category 12: End-of-life treatment of sold products	
	Building owners:	
	1. Category 2: Capital goods	
	2. Category 13: Downstream leased assets	
	3. Category 1: Purchased goods and services	
	4. Category 3: Fuel- and energy-related activities	
	REITs (that do not own real estate):	
	1. Category 15: Investments	
Capital goods	1. Category 1: Purchased goods and services	16%
	2. Category 3: Fuel- and energy-related activities	
	3. Category 4: Upstream transportation and distribution	
	4. Category 9: Downstream transportation and distribution	
Steel	1. Category 1: Purchased goods and services	27%
	2. Category 11: Use of sold products	
	3. Category 10: Processing of sold products	
	4. Category 12: End-of-life treatment of sold products	

In the “Scope 3 Upstream: Big Challenges, Simple Remedies” report, CDP and Boston Consulting Group (BCG) analysed responses to CDP’s 2023 data request that covered more than 23,000 companies worth \$67 trillion or more than 66% of the global market capitalisation. According to the report, companies’ supply-chain emissions reported to CDP were on average 26 times higher than their combined Scope 1 and 2 operational emissions. Furthermore, if the companies do not effectively account for and manage these emissions, it can lead to significant risks to the companies and the investors, as well as present supply-chain risks that can ultimately impact the company’s performance. Additionally, there could be a direct financial impact on the company. To quote an example, based on upstream emissions in 2023 from just the top three Scope 3-emitting sectors (manufacturing, retail and materials), the report found an implied carbon liability of more than \$335 billion at the IMF-proposed 2030 \$75 floor carbon price. If this is extrapolated, the total financial implications could run to trillions of dollars across all sectors worldwide.



**Inclusion of Scope 3 emissions under net-zero commitments/targets**

After identifying and measuring the Scope 3 emissions, companies need to set reduction targets for the short term and long term for these emissions, along with Scope 1 and 2 emissions. While setting targets, companies should consider science-based targets that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to 1.5°C above the pre-industrial levels. To make the targets more credible, companies should get them validated through the Science-Based Targets initiative (SBTi) that provides companies a clear path to reduce emissions in line with the Paris Agreement goals. Under SBTi’s Net-Zero Standard framework, companies are required to set near-term, as well as long-term targets covering:

Scope 3 Target	Boundary	Timeframe	Pathway
Near-term target	67% minimum coverage (if Scope 3 emissions are at least 40% of total Scope 1, 2 and 3 emissions)	5–10 years	Well-below 2°C
Long-term target	90% minimum coverage (all companies)	2050 latest	1.5°C





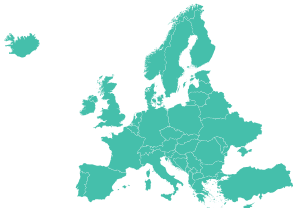

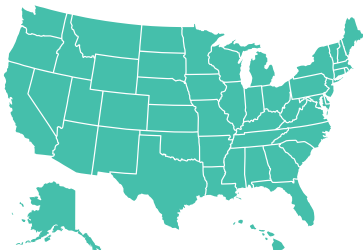
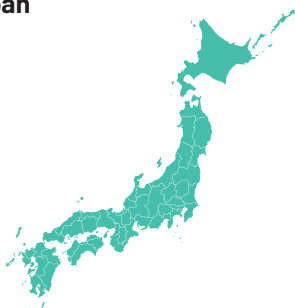
The Institutional Investors Group on Climate Change (IIGCC) was established in 2001 as a collaborative forum between pension funds and asset managers focused on tackling the issues related to climate change. It brings the investment community together to progress towards a net-zero and climate-resilient future, in line with the Paris Agreement. The Scope 3 emissions requirements under the various IIGCC initiatives and methodologies include:

IIGCC Initiative	Scope 3 requirements
Paris-Aligned Asset Owners (PAAO)	Scope 3 is included in commitment 3 to set objectives and targets, including an interim target for 2030 or sooner for reducing Scope 1, 2 and 3 emissions associated with portfolios.
Net Zero Asset Managers (NZAM)	Scope 3 is included in commitment 2, where assets or assets committed to be managed in line with the attainment of net-zero emissions by 2050 or sooner should account for portfolio Scope 1 & 2 emissions and, to the extent possible, material portfolio scope 3 emissions.
The Net Zero Investment Framework (NZIF)	NZIF 1.0: Emissions reduction targets and monitoring at the portfolio level should include at least Scope 1 and 2 emissions initially, and phase in Scope 3 emissions over time, although these should be set and reported on separately given measurement and aggregation challenges. NZIF 2.0: Monitor and disclose baseline portfolio Scope 1, 2 and 3 financed emissions, with portfolio Scope 3 emissions kept separate from Scopes 1 and 2. Develop a high-level strategy to address Scope 3 emissions of investments at portfolio level.
Climate Action 100+ Net Zero Benchmark (CA100+)	At asset level, the Climate Action 100+ Disclosure Framework has several references to inclusion of Scope 3 emissions. The most relevant Scope 3 GHG emissions categories for the sector should be covered in its overall ambition, targets and decarbonisation strategy.

