



GUIDE BOOK

How to calculate your company's scope 3?

January 2025



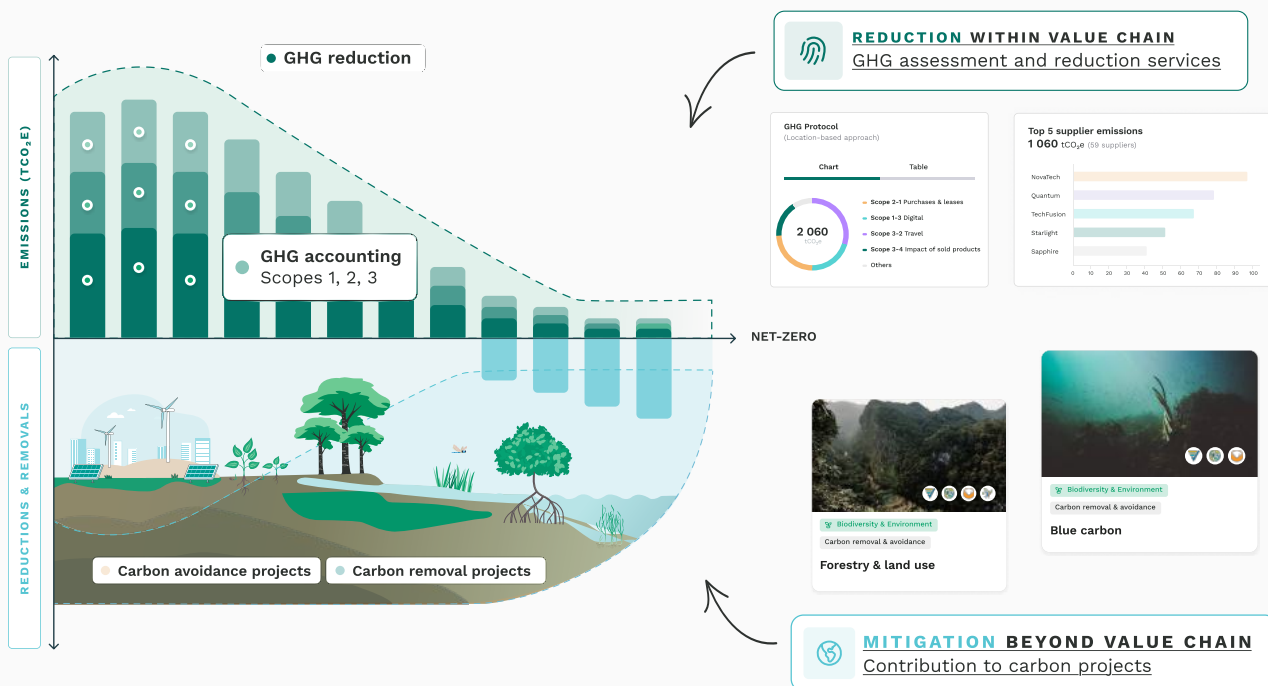
About ClimateSeed

Founded in 2018, ClimateSeed is an **impact-driven company** that supports over 200 organizations in their decarbonization journey.

ClimateSeed provides **consulting services** and **technological tools** to measure organizations' greenhouse gas emissions (GHG assessment), define reduction strategies aligned with science-based targets (SBTi), and contribute to premium carbon sequestration and avoidance projects, in line with the UN Sustainable Development Goals.

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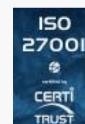


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Introduction

In an era where sustainability has become a priority, companies are increasingly committing to environmental strategies. Whether to comply with evolving regulations or to take concrete steps against global warming, these strategies are essential for reducing their environmental impact. **Moreover, adopting a well-structured Corporate Social Responsibility (CSR) approach is a powerful lever to enhance a company's reputation, build trust with partners, and engage employees.**

However, the path to sustainability can be challenging. With growing pressure from regulators, investors, and customers, companies must not only address their direct emissions but also consider the broader impact of their entire value chain. This means looking beyond Scope 1 and Scope 2 emissions and tackling the complex challenge of measuring and reducing Scope 3 emissions.

Scope 3 emissions, often representing the largest share of a company's carbon footprint, are generated by activities that occur outside its direct control—within its value chain. Understanding and calculating these emissions is crucial for developing an effective and comprehensive environmental strategy.

So, where should companies start?

