GUIDE BOOK

How to calculate your company's scope 3?

November 2025

ClimateSeed

About ClimateSeed

Founded in 2018, ClimateSeed is an **impact-driven company** that supports over 200 organizations in their decarbonization journey.
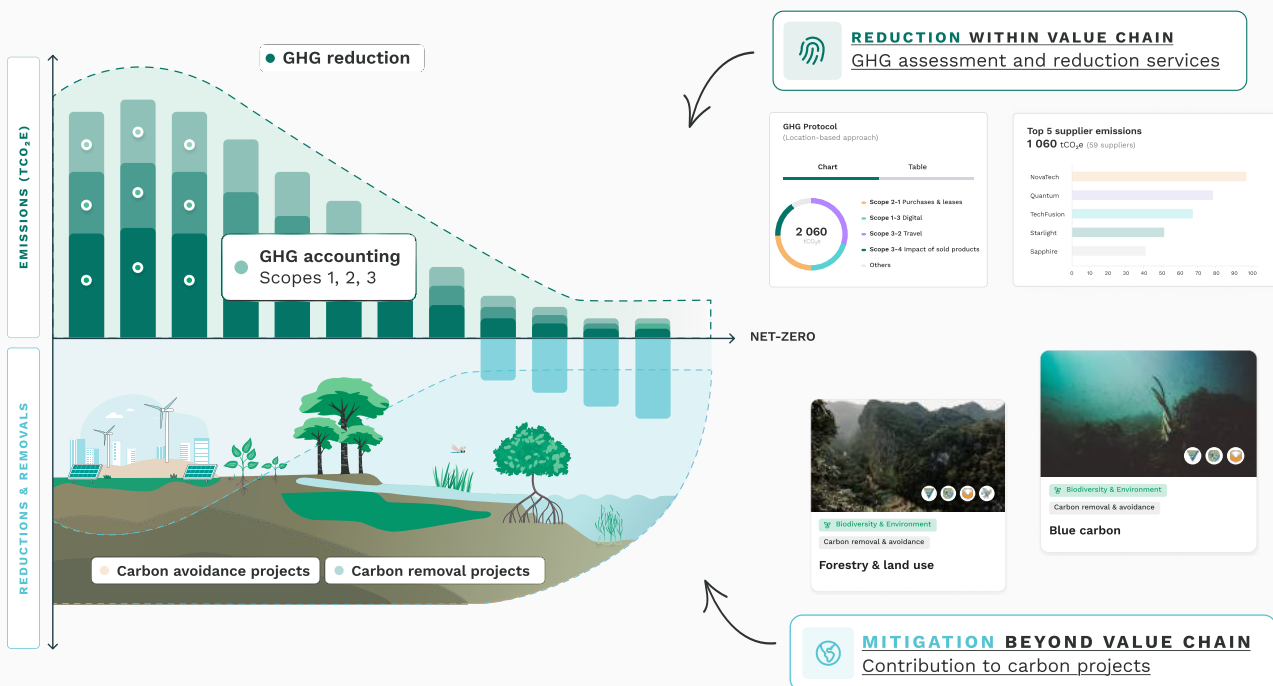
ClimateSeed provides **consulting services** and **technological tools** to measure organizations' greenhouse gas emissions (GHG assessment), define reduction strategies aligned with science-based targets (SBTi), and contribute to premium carbon sequestration and avoidance projects, in line with the UN Sustainable Development Goals.

CONSULTING + PLATFORMS

Financed by AXA Impact Fund — AXA Investment Managers | PART OF BNP PARIBAS GROUP

● GHG reduction

EMISSIONS (TCO₂E)

REDUCTIONS & REMOVALS

● GHG accounting
Scopes 1, 2, 3

NET-ZERO

○ Carbon avoidance projects   ● Carbon removal projects

REDUCTION WITHIN VALUE CHAIN
GHG assessment and reduction services

GHG Protocol
(Location-based approach)

Chart   Table

2 060
tCO₂e

■ Scope 2-1 Purchases & leases
■ Scope 1-3 Digital
■ Scope 3-2 Travel
■ Scope 3-4 Impact of sold products
○ Others

Top 5 supplier emissions
1 060 tCO₂e (59 suppliers)

