GUIDE BOOK

Understanding the basics of decarbonization

ClimateSeed

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In this guide, we will cover what a carbon footprint is, six reasons to measure your carbon footprint, and a deep-dive into CSRD. Along with, more information on the Net-Zero Standard by SBTi, and what your company can do to reduce its carbon emissions. At ClimateSeed we combine experts with technology to measure GHG emissions and optimize your decarbonization in line with GHG accounting standards and Science Based Targets. For more information, contact us.

1. What is a carbon footprint?

Companies are increasingly committing to an environmental strategy, whether to anticipate future regulations or to outline their commitment to fight against global warming. A CSR (Corporate Social Responsibility) business model can be a real lever to enhance your image and build loyalty among your partners and employees, but where to start?

A carbon footprint measurement is the first step towards a robust environmental strategy for companies. In this article, we review what a carbon footprint measurement is, why, and how to do it.

What is a GHG footprint assessment?

A Greenhouse Gas (GHG) footprint is an assessment of the amount of greenhouse gasses emitted (or captured) into the atmosphere, over a reference period, by the activities of an organization or a territory.
In France, it is often referred to as Bilan Carbone, from the methodology "Bilan Carbone" developed by ABC (Association for Low Carbon Transition) as mandated by ADEME (The French government agency for Energy and Environment).

Why measure your carbon footprint?

It has become necessary to change the way we produce and consume if we want to continue to live on a healthy and habitable planet. We can already see the disastrous repercussions of global warming on our civilizations: famines, displacement of populations, degradation of human health, water shortages, etc...

The IPCC (Intergovernmental Panel on Climate Change) warns of these repercussions and urges governments to drastically reduce their greenhouse gas (GHG) emissions to achieve the objectives of the Paris Agreement and limit global warming to 1.5°C compared to the pre-industrial era.

Individuals and companies, therefore, must measure their carbon footprint and take the necessary steps to reduce their emissions, in the short term, and contribute to global carbon neutrality in the long term. This transition must be accompanied by concrete actions, the first step being to identify one's sources of emissions to be able to reduce them: we cannot reduce what we have not measured.

To help them, companies can call upon consulting firms specialized in carbon assessment such as ClimateSeed.

But what are the specific steps to properly measure your carbon footprint? Which perimeter do we need to consider?

To assess its GHG, several perimeters are taken into account:
- The operational perimeter, is all direct and indirect emissions generated by the company's activity.
- The organizational perimeter, all the company's sites, and facilities.
- The temporal perimeter, the carbon footprint covers a specific period, delimited in time.

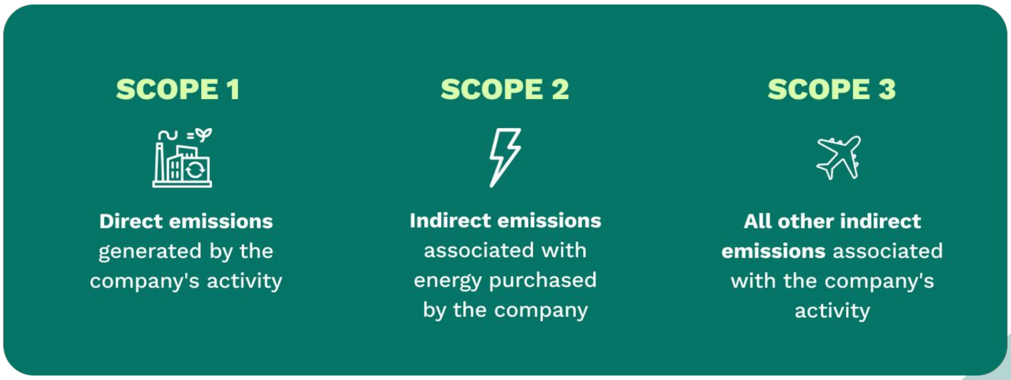
Emissions are divided by scope (Scope 1, 2, & 3) or by emission items depending on the methodology. These categories correspond to the operational scope.

What are the scopes of the application?

Scope 1 represents direct GHG emissions and takes into account the sources that are directly controlled by the company. This is the most limited scope and includes emissions related to the company's production process, fuel used for the process, air conditioning, and the company's vehicle fleet.

Scope 2 represents indirect GHG emissions from the production of electricity purchased and consumed by a company. This includes the electricity and steam required to manufacture a product or provide a service, and therefore includes the energy production associated with a product or service.