The CDP-BCG report identified three factors that play a significant role in setting targets and taking action on Scope 3 emissions – having in place a “climate-responsible board,” supplier engagement and internal carbon pricing. As per the report, from all the companies disclosing through CDP that had a board with climate oversight and at least one climate-competent board member, were 4.8x more likely to have a 1.5°C aligned transition plan with a Scope 3 target. Similarly, companies that engage with suppliers on climate-related issues and those that have adopted an internal carbon price, were nearly 7x as likely and 4x as likely, respectively. Overall, the report found 34% of the companies have a climate-responsible board, 41% of the companies are engaging with suppliers and 14% of the companies are using an internal carbon price.

## Regulatory requirements for Scope 3 emissions disclosure

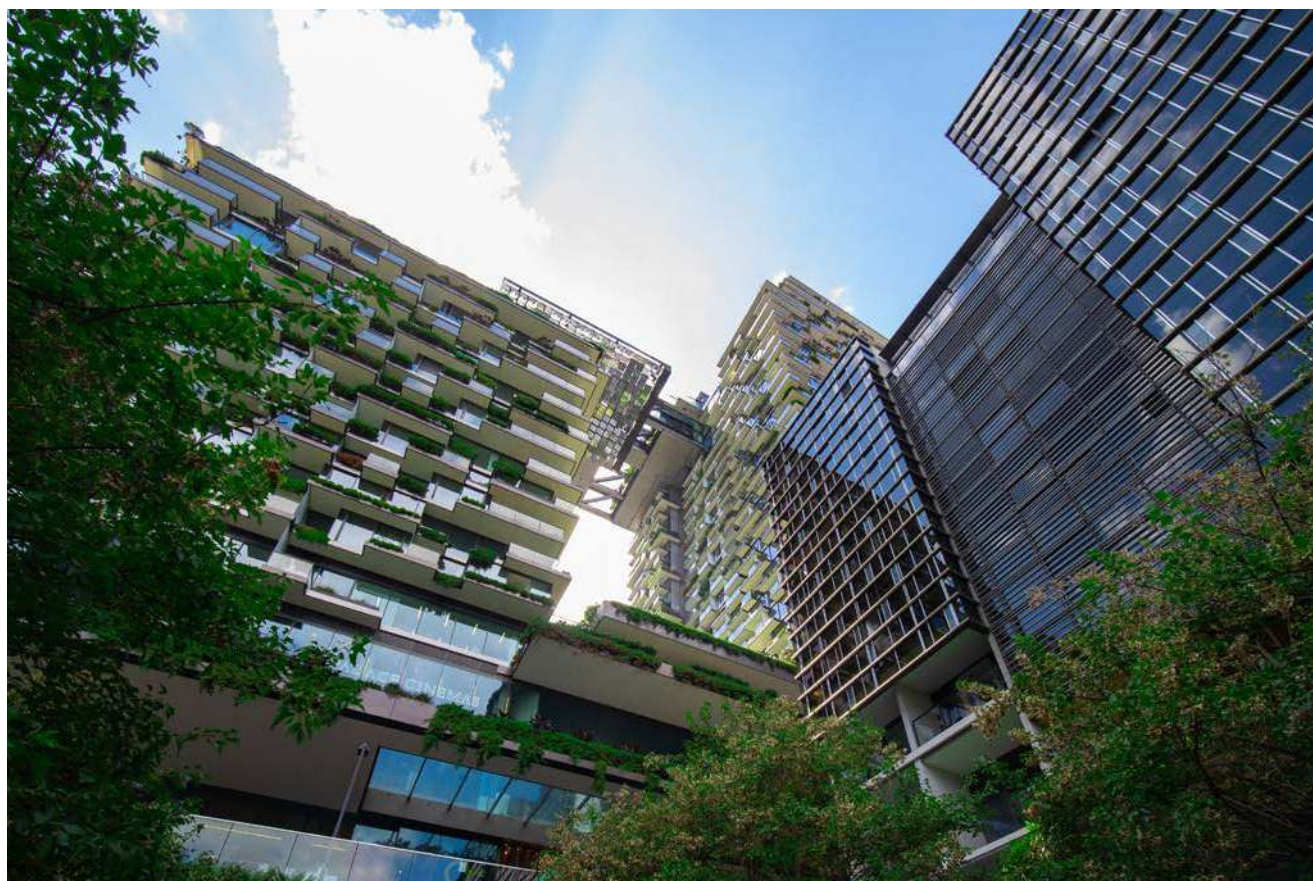
Although reporting on Scope 1 and 2 is mandatory for many companies under various regulations, it is largely voluntary for Scope 3 emissions. However, companies reporting their Scope 3 emissions are looked at positively by the investors and other stakeholders, as there is an increased pressure to disclose and effectively manage Scope 3 emissions, providing a complete picture of the carbon footprint. Regulations for reporting Scope 3 emissions vary across geographies and based on the standards or frameworks that companies choose to or must comply with. The table below highlights the Scope 3 emissions reporting requirements across key geographies:

Geography	Reporting requirements
<b>EU</b> 	Under the new European Sustainability Reporting Standards (ESRS) as part of the Corporate Sustainability Reporting Directive (CSRD), all listed companies will be required to report Scope 3 emissions if deemed material (from a double materiality perspective) and “significant” from 2025 onwards.
<b>UK</b> 	In line with the 2017 TCFD recommendations, the UK’s Financial Conduct Authority (FCA) has encouraged (but not required) premium and standard listed companies to report Scope 3 emissions, where “appropriate” since 2020. In the first half of 2024, the FCA is expected to consult on proposals to implement new disclosure rules for listed companies that reference the UK-endorsed IFRS S1 and IFRS S2, including Scope 3 disclosure requirements.
<b>USA</b> 	<p>Under current regulations, Scope 3 disclosures are voluntary in the US. In 2022, the Securities and Exchange Commission (SEC) proposed – as part of its draft climate disclosure rules – to make Scope 3 disclosures mandatory for all listed companies “if material or if the entity has set a GHG emissions target or goal that includes Scope 3 emissions”.</p> <p>Following a consultation period, the rules are yet to be finalised. As of October 2023, California’s adopted that climate disclosure laws require businesses active in the state “with more than \$1 billion in annual revenue to report their Scope 1, 2 and 3 emissions” from 2027 onwards, though implementation could be delayed.</p>
<b>Japan</b> 	Under current regulations, Scope 3 disclosures are voluntary in Japan. In 2023, the Japanese Financial Services Agency (FSA) required all listed companies to disclose sustainability-related information using the TCFD pillars, but with no mandatory requirements on Scope 3 emissions. The Sustainability Standards Board of Japan (SSBJ) is currently preparing ISSB implementation, with draft standards – including requirements on Scope 3 disclosures – published in 2024 and open for consultation, with the final standards expected by March 2025.