NovaTech
Quantum
TechFusion
StarLight
Sapphire

0 10 20 30 40 50 60 70 80 90 100

🌱 Biodiversity & Environment
Carbon removal & avoidance
Forestry & land use

🌱 Biodiversity & Environment
Carbon removal & avoidance
Blue carbon

MITIGATION BEYOND VALUE CHAIN
Contribution to carbon projects

Member of

1% FOR THE PLANET   NET ZERO INITIATIVE

Certified

GOLD | Top 5% ecovadis Sustainability Rating JUL 2024

ISO 27001 certified by CERTI TRUST

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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, **CO_2 concentration reached nearly 423 ppm (parts per million), an increase of about 30% compared to 1960 levels** (from 1750 up to 1960, CO_2 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 (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PCFs)
- Sulfur hexafluoride (SF_6)
- Nitrogen trifluoride (NF_3)

Did you know?

The atmospheric CO_2 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: CO_2 equivalent (CO_2e).

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 CO_2 equivalent (CO_2e)?**
>
> The CO_2 equivalent (CO_2e) is a standardized unit that represents the impact of any greenhouse gas (GHG) on global warming, compared to carbon dioxide (CO_2) over a specific time frame (usually 100 years).
>
> Example: Methane (CH_4) has a GWP of 28, meaning that 1 tonne of CH_4 has the same warming effect as 28 tonnes of CO_2 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.
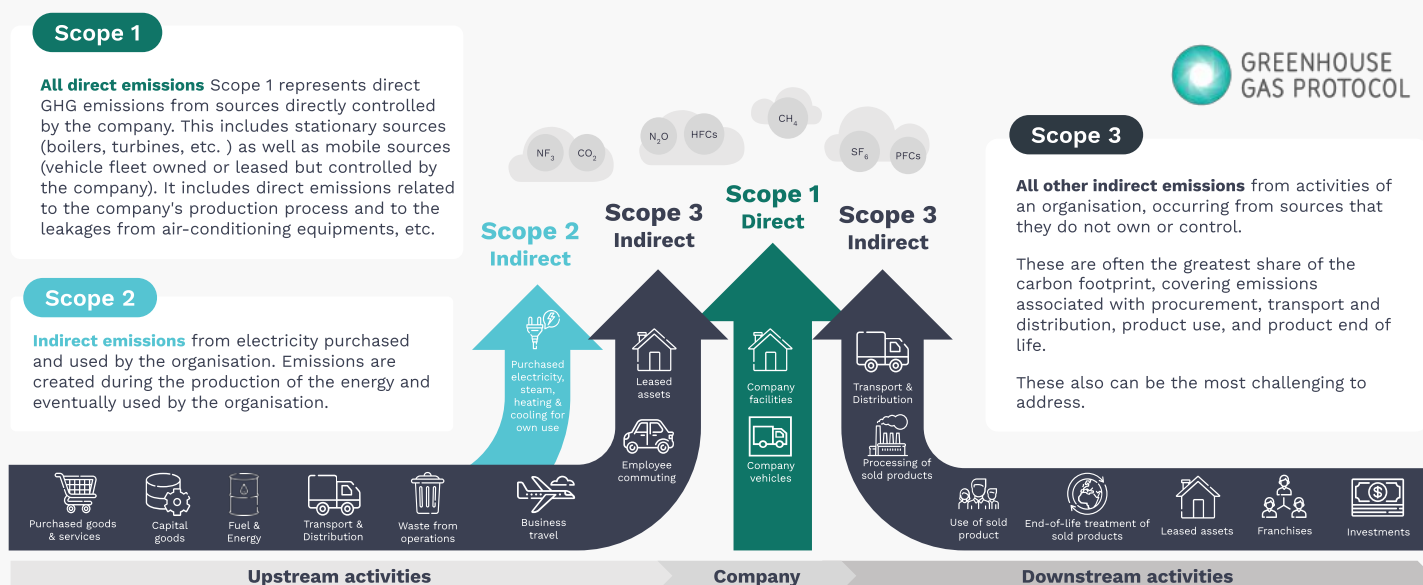
Identifying emission sources can also be defined as determining the carbon footprint, which is the total amount of greenhouse gases emitted over a reference period due to an organization's activities. This leads to defining three key perimeters [3]:

- ✓ **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 divides emissions into three scopes [4]:

Scope 1

All direct emissions Scope 1 represents direct GHG emissions from sources directly controlled by the company. This includes stationary sources (boilers, turbines, etc.) as well as mobile sources (vehicle fleet owned or leased but controlled by the company). It includes direct emissions related to the company's production process and to the leakages from air-conditioning equipments, etc.