Measuring a complete carbon footprint, including direct and indirect emissions, is the first step toward developing a robust environmental strategy. This guide aims to help you understand how to calculate your company's Scope 3 emissions, providing practical insights and key methodologies for a thorough and accurate assessment.

Carbon accounting basics

Context

Anthropogenic Greenhouse Gas (GHG) emissions continue to rise, leading to ever-higher atmospheric concentrations. According to NASA [1], at the beginning of 2024, **CO₂ concentration reached nearly 423 ppm (parts per million), an increase of about 30% compared to 1960 levels** (from 1750 up to 1960, CO₂ concentration had risen by 12.5%). This increase has severe consequences for the planet, manifesting in more frequent and climate extreme events, such as droughts, floods, and heatwaves.

The IPCC (Intergovernmental Panel on Climate Change) warns that urgent action is needed to drastically reduce GHG emissions. Meeting the objectives of the Paris Agreement and limiting global warming to 1.5°C above pre-industrial levels requires collective efforts from governments, companies, and individuals. Companies must take responsibility by reducing their emissions in the short term while working toward global carbon neutrality in the long term.

The seven greenhouse gases and their impact

According to the GHG Protocol Corporate Standard, the most internationally recognized carbon footprinting standard, the accounting exercise includes seven GHGs from the Kyoto Protocol:

- ✓ Carbon Dioxide (CO₂)
- ✓ Methane (CH₄)
- ✓ Nitrous oxide (N₂O)
- ✓ Hydrofluorocarbons (HFCs)
- ✓ Perfluorocarbons (PCFs)
- ✓ Sulfur hexafluoride (SF₆)
- ✓ Nitrogen trifluoride (NF₃)



Did you know?

The atmospheric CO₂ concentration has increased by nearly 30% since 1960, primarily due to human activities such as fossil fuel combustion and deforestation [2].

Each gas has a varying degree of greenhouse effect over time. This is reflected by its Global Warming Potential (GWP), which allows emissions to be converted into a single comparable unit: CO₂ equivalent (CO₂e).

In carbon accounting, organizations collect data on various activities, such as energy consumption, distance traveled, and quantities of purchased items. **These data are then converted into emissions using emission factors (EF)**. Finally, the resulting emissions are categorized into standardized scopes, producing a comprehensive GHG assessment.



What is CO₂ equivalent (CO₂e)?

The CO₂ equivalent (CO₂e) is a standardized unit that represents the impact of any greenhouse gas (GHG) on global warming, compared to carbon dioxide (CO₂) over a specific time frame (usually 100 years).

Example: Methane (CH₄) has a GWP of 28, meaning that 1 tonne of CH₄ has the same warming effect as 28 tonnes of CO₂ over 100 years.

This allows companies to report their total GHG emissions as a single number, simplifying carbon accounting and comparisons.

Defining the three key perimeters for carbon accounting

The first step in carbon accounting is to identify a company's sources of emissions to prioritize actions and reduce them efficiently.

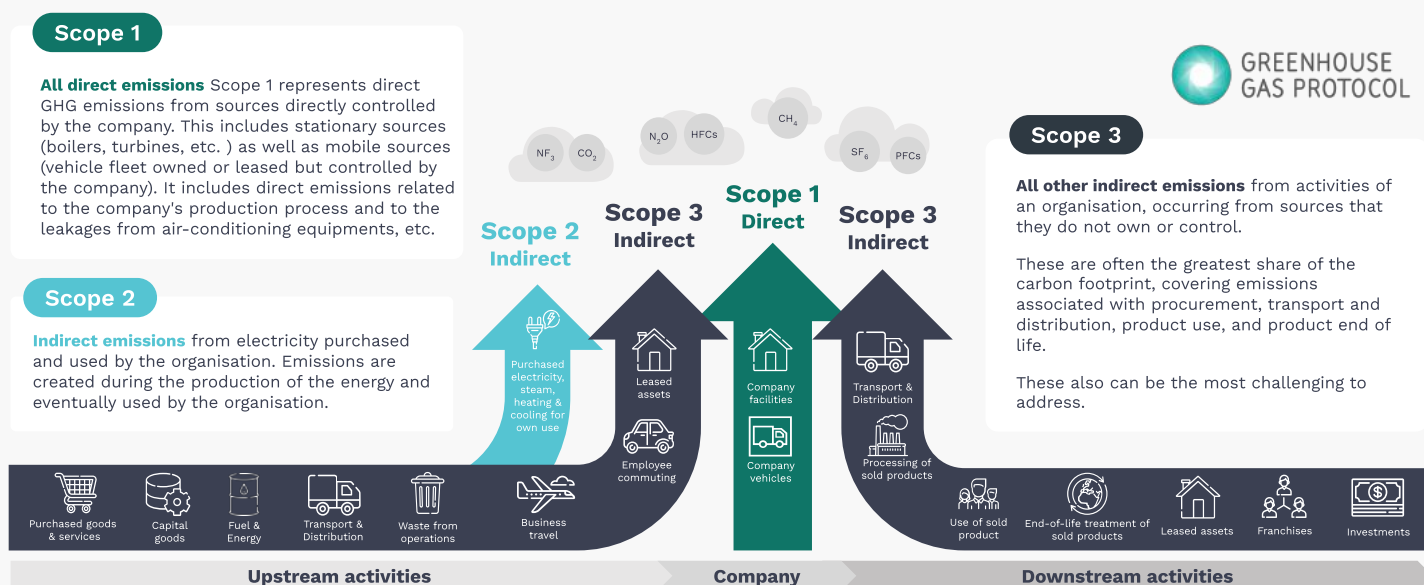
Identifying emission sources can also be defined as determining the carbon footprint, which is the total amount of greenhouse gases emitted over a reference period due to an organization's activities. This leads to defining three key perimeters [3]:

- ✓ **Temporal:** the assessment covers a specific period, delimited in time.
- ✓ **Operational:** the measure encompasses certain activities of the organization.
- ✓ **Organizational:** the evaluation includes some or all company's sites, and facilities

What are the 3 Scope emissions?

In carbon accounting, emissions are divided into standardized categories according to frameworks such as the **GHG Protocol Corporate Standard** or the **French 'Bilan GES Réglementaire'**, both derived from **ISO 14064**.

These frameworks generally divide emissions into three scopes [4]:



*Source: Technical Guidance for Calculating Scope 3 Emissions V 1.0

What are Scope 3 emissions and why do they matter?

Scope 3 emissions are indirect emissions, meaning they are generated by sources linked to activities that are not directly controlled by the company. Broadly speaking, Scope 3 emissions are those managed by the company's value chain and stakeholders, such as suppliers and customers. In short, they refer to indirect emissions related to both upstream and downstream activities.

In practice, Scope 3 includes, among others, emissions associated with [5]:

- ✓ **Manufacturing of products purchased by the company**, including the extraction of raw materials, their transportation, and transformation.
- ✓ **Services purchased by the company**
- ✓ **Business travel** in vehicles not operated by the company (e.g., cars, trains, planes, or any type of vehicle).
- ✓ **Employee commuting** to and from work.
- ✓ **Transportation of goods** in vehicles not directly operated by the company.
- ✓ **The use and end-of-life** of products sold by the company.
- ✓ **The treatment of waste generated** by the company.
- ✓ **Other indirect emissions** (e.g., leased assets, investments, and franchises).

This list is not exhaustive, as Scope 3 can include other similar sources depending on the company's activities.



Did you know?

For many companies, depending the sector, Scope 3 emissions can represent up to 90% of their total carbon footprint, making it the most significant contributor to their environmental impact [6].

Foresee Scope 3 hurdles

Due to the broad scope and complexity of Scope 3 emissions, several obstacles may arise when gathering the necessary activity data. Ensuring the success of the project requires careful planning, early anticipation of potential issues, and a well-structured approach to data collection.

Challenges in measuring Scope 3

1 Over-reliance on the monetary approach, affecting assessment quality

Incorporating Scope 3 emissions magnifies the difficulty of collecting precise activity data. While the monetary approach may seem appealing due to its speed in estimating GHG emissions, it introduces significant uncertainty and lacks the granularity needed to develop a robust and effective transition plan.

2 Spending excessive time on insignificant data collection

In contrast to the previous point, the pursuit of precision can lead to spending an excessive amount of time collecting activity data, only to finally realize that it contributes minimally to the overall carbon footprint.

3 Difficulty in defining the assessment perimeter

Carbon accounting is not yet an established science, and sometimes rules are still unclear on whether a specific activity should be included in the scope. This can complicate the definition of boundaries for the assessment.