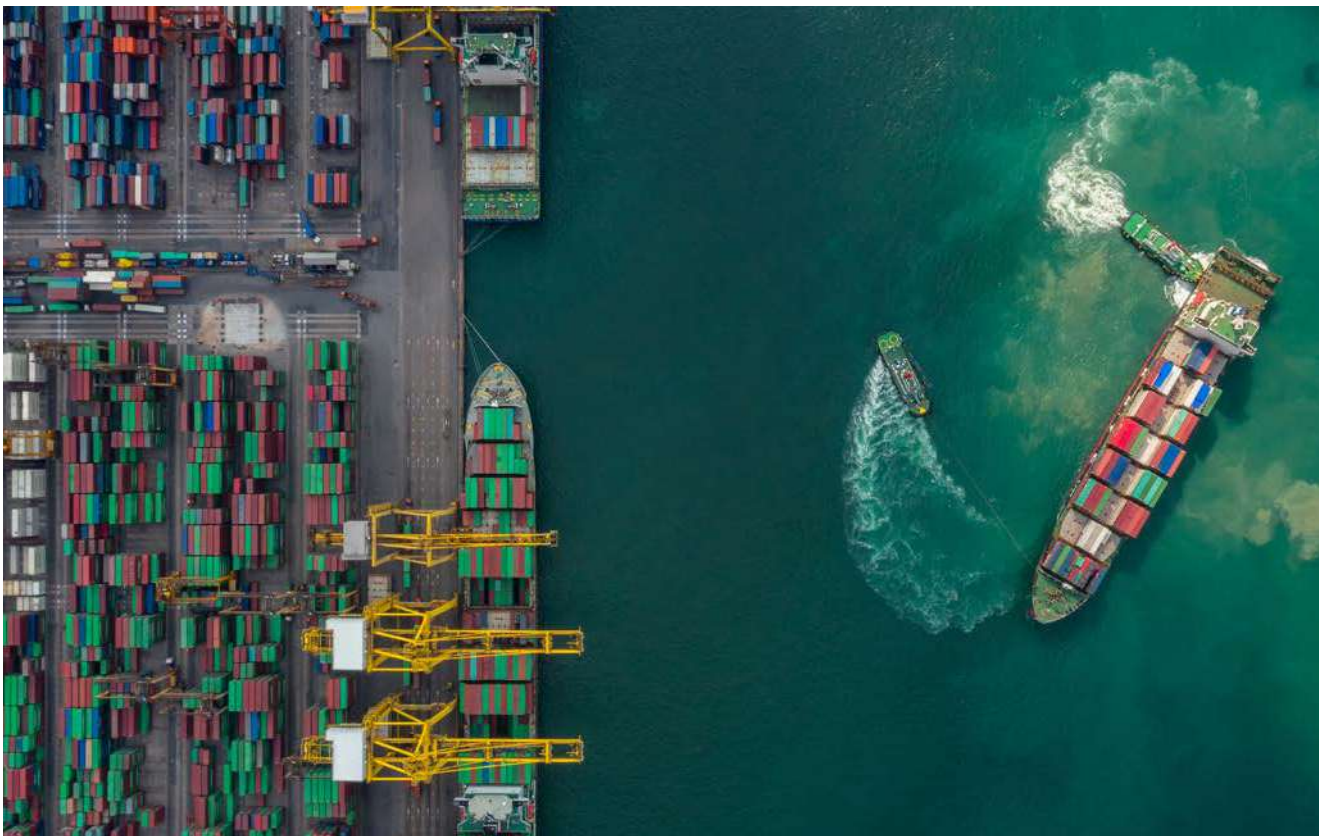
The table below highlights the Scope 3 reporting requirements under some of the key frameworks/ standards.

Framework	Reporting requirements
Task Force on Climate-related Financial Disclosures (TCFD)	The TCFD recommends that companies disclose Scope 3 emissions, where they form a significant portion (i.e., 40% or more) of their overall GHG emissions.
International Sustainability Standards Board (ISSB) Standards	Scope 3 requirements are in the S2 Climate-related Disclosures and aligned with the Scope 3 categories from the GHG Protocol. A phased-in approach will apply for Scope 3, with the requirement beginning in the year following a company's adoption of the ISSB Standards.
Corporate Sustainability Reporting Directive (CSRD)	Reporting boundaries are expanded to include upstream and downstream impacts from operations. Reports must include Scope 3 emissions. Companies can determine which data points are material for each topic, with justification for those not reported.
Corporate Sustainability Due Diligence Directive (CSDDD)	Companies must adopt and implement a transition plan in alignment with the Paris Agreement global warming limit of 1.5°C, by including time-bound targets related to Scope 1, 2, and "where relevant," 3 emissions.



## Challenges related to Scope 3 emissions

- » **Complex multi-layered supply chains:** Considering the complex nature of global supply chains and the large number of businesses operating within and across multiple levels, it is challenging for businesses to monitor and control Scope 3 emissions. This makes it increasingly harder for investors to estimate the financial risk associated with carbon emissions and their exposure to climate related regulations.
- » **Estimation:** Emissions from the supply chain are also challenging to measure, particularly since they take place beyond tier-1 and -2 suppliers where businesses have limited influence over the practices that suppliers implement. From an investor's perspective, considering the same emissions multiple times within a single investment portfolio means investors having stakes in multiple companies within the same value chain, which leads to practical challenges regarding data quality and coverage, inconsistencies in methodology and aggregation.
- » **Inconsistency:** There is a lack of consistent methods across industries for calculating Scope 3 emissions, which hampers comparison between companies and appropriate categorisation. Also, companies often start reporting Scope 3 emissions by focusing on the most relevant categories and those with the easily available data. Over time, data and methodologies improve, leading to restatements, as companies include more categories. Overall, Scope 3 emissions increase, making year-on-year comparison difficult.
- » **Evolving frameworks:** Currently, frameworks are continually evolving, creating market uncertainty and increasing the risk of incorrect claims on the Scope 3 emissions, which might impact organisation credibility.