Scope 2

Indirect emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.

Scope 3

All other indirect emissions from activities of an organisation, occurring from sources that they do not own or control.

These are often the greatest share of the carbon footprint, covering emissions associated with procurement, transport and distribution, product use, and product end of life.

These also can be the most challenging to address.

*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 support in calculating your Scope 1, 2, and 3 carbon footprint and reducing your emissions

Our consultant team support

At ClimateSeed, we provide tailored support delivered by a dedicated consultant, adapted to your needs and your level of carbon accounting maturity. Their guidance is reinforced by our GEMS emissions-measurement platform.

Your consultant can support you at every stage of your journey:

- **Defining the boundaries of your assessment.**

- **Selecting and applying the appropriate methodologies.**

- **Structuring and framing data collection efficiently (Scopes 1, 2 and 3)** by identifying key categories and high-impact areas.

- **Focusing data-collection efforts** where they matter most, prioritizing according to your industry and operational flows.

- **Ensuring data quality and reliability** through rigorous verification and expert guidance.

- **Analyzing and interpreting your results** and leading a clear and engaging debrief session.

- **Building a realistic climate roadmap** that includes a transition plan aligned with your decarbonization objectives.

- **Building a reduction plan** compliant with SBTi recommendations.

> **True experts by your side**
>
> **Our in-house ClimateSeed consultants are specialists with extensive experience,** including missions carried out for AXA Group entities.
>
> **Each client benefits from a dedicated consultant, an expert in climate and carbon accounting, ensuring high-quality, personalized support.**
> Unlike other platforms, we do not offer basic user support delivered by Customer Success Managers with no technical expertise, we provide real consulting.
>
> To discuss your needs, feel free to book a meeting with our team.

GEMS: our platform to structure your emissions measurement

Alongside our consulting services, our GEMS platform automates and streamlines the entire emissions-measurement process.

Access a large emission factor database

In carbon footprinting, it's common to make estimations or rely on generic emission factors, providing averages for a given product or service. With GEMS, companies have access to a comprehensive database maximizing a supplier-specific approach.

Among others, you will be able to use the emission factors of the following databases:

- **Eco-invent:** the most well-known environmental database that covers a diverse range of sectors and contains more than 20000 datasets modeling human activities and processes.

- **Carbon Disclosure Project (CDP):** provides supplier-specific carbon intensities. In GEMS, 20000 companies that reported their emissions through the CDP Climate change questionnaire.

- **International Energy Agency (IEA):** provides emission factors related to the energy sector. Among others, it provides electricity regional grid emission factors over more than 200 locations.

- ✓ **Sectoral databases** such as INIES specialized in construction, Agribalyse in the food sector or Boavitza that lists thousands of product carbon footprint in the IT sector.