Scope 3 takes into account all other indirect emissions generated by the organization. This is the broadest scope, looking at the rest of the company's value chain (upstream and downstream activities). For example, we analyze emissions from the transportation of goods, waste management, business travel, supplier emissions or purchasing policy, etc.



A decree signed by the Minister for Energy Transition on July 1 2023 makes it mandatory to account for and report all significant indirect emissions, thus including so-called "scope 3" emissions.
In France, regulations require companies with more than 500 employees to measure their greenhouse gas emissions at least once every four years.

On January 1st 2024, a new rule called the Corporate Sustainability Reporting Directive (CSRD) took effect in the European Union (EU). This rule makes it mandatory for companies in the EU to report more information about their environmental and social practices.

While the NFRD is concerned with only large companies with more than 500 employees, the CSRD will apply to large companies exceeding at least 2 of the following criteria:
- > 250 employees,
- 20 million euros balance sheet,
- 40 million euros in sales.

These thresholds will normally be updated by the end of this year following the next publication of Directive.

2. 6 Reasons to Measure Your Carbon Footprint

Why is it important to measure your carbon footprint? Many reasons that have become evident in an increasingly severe and urgent climate context. Not only are these affecting individual consciousness, but also impact decision-making processes in the business world.

Within a business environment, customers and investors are becoming increasingly sensitive to environmental issues. Measuring your carbon footprint is a strategic tool for structuring a solid environmental strategy. A large majority of companies are calculating their carbon footprint and here are 6 reasons for you to do the same:

a. Comply with Existing Regulations & Anticipate Upcoming Regulation Changes

Companies with more than 500 employees are obliged to carry out a GHG assessment (by EU directive 2014/95/EU, French "Grenelle II law", German "CSR Act"). However, since the business sector is largely responsible for each country's emissions, climate regulations are very likely to change and affect a broader scope of companies. **From 2024 onwards, the European Sustainability Reporting Directive (EU CSRD) will extend this requirement to companies with more than 250 employees** (SMEs and all companies listed on regulated markets). This directive concerns more than 50,000 companies.

In the event of a breach of these legal obligations, the company concerned may be issued a fine of €10,000. Following that, an increase of up to €20,000 fine if there is a repeat offense.

b. Meet your Clients' & Investors' Growing Expectations

It is increasingly common for **investors nowadays to request companies to disclose their carbon footprint and reduction strategies.** It has become a key decision factor for their investment or partnerships. Customers also attach greater importance to a company's environmental commitment, and it is a criterion that increasingly influences their purchasing decisions.

These growing concerns are likely to become a new norm for stakeholders. More investors are paying attention to the extra-financial parameters of a company related to ESG (environmental, social, governance).

In the Environmental part (E), the measurement of the carbon footprint plays a fundamental role in creating an environmental strategy that can align with investors' requirements. In addition, the SFDR regulation requires companies in the financial sector to communicate extra-financial information for each of their products and to classify them.

c. Reduce your Costs and Impacts

Measuring your carbon footprint allows you to determine carbon reduction opportunities, usually linked to energy and transportation. Excessive energy use or other inefficiencies are frequently associated with high levels of greenhouse gas emissions. Lowering your GHG emissions means increasing your efficiency and cost-effectiveness. Implementing low-carbon solutions not only leads to reductions in emissions, but also overall costs.

d. Strengthen your Reputation

Transparently disclosing your carbon emissions and reduction goals is a competitive advantage. It shows your involvement and commitment to preserving the environment.

Although this is still considered a competitive advantage today, this trend will tend to weaken, as environmental commitment increasingly becomes the new norm.

e. Raise Awareness and Attract New Talents

Awareness leads to action. **By measuring your carbon footprint, you inspire others to do the same. It highlights the fact that reduction measures exist and can be implemented.** In addition, being a company that has a robust sustainability strategy is also a way to attract and retain talent. Individuals are more sensitive to the sense of their work and are increasingly interested in making a difference. Today, successful professionals favor a company that shares the same environmental values.

f. Fight against Global Warming

Fighting climate change should be the first motivation for measuring your corporate carbon footprint. We all have a role to play in the fight against global warming, but companies have the biggest room for action.

By measuring their carbon footprint, companies can identify their highest emission sources, which allows them to implement an emission reduction strategy and thus reduce their environmental impact.

