



How to choose
**the best carbon
accounting solution**
for your business and
get C-suite buy-in

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Introduction

Are you ready to introduce carbon accounting to your business?

There are many possible approaches, such as in-house teams, consultancy engagements, and carbon accounting software-as-a-service (SaaS) products, but quality varies and different solutions bring different benefits.

As you research the options, you need to be clear about your company's needs and understand best practice for carbon accounting in the commodities sector.

Use our checklist overleaf to help you focus on the most important features of a carbon accounting solution. Go to Page 9 for our tips on getting C-Suite buy-in.

What is carbon accounting?



Carbon accounting is the process of measuring all the greenhouse gas (GHG) emissions produced by a company, typically calculated as carbon dioxide equivalent (CO₂e).

Why commodities trading needs carbon accounting

It's becoming critical for commodity traders to measure and manage their GHG emissions. A growing number of traders are seeking to track and understand their carbon footprint across the supply chain due to:



Regulatory and reputational risks

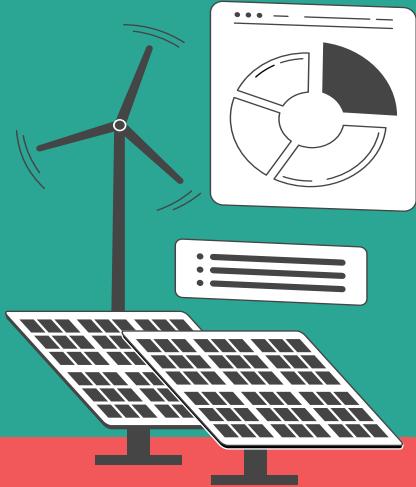


Scrutiny from customers and stakeholders¹ on high-carbon products



Opportunities to seize in the net-zero transition

Choosing the best carbon accounting solution for your organization



1. Check your third-party requirements

- Methodology
- Frequency
- Reporting format
- KPI tracking

Gather any requirements you may have from the customers, stakeholders or external bodies requesting your carbon data, or from your voluntary reporting or target-setting initiatives.

If this is not applicable, and you don't have external requirements, follow our best practice tips for each factor below.



2. Emission scopes

Establish which emissions scopes you want to account for. Ideally you should cover all three, to get a complete picture of your business's carbon impact and risk.

- Direct operational emissions (**Scope 1**)
- Emissions from purchased energy and electricity (**Scope 2**)
- Indirect emissions in your upstream and downstream supply chain (**Scope 3**)

If you start anywhere, it should be Scope 3: your supply chain.

Customers and trade finance providers increasingly want to know the carbon footprint and intensity of your products. With carbon-intensive value chains running through the extractive and agriculture industries, this is where most of your emissions and related risks lie. Quantifying your Scope 3 carbon footprint helps you monitor risks (for example, stranded assets and the impact of regulation such as [carbon pricing](#) that will trickle down the stream).

Third party carbon accounting solutions differ in terms of the scopes they cover, and how accurately and comprehensively they cover them. Scopes 1 and 2 are much easier to calculate than Scope 3; this means that some solutions specializing in Scopes 1 and 2 also offer Scope 3, but principally rely on broad-based estimates. This inaccuracy is particularly risky for the commodities sector. Ensure your chosen solution specializes in Scope 3: your most important source of emissions.



3. Specific data for the commodities you trade



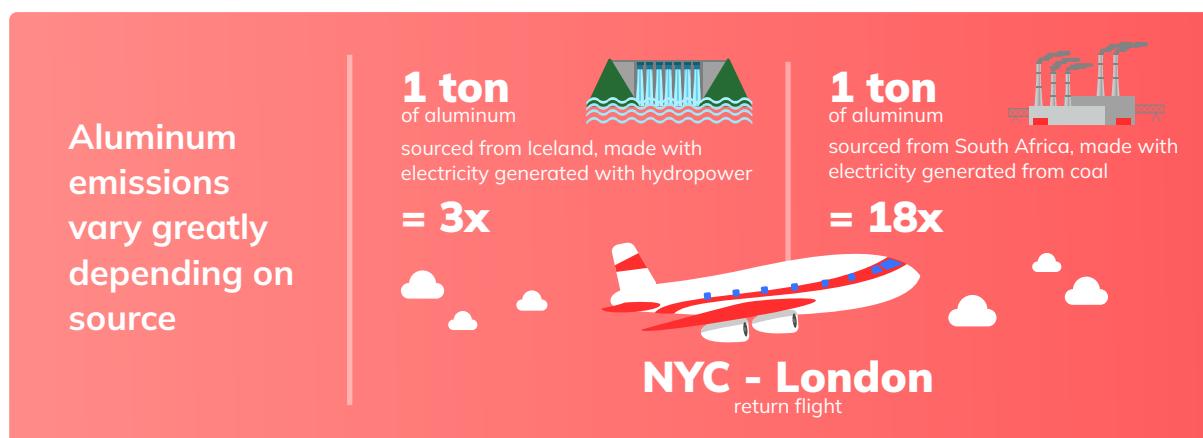
There's a major data gap for supply chain emissions, particularly in the highest-polluting industries. Check whether the solution provider's emissions database covers the products relevant for your trading activities. Wherever possible, you need primary data for the vessels, mines, farms, refineries or consignments in your supply chain.