4 Lack of reliable emission factors

Including the value chain in the assessment results in significant data variability, leading to discrepancies in emission estimates. Currently, the lack of environmental data prevents the development of supplier-specific emission factors. Consequently, relying on generic factors limits the ability to make well-informed decisions aimed at reducing emissions. Engaging the supply chain can help bridge this gap; however, it remains a major challenge that requires specialized tools.

5 Risk of double counting activity data

When addressing Scope 3 emissions, companies often encounter the issue of multiple sources providing the same activity data. For example, when accounting for the procurement of goods and services, both expense accounts and specific points of contact within the company are typically used to collect physical activity data whenever possible. While expense accounts have the advantage of being comprehensive, they lack precision, as they often group various items under broad categories. As a result, it becomes necessary to exclude certain data, which introduces a risk of double counting.

6 Waste time involving too many people in the project

Since Scope 3 covers a wide range of emissions, many departments within the company are involved in the process. Without clear coordination, this can lead to inefficiencies and unnecessary time spent, as too many stakeholders may be engaged in tasks that don't require their direct input.

How to be efficient?

The key to success lies in defining a clear data collection strategy and implementing a continuous improvement process.

1 Start with simple questions

What are the objectives of the measurement? Is it a legal obligation? A certification? A necessary step to build the transition plan?, Etc... What are the legal units and facilities included in the assessment? What is the temporal scope (align with the financial year wherever possible)? Who's going to be the project manager?

2 Adapt the collection approach based on the significance of the impact

To identify and justify exclusions of insignificant sources, conduct an emission screening, check your peers' carbon footprint or review sectoral studies. Determine whether you should look for accurate activity-based data, use a monetary approach or estimations. Anticipate the need for extrapolations and assumptions.

3 Identify the right contributors

Who will collect each activity data? Is there someone who can centralize the information to avoid multiple sources and potential double counting?

Communicate with stakeholders to involve them in the project. Emphasize the importance of using physical and primary data, and clearly define the scope of the data collection.

4 Trace data, assumptions, contributors, and comments explaining the context

Ensure that everything is well-documented so future assessments can easily understand what was done. Centralize the information and maintain sufficient transparency to ensure consistency and comparability over the years.

5 Identify potential for improvement

It's unrealistic to expect perfect data for all emission sources in the first year, primarily due to data availability issues. However, it's important to acknowledge these limitations and actively work towards improving data accuracy over time.

Once all this is in place, the final step is to equip yourself with the right tools to measure your carbon footprint: that's where ClimateSeed can help you.

Our Solution: GEMS, the GHG Emissions Management Software

ClimateSeed's GHG Emissions Management Software (GEMS) has been designed to help you centralize your activity data, process it efficiently, find the right emission factor and analyze the results of your assessment.

How does it work?

- ✓ **Guided data collection:** adaptative data input that guide you step by step through the data collection process. If certain information is missing, alternative questions are used to generate accurate emission estimates.
- ✓ **Smart data processing:** Import Excel files and leverage Artificial Intelligence (AI) to process data efficiently and select the most precise emission factors available.

User roles

Validator Contributor Read-only

Categories	Paris site	Hong Kong site	Rouen site
Buildings			
Travel			
Accommodation & catering			
Purchases & leases			
Purchase of services			



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Results in official format

(Location-based approach)

Graphic

Table



Confidence score

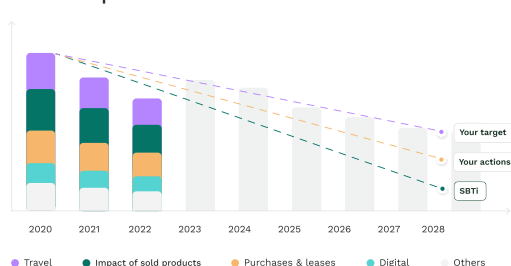
+/- 24 tCO₂e (24%)

A B C D E

Purchasing electricity	A	3%
Raw materials purchases	B	12%
Purchase or rental of IT equipment	D	74%
Transformation process	C	56%
Travel-related emissions	A	4%

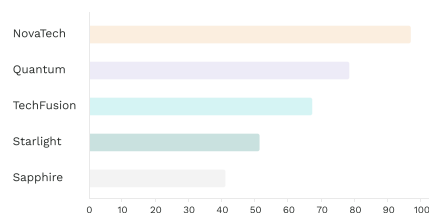
[See 16 more](#)

Transition plan 2020 → 2028



Top 5 supplier emissions

1 060 tCO₂e (59 suppliers)



Rapidly process your activity data with bulk file import

Managing thousands of business trips, large volumes of goods transportation, or multiple facilities with varying energy consumption can quickly become overwhelming if entered manually into a web platform. **That's why bulk data import is essential.**

This is exactly what GEMS offers. We've designed dedicated Excel templates that allow you to create activity data directly from a spreadsheet, making the import process both fast and efficient. Several customization options are available within the templates to match your data structure and minimize the need for additional processing.