- ✓ **National databases** such as the Base Empreinte in France, conversion factors in the UK (DEFRA) or emission factors from the Environmental Protection Agency (EPA) in the US.
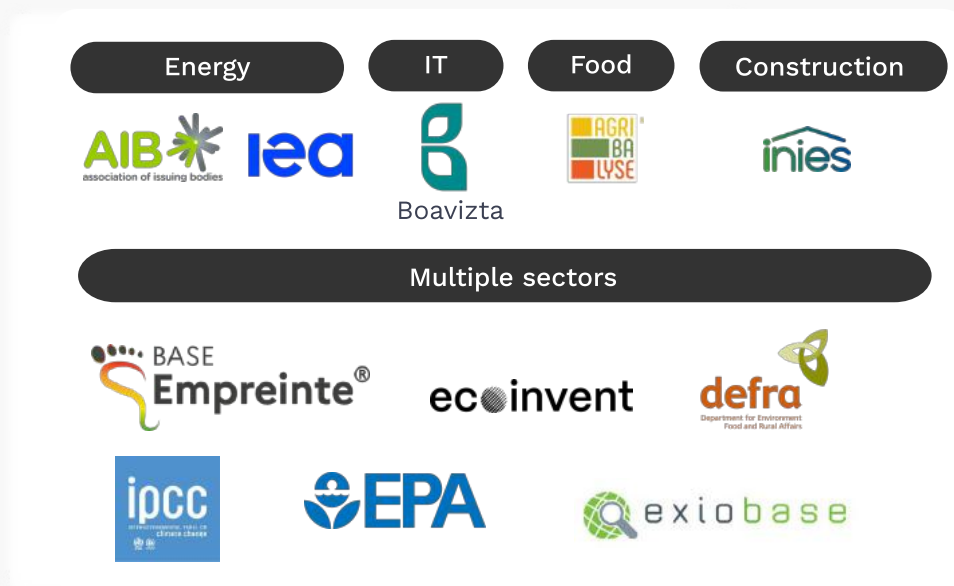

Customize your emission factors

depending on your needs and your industry specifics, you can integrate your own emission factors into GEMS.

Your dedicated consultant will help you with this customization.

Adaptive data collection

To simplify data collection, especially for teams for whom this is not a core activity, GEMS offers several methods for efficient and structured collection:

- ✓ **Adaptive data entry forms:** fill in data through forms that adjust to your level of granularity.

- ✓ **Bulk import:** upload your Excel files using our templates.

- ✓ **Employee surveys:** customized questionnaires to gather data from your teams.

- ✓ **Automatic extrapolation:** while physical data is always preferred, you can extrapolate values from existing data when needed.


Ask for a demo ↗
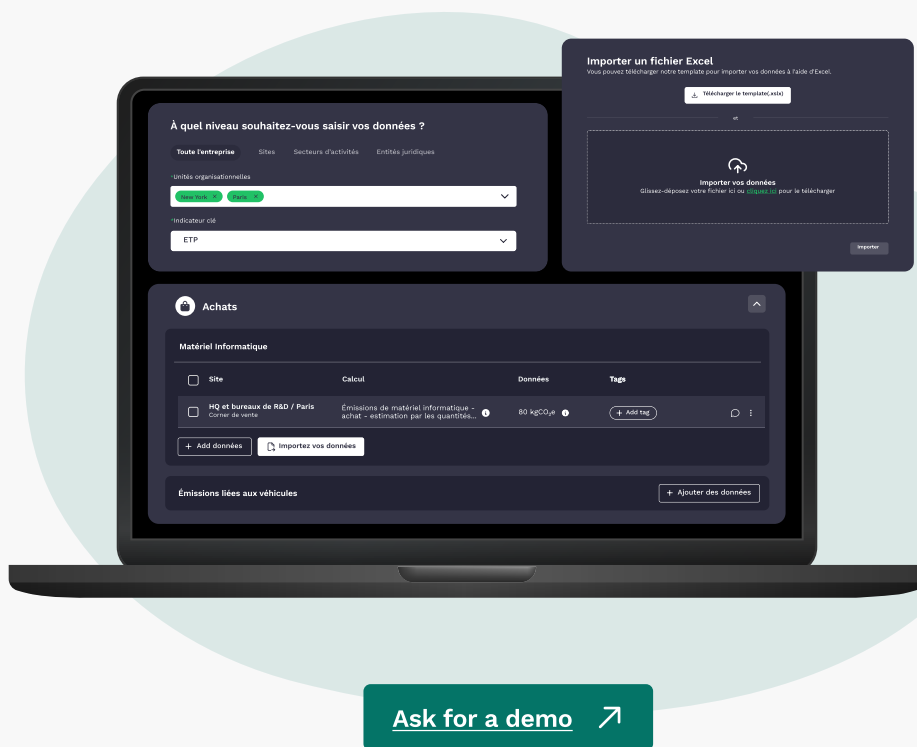
🛡️ **Your dedicated consultant will assist you with your collection**

Because data collection is a crucial step in completing your carbon footprint, your consultant supports you throughout the entire process: from defining the collection strategy to verifying data quality and reliability.