For more information on what your company can do to reduce its emissions, check out our article, "What can my company do to reduce its carbon emissions?" Measuring your carbon footprint is the first step toward a successful environmental journey. Ready to get started? Contact ClimateSeed.

3. CSRD: the European Directive on Corporate Sustainability Reporting

On November 10, 2022, the European Parliament approved by a large majority the new ESG reporting framework for companies, the Corporate Sustainability Reporting Directive (CSRD). The Council of the European Union is expected to adopt the proposal on November 28th, when it will be signed and published in the Official Journal of the EU. The directive will take effect 20 days after its publication and application of the rules will start between 2024 and 2028.

One of the cornerstones of the Green Pact for Europe, the CSRD was presented on April 21, 2021, by the European Commission to improve financial flows towards sustainable activities in the European Union. This new EU legislation requires all large companies to report regularly on their activities, to put an end to greenwashing and to increase corporate responsibility.

To achieve this, **the CSRD is introducing reporting requirements that are more detailed than the current Non-Financial Reporting Directive (NFRD).** DIRECTIVE 2014/95/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. **A regulatory framework that requires major public interest entities (PIEs) to report on their sustainability performance since 2018.**

Implementation of the rules will start between 2024 and 2028:
- **As of January 1, 2024,** public interest companies with more than 500 employees, already subject to the Non-Financial Reporting Directive, have to start gathering data because in 2025 they will have to report on 2024 activities and emissions;
- **As of January 1, 2025,** for large companies that are not currently subject to the Non-Financial Reporting Directive (with more than 250 employees and/or EUR 40 million in turnover, and/or EUR 20 million in total assets), reporting is expected in 2026;
- **As of January 1, 2026,** for SMEs and other publicly traded companies, reports are due in 2027. SMEs may choose not to participate until 2028.

The thresholds are subject to change regarding the next publication of amended Directive 2013/34/EU of the European Parliament and of the Council as regards the adjustments of the size criteria for micro, small, medium-sized and large undertakings or groups.

The European Commission has adopted by delegated act the 31st of July 2023 the first set of reporting standards (European Sustainability Reporting Standards) on sustainable finance disclosure. A second set of sector-specific reporting standards will be adopted by June 30, 2024. Non-compliance will be sanctioned by each Member State. The text states that these sanctions must be "effective, proportionate, and dissuasive." Following the progressive calendar, **almost 50,000 companies (15,000 in Germany alone) in the EU will have to comply with these detailed standards.**

From January 1st onwards, this regulatory framework will be a necessary step in making environmental and human rights an imperative for all companies.

4. The Net-Zero Standard by the SBTi

In October 2021, the SBTi launched the world-first Net-Zero Standard. This initiative has emerged to provide companies with a credible science-based certification to meet the Paris Agreement goal of limiting global warming to 1.5°C by 2050.

The key point in limiting global warming and reaching net-zero emissions at a global level is to reduce emissions within and beyond one's value chain and neutralize residual emissions. Net-zero emissions mean that GHG emissions are equal to CO2 removals.

The Science Based Targets Initiative (SBTi) is a partnership between CDP, the United Nations Global Compact, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). SBTi defines and promotes best practices to set emissions reductions and targets considered "science-based". These targets are in line with the latest climate science to help prevent the worst consequences of climate change and prepare companies for future growth in line with the Paris Agreement.

What are the 3 key elements of the Net-Zero Standard?

a. Reduction within the value chain:

According to the SBTi, abatements are "measures that companies take to prevent, reduce, or eliminate sources of GHG emissions". Abatement is a priority and a minimum societal expectation to face the environmental crisis and limit global warming below 1.5°C.

This reduction plan is divided into two phases: near-term targets and long-term targets.

- Near-term SBTs: In the short term (5-10 years), carbon emissions must be reduced in line with the Paris Agreement (limiting global warming to 1.5°C). Near-term science-based targets are required to achieve significant emissions reductions by 2030.
- Long-term SBTs: in the long term (by 2050), all emissions must be reduced to a residual level (in line with the Paris Agreement).

b. Beyond value chain mitigation:

Beyond value chain mitigation is the next step for companies to reach net-zero carbon emissions and go beyond their near-term and long-term science-based targets.

Businesses can go further to mitigate their carbon footprint outside their value chain by undertaking actions, like preventing deforestation or making investments, such as financing projects or new technologies.