## Recommendations to tackle Scope 3 emissions

- » **Engage with suppliers:** Collaborate with suppliers to assess and control Scope 3 emissions to the extent possible. Some important actions in this area may involve assisting suppliers in setting up specific metrics to gauge emissions accurately and aiding them in identifying their possible return on investment for decarbonisation.
- » **Engage with companies:** Investors can engage with their portfolio companies to encourage cooperation with suppliers, promote emission reduction initiatives across the supply chain and find low-carbon opportunities. Investors can engage with companies through multiple channels, including ongoing calls, meetings and proxy voting.
- » **Identify and measure emissions:** Companies can conduct a thorough analysis to identify and measure emissions across the entire lifecycle of their products and aim to pinpoint high-emission areas and seek out significant reduction opportunities.
- » **Collaborative associations or initiatives:** In order to reach decarbonisation throughout the global value chains, companies will need to work closely with their suppliers and various stakeholders to support the monitoring, measuring, target establishment and progress reporting, all of which are essential for attaining net-zero objectives and restricting global temperature rise to 1.5°C by 2050. Investors can evaluate the targets as a component of ESG assessment and fund management. Several associations and forums are available for investors and asset managers to work towards reducing emissions.
- » **Portfolio based target setting:** Double counting is inherent in the three-scope emissions accounting model when assessing multiple companies in a portfolio, particularly for Scope 3 emissions. So, setting portfolio net zero targets on Scope 3 could incentivise unintended outcomes. For example, investing in one company with a more integrated value chain to reduce the instances of double counting and therefore, the overall emissions of the portfolio.
- » **Mandatory reporting:** A growing number of climate disclosure regulations in various jurisdictions are transitioning to mandatory disclosure of Scope 3 emissions from voluntary reporting. Requiring the reporting of emissions throughout the supply chain will enhance transparency regarding climate risks and foster increased accountability for the effects and management of climate-related risks.

## Author



**Shashank Patel**  
Delivery Manager

I have been with Acuity Knowledge Partners working as Delivery Manager in the ESG team for 2.5+ years with an overall experience of 8+ years. I have worked on and supervised various ESG deliverables including climate transition maturity assessment, ESG maturity assessment, ESG fund level quarterly reporting and developed a methodology for calculating Scope 3 emissions for auto financiers and key analytics to be used in an online platform. Prior to joining Acuity Knowledge Partners, I have worked at Wells Fargo in the Investment Banking team and Australia New Zealand Bank in the Client Insights and Solutions team. I have completed MBA from Bharathidasan Institute of Management, Trichy.



**Somya Gupta**  
Analyst

I have been working as an Analyst in the ESG team at Acuity Knowledge Partners for over 2.5 years. My experience includes ESG Benchmarking and analysis, EU Taxonomy, climate change assessment, and supporting clients in preparing quarterly ESG reports. Additionally, I have also handled diverse data and report requests from various stakeholders for an ESG engagement and also actively managed the engagement log process quarterly. I hold a postgraduate diploma in management with a specialization in finance from Jagdish Sheth School of Management, Bengaluru.

## Sources:

1. GHG Protocol and Scope 3 standards
2. Scope 3 Detailed FAQ.pdf
3. CDP-technical-note-scope-3-relevance-by-sector.pdf
4. Scope 3 Upstream Report: Big challenges, simple remedies - CDP
5. Scope 3 emissions: PwC
6. SBTi Corporate Net-Zero Standard V1.2
7. IIGCC\_Investor-approaches-to-scope-3\_Final\_Jan-2024.pdf
8. 2024 Scope 3 Supplementary Guidance.pdf
9. Solving the Scope 3 conundrum
10. Reporting Scope 3 emissions: Key frameworks and standards
11. Navigating mandatory Scope 3 emissions reporting in the EU, US, and beyond - Aligned Incentives





For more details scan the QR code or visit  
[www.acuitykp.com](http://www.acuitykp.com)



Reach out to us on  
[contact@acuitykp.com](mailto:contact@acuitykp.com)

Acuity Knowledge Partners (Acuity) is a leading provider of bespoke research, data management, analytics, talent, and technology solutions to the financial services industry, including asset managers, corporate and investment banks, private equity and venture capital firms, hedge funds and consulting firms. Its global network of over 6,000 analysts and industry experts, combined with proprietary technology, supports more than 650 financial institutions and consulting companies to operate more efficiently and unlock their human capital and transforming operations. Acuity is headquartered in London and operates from 16 locations worldwide.

Acuity was established as a separate business from Moody's Corporation in 2019, following its acquisition by Equistone Partners Europe (Equistone). In January 2023, funds advised by global private equity firm Permira acquired a majority stake in the business from Equistone, which remains invested as a minority shareholder.