A clear and transparent results dashboard

GEMS provides a comprehensive view of your results through a dedicated dashboard. You will be able to:

✓ **Obtain a confidence score to reinforce the credibility of your data:** This feature helps identify levers to improve reliability and strengthen the robustness of your assessments.

✓ **View emissions clearly by scope.**

✓ **View detailed graphs by activity category:** The dashboard displays graphs showing results by activity category. You can also access specific details by subcategory.

✓ **Get dynamic results with filters:** You can use filters such as activities, tags, suppliers, and emission factors to tailor the results to your needs. This feature ensures personalized analysis and a deeper understanding of your results.
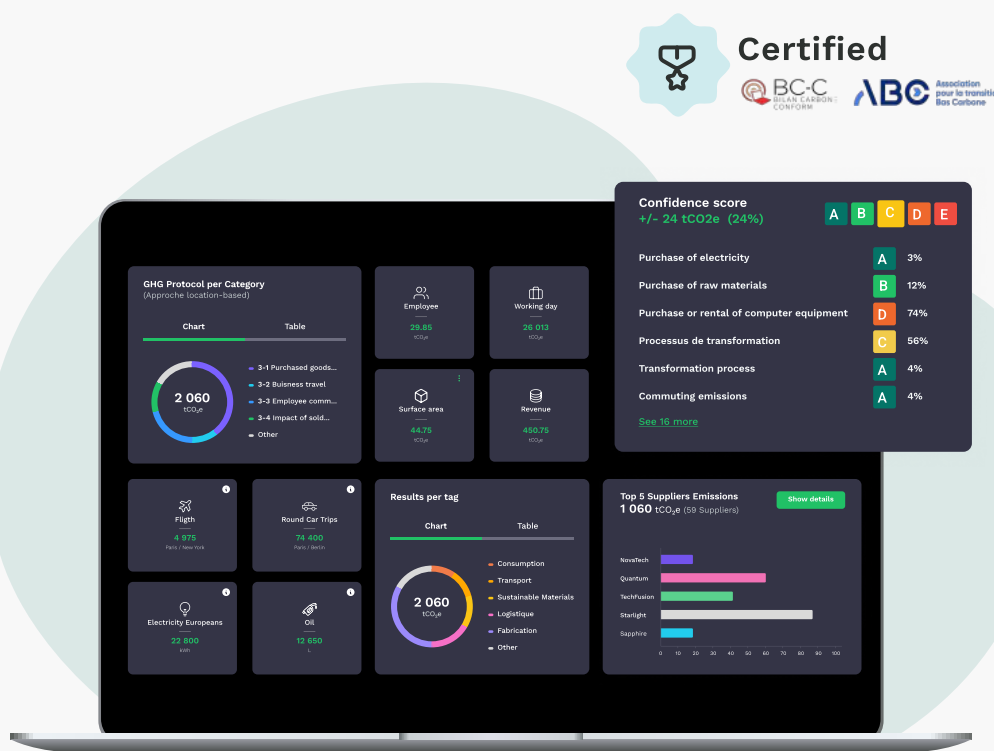

Results in line with the best national and international methodologies

Auditable and exportable results

With GEMS, you can easily:

- ✓ **Generate automated reports (ISO 14064 / BEGES / GHG Protocol)** in multiple languages and formats (1-pager or full report), consolidated at group, site, or legal-entity level for stakeholder communication