Beyond value chain mitigation are actions or investments that include activities of avoidance and sequestration of GHG, such as purchasing high-quality credits (Forestry and Land Use like REDD+, conservation projects, like peatland or mangrove, energy efficiency, renewable energy, etc.). This includes activities outside a company's value chain that avoid or reduce greenhouse gas emissions or permanently remove and store greenhouse gases from the atmosphere.

c. Neutralization of residual emissions (within or beyond the value chain):

Neutralization is the last step for companies to achieve the Net-Zero Standard. It consists of removing the remaining emissions from the atmosphere by capturing them and permanently storing them. This can be done within or beyond the value chain through nature-based or engineered solutions, such as direct air carbon capture and storage technologies. Companies can neutralize emissions only once they have achieved their long-term SBT.

5. What can my company do to reduce its carbon emissions?

Climate change awareness has become more prominent with the rising temperatures and extreme climate events taking place across the world. As we become more aware of these events, it's obvious that changes need to be made in our daily lifestyle practices to positively influence the environment. It can be overwhelming to make changes to our lifestyle, especially when we are not sure how to implement these new habits.

For businesses, this could be an opportunity to re-evaluate their current activities and commit to a robust sustainability strategy and improve their reputation. A decarbonization strategy can be challenging to start, but here are some steps that can help businesses on their journey toward transition:

a. Measure your Carbon Footprint

There are many reasons why it is beneficial to measure your carbon footprint. A carbon footprint assessment allows your company to understand the most intensive drivers of carbon emissions in your business activity. This will help you prioritize and plan your reduction strategy accordingly. Measuring carbon footprints also forces companies to account for data that is not purely financial. Not only will this help you to understand where inefficiencies are in your business, but will also contribute to implementing cost-saving measures.

For assistance in calculating your carbon footprint, feel free to contact us.

b. Have Sustainable Suppliers

One of the things you will probably notice from a carbon footprint assessment is that you have to collect different data from various suppliers.

This allows you to engage with your suppliers and understand the carbon impact of the goods you purchase. Here you can motivate your suppliers to adopt carbon reduction strategies and in turn, contribute to creating a list of sustainable suppliers.

c. Create a Policy for Business Travel

While this may seem simple in practice, it is often difficult for businesses to make final decisions on when travel is necessary. A travel policy will set boundaries and ease the decision-making process.
Potential recommendations include; limiting the number of flights an employee can take a year, banning air travel that is less than 2 or 3 hours of travel time, favoring train travel, and hosting virtual meetings in place of physical events.

d. Educate and Encourage Employees to follow Sustainable Practices

Creating an environment that promotes carbon emission reduction shows commitment as people become increasingly more environmentally conscious. Putting in place workshops or resources to help employees understand how they can reduce their carbon emissions could also be very beneficial.

Other incentive methods can be subsidizing public transportation costs, encouraging ride-sharing, or carpooling to work.

e. Reduce Waste

Implement waste reduction practices within the office in order to decrease the amount of garbage entering landfills. This can be done by; ensuring there is a proper recycling program in place, starting a green team to conduct annual waste audits, recycling electronic equipment, going paperless, and banning plastic bottles. As well as, encouraging litter-less lunches, and working with suppliers to ensure packaging is composed of recycled materials.

f. Extend Usage of Digital Products

As technology is integral to running businesses, an effective method of controlling carbon emissions is ensuring that your technology is sustainable. In France, 99% of a smartphone’s carbon footprint is linked to its production and transport to France.

Next time, when replacing electronic equipment, opt to repair your existing device or purchase second-hand digital goods.

g. Reduce Energy Consumption

There are many ways in which your company can reduce its overall energy consumption levels. By ensuring the lights are off during the evening, devices are unplugged when they're not in use, and implementing energy-efficient solutions.

For example, motion-sensor lighting, and temperature regulating systems. This practice ensures that the office space is not over-air-conditioned during summer or overheating during the winter.

h. Invest in Renewable Energy

Another controllable and effective solution is to look at the office energy supply and transition to renewable energy sources. There are various suppliers, such as ekWateur and Enercoop that provide 100% renewable energy solutions. By significantly reducing the amount of fossil fuels used, you can decrease your overall GHG emissions.

For more tips on how to reduce your environmental impact, check out our blog: "Sustainable Fashion: How to Reduce your Environmental Impact". These are just a few recommendations a company can follow to reduce its environmental impact. Contact ClimateSeed to structure a detailed strategy.