For example, you can request an extract from your travel agency listing all business trips during the reporting period. Using a Google API, GEMS automatically calculates distances based on departure and arrival cities. These distances are then converted into GHG emissions using emission factors from well-known databases such as DEFRA. All of this is done simply by uploading your Excel file to the platform!

In addition, other Excel templates are available to simplify and speed up the estimation of your GHG emissions. These include templates for vehicle fleets, goods transportation, and facility-related activity data.

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 **Purchases & leases**

☐ Site	Emissions factor used	Datas	Tags
☐ HQ and R&D offices / Paris Sales corner	Hardware purchase emissions – estimated based on quantities	 80 kgCO ₂ e 	+ Add tag  
☐ HQ and R&D offices / Paris Sales corner	IT equipment – OPEX – purchase emissions estimated based on quantities	 54 kgCO ₂ e 	+ Add tag  

 **Validate my data**

Bulk import
You can download our template to create your portfolio using Excel.


Import your data
Drag and drop your file here or [click here](#) to download it

 **fund_2022.xlsx"**
2 min remaining

78% of imported data

 **Energy consumption**

Electricity
12 365 kWh 

Heating
2000 kWh 

Involve a large number of stakeholders through surveys

Scope 3 emissions are often complex to estimate because they originate from your value chain, and it's common to lack accurate, specific data. To address this challenge, the GEMS platform offers various survey options to engage different stakeholders and improve the accuracy of your measurements.

Send surveys to your supply chain

You can engage your supply chain by sending them dedicated surveys. Define a strategy for your suppliers, specifying the level of commitment required for each, and send tailored surveys that ask them to:

- ✓ **Directly report their emissions**
 - ✓ **Estimate emissions using a simplified form, or**
 - ✓ **Conduct a complete GHG assessment.**
-

Send surveys to your employees

Surveys are an effective way to estimate the impact of employee habits, such as commuting, lunch preferences, and remote working. **The survey is fully customizable, allowing it to adapt to individual cases and estimate emissions from your own activities.** Sharing the survey with employees is simple—all you need to do is send the link generated directly on the platform.

The entire process is integrated into the platform, with live tracking of response rates by facility.

Surveys are available in multiple languages

Additionally, the survey is available in multiple languages, including English, French, and Italian. Once the survey is complete, activity data are automatically extrapolated based on the final response rate.

Benefit from the expertise of our consultants

At ClimateSeed, we don't just offer a measurement platform. We also offer tailor-made support provided by our consultants, adapted to your needs and your level of maturity in terms of carbon assessment.

Support available at every stage of your journey

Our experts can assist you with:

- ✔ Defining the measurement perimeter
- ✔ Structuring an effective data collection strategy
- ✔ Selecting and applying the appropriate methodologies
- ✔ Verifying and ensuring the reliability of the collected data
- ✔ Analyzing and interpreting the results
- ✔ Drafting a personalized report of your results
- ✔ Leading a clear and engaging results presentation
- ✔ Developing a reduction plan aligned with SBTi recommendations

To discuss your needs, feel free **to schedule a meeting** with our team.



Truly committed experts by your side

Our consultants, who are part of the ClimateSeed team, are genuine experts in the field, with significant seniority and extensive experience, including work with entities within the AXA Group.

Each of our clients is supported by a dedicated consultant, specialized in climate and carbon accounting, ensuring personalized and high-quality guidance. Unlike other platforms, we do not offer basic user support delivered by Customer Success Managers without subject matter expertise — we provide real, expert-driven support.

Conclusion

Achieving net-zero requires a deep understanding of a company's entire carbon footprint, including indirect emissions from its value chain (Scope 3). While Scope 1 and 2 emissions are easier to measure and control, Scope 3 often represents the largest share of total emissions and presents the greatest challenge.

This guide has provided a comprehensive overview of how to measure Scope 3 emissions, from understanding key concepts to addressing common challenges and implementing practical solutions. By adopting a structured approach and leveraging advanced tools like GEMS, companies can not only ensure compliance with evolving regulations but also gain valuable insights to drive their decarbonization strategy.