- ✓ **Transparently extract all your data:** you retain full ownership and can export raw data and results in Excel format
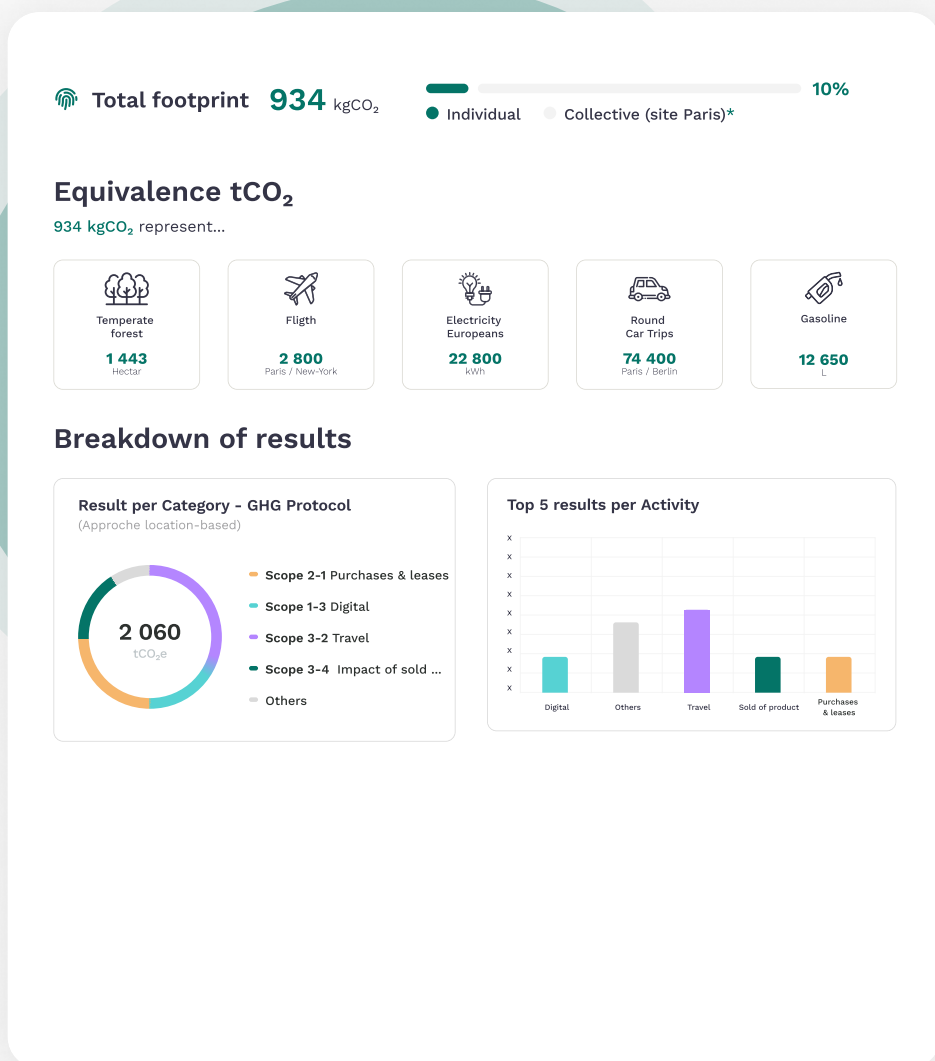
Conclusion

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.

- ⊘ **The right support makes all the difference:** working with experts backed by reliable tools like GEMS simplifies data collection, improves accuracy, and strengthens 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.

# Let's assess your situation

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

ClimateSeed can simplify your Scope 3 measurement and reporting, supported by the extensive experience of our consultants.

Talk with an expert ↗

CONSULTING + PLATFORM
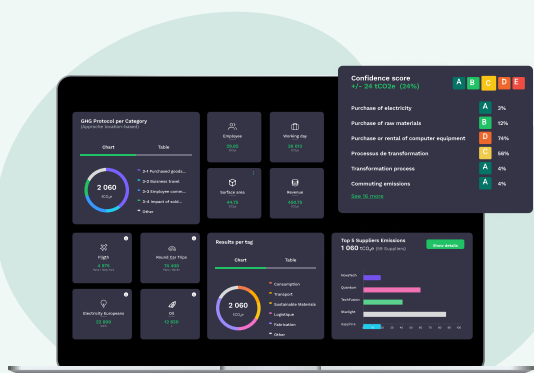
ACT WITHIN YOUR VALUE CHAIN

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   Sécurity

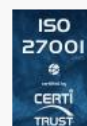**Results in line with the best national and international methodologies:**

Bilans GES Organisation   GREENHOUSE GAS PROTOCOL   BC BILAN CARBONE®   ISO 14064   PCAF Partnership for Carbon Accounting Financials

Certified

BC-C BILAN CARBONE CONFORM   ABC Association pour la transition Bas Carbone

Discover our offer ↗

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ecovadis GOLD | Top 5% Sustainability Rating Jul. 2024   ISO 27001 certified by CERTI TRUST

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

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