In this guide, we have explored the concept of a carbon footprint, delved into six compelling reasons to assess your carbon footprint, and conducted an in-depth examination of CSRD (Carbon Disclosure Standard Regulation). Additionally, we provided further insights into the Net-Zero Standard by SBTi (Science Based Targets Initiative) and offered guidance on actions your company can take to diminish its carbon emissions.

At ClimateSeed, we harness the synergy of expertise and technology to quantify greenhouse gas emissions and enhance your decarbonization efforts in accordance with established greenhouse gas accounting norms and Science Based Targets. If you seek additional information, please don't hesitate to get in touch with us.

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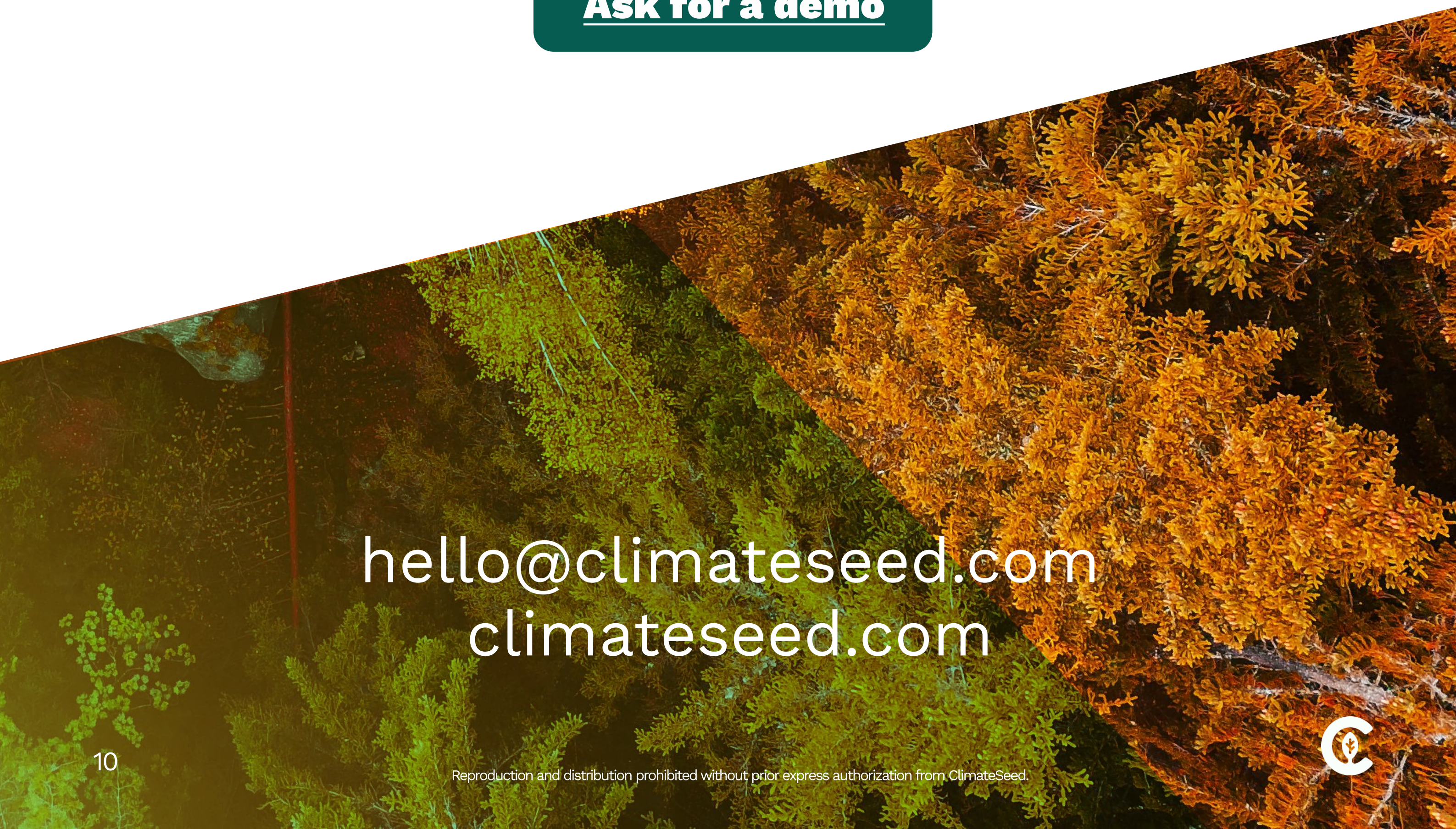

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