Key takeaways

- ✓ **Understanding Scope 3 is critical:** Scope 3 emissions often account for the majority of a company's carbon footprint.
- ✓ **Regulations are tightening:** The CSRD and other regulations are making Scope 3 reporting mandatory for many companies.
- ✓ **Using the right tools makes a difference:** Leveraging AI-driven tools like GEMS can simplify data collection, improve accuracy, and enhance decision-making.

Now is the time to act. By taking a proactive approach to Scope 3 measurement and reduction, companies can play a vital role in the global fight against climate change while strengthening their reputation and long-term resilience.

Ask for a demo

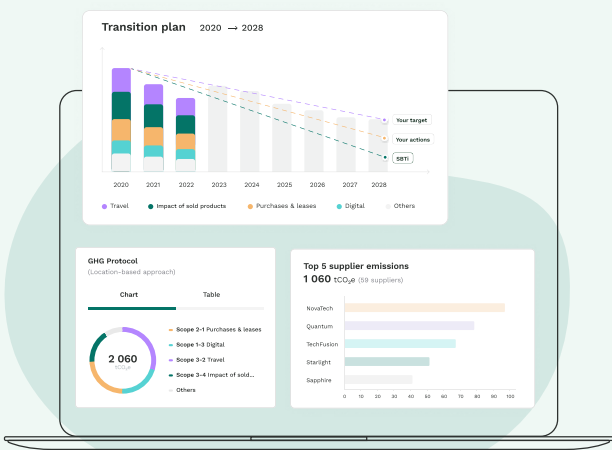
Measuring Scope 3 emissions is complex, requiring numerous data points across your value chain. A trusted partner provides both the right tools and expertise.

Curious about how GEMS can streamline your Scope 3 measurement and reporting? Ask for a personalized demo to explore how our platform can help your company accurately measure, manage, and reduce its carbon footprint.

[Ask for a demo](#) ↗

GEMS, includes the following key features:

- 1 Set your organization structure:**
Define your measurement scope, set up access levels and onboard your team.
- 2 Measure your GHG emissions:**
Minimize data collection time, gain accuracy with our integrated AI and automate calculations connected to numerous emission factor databases.
- 3 Analyze and report your results:**
Easily view and compare your results, and access auditable GHG accounting compliant with major standards.
- 4 Create your reduction plan:**
Identify and prioritize reduction actions, set global targets and simulate reduction actions by creating customized action plans or defining your own.



WITHIN YOUR VALUE CHAIN

Measure and reduce your GHG emissions

Measure your carbon footprint and define an **emissions reduction strategy** with our experts and our software, fully aligned with the **GHG Protocol**.

Accuracy Collaboration Simplification Security

In line with the best-in-class standards and methodologies







[Discover our offer](#) ↗

References

- [1] NASA. (2023, August 15). Carbon dioxide concentration. NASA.
<https://climate.nasa.gov/vital-signs/carbon-dioxide>
- [2] Lindsey, R. (2024, April 9). Climate change: Atmospheric carbon dioxide. NOAA Climate.gov.
<https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>
- [3] Corporate Standard: GHG Protocol. (2013, February 1). Revised edition. GHG Protocol.
<https://ghgprotocol.org/corporate-standard>
- [4] Technical guidance for Calculating Scope 3 emissions. (n.d.-b). https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf
- [5] Corporate Standard: GHG Protocol. (2013, February 1). Revised edition. GHG Protocol.
<https://ghgprotocol.org/corporate-standard>
- [6] Relevance of scope 3 categories by sector. (n.d.-a). https://cdn.cdp.net/cdp-production/cms/guidance_docs/pdfs/000/003/504/original/CDP-technical-note-scope-3-relevance-by-sector.pdf
- [7] Bilan Carbone : Réduire son empreinte en augmentant son impact sur sa Filière Grâce au scope 3. Bpi France. (n.d.). <https://bigmedia.bpifrance.fr/decryptages/bilan-carbone-reduire-son-empreinte-en-augmentant-son-impact-sur-sa-filiere-grace-au-scope-3>
- [8] Décret n° 2022-982 du 1er juillet 2022 Relatif aux bilans d'émissions de gaz à effet de serre. Légifrance. (n.d.). <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000046006338>
- [9] Corporate sustainability reporting. Finance. (n.d.). https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en



For more information, get in touch with our team of experts.

 **Contact us**



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