4. Supply chain mapping



Emissions can vary hugely between assets (e.g. from mine to mine, factory to factory, vessel to vessel), as can emissions averages from one source country to another. Supply chain documentation doesn't always contain comprehensive information about assets or production location. It's vital to try to fill these information gaps, to avoid over-reliance on estimates and averages. Look for solutions providers who will undertake this supply chain mapping.



5. Methodology



- Activity-based methods
- Primary data sources
- Asset-level information and categorization by scopes and boundaries



Ensure you, or your solution provider uses activity-based methods and primary data sources wherever possible.

For in-house solutions, the GHG Protocol sets out [widely accepted standards](#) and [comprehensive technical guidance](#) for carbon accounting and reporting, with guidance on how to categorize emissions, where to set your boundaries, how to collect data, and calculation methods. These standards are accepted for TCFD-aligned [CDP disclosure](#).

A range of methods are currently permitted for voluntary global disclosure frameworks, but standardization is on the horizon²; it's wise to get ahead of tightening guidance now. Permitted methods and estimates based on product, spend or revenue are popular, but carry a higher risk of inaccuracy and weaker insights.



Check if the solutions provider will help you **differentiate value chain emissions at the asset level** according to scope (this is particularly important for commodity trading houses who also own upstream assets).



Transparency³ accountability, and consistency are critical: ensure you or your solutions provider records and can demonstrate rationale for methodological choices and changes.



6. Certification and auditing

- Transparent methodology
- Independent databases
- Third-party certification

Just like financial accounts, carbon accounting should be auditable and verifiable. Reports need to be trusted by stakeholders and to survive greenwashing scrutiny. Your solutions provider should use transparent methodologies, independent databases, and be able to give your emissions reports third-party certification.

For in-house carbon accounting, you must ensure that your external auditors are experts in carbon emissions methodologies and can verify the calculations.



7. Ongoing accounting

- Frequency of reports
- Live tracking

Ongoing carbon accounting is vital to measure progress against targets, evaluate sourcing and offsetting strategies, and report regularly.

Decide how frequently you need an update, and ensure your solution can support this schedule (whether that's internal team processes for data gathering, or automatic updates from a software provider), for example:

- Do you have quarterly or annual reporting requirements?
- How often do you review your procurement contracts?
- Do you need constant, real-time tracking?

Tracking consignments in near real-time lets you make timely decisions and quickly evaluate interventions (for example, swapping a high-emitting vessel for a low-carbon one before a consignment gets underway).



8. Timeliness of data

- Retrospective reporting
- Real-time insights
- Forward planning

Most reporting frameworks ask for retrospective emissions inventories for the previous calendar or financial year. But if you want insights to inform immediate decisions as well as long-term strategies, you need forward-looking reports or live tracking.

Knowing your estimated emissions in advance helps you quantify the associated regulatory, financial, or reputational impacts.



9. Friendly formats and painless platforms



- Does the solution provide useful data visualizations, snapshots and summaries?
 - Can you export the data in different formats?
-

Whether using a software provider or setting up your own process, ensure you'll have emissions reports in formats helpful for you and for internal and external stakeholders.

Most companies will need access to clear quick summaries (to understand immediate areas of risk and opportunity) as well as itemized, granular data (for transparency and auditing, and to take targeted action).



10. Benchmarks and ratings



Look for solution providers that benchmark your CO₂e output against industry averages, and rate products, assets, and suppliers.

This will let you, your customers and stakeholders understand how the carbon intensity of your trades, set KPIs, compare options and work to improve your rating over time.



11. Integration and automation



For technology solutions, be clear about:

- Who will use the software internally?
- Do you need your customers, purchasers, or financiers to access it?
- What format is your raw data in?

Ensure the solutions provider or your internal set-up can incorporate these needs smoothly, without adding unnecessary burdens on your teams.

Consider whether you need a fully automated technical integration with your systems and data sources, or whether a semi-automated process is sufficient. For example, are you willing to do a one-click manual data dump as long as the remaining calculation process is fast and automatic?

Check if the carbon accounting platform is cloud-based and cost-effective, or does it require you to install and maintain clunky on-premise software?

Finally, consider whether you need your carbon accounting to be integrated into related processes and tools, such as compliance exposure or vessel tracking.⁴



12. Type of solution



Each type of solution, be it in-house, consultancy or software, comes with advantages and disadvantages. Whichever you select, ensure it ticks the above boxes and that it overcomes these potential pitfalls:

1. In-house



6-12 months*



Live tracking

PROS

In-house solutions provide your organization with carbon literacy and a long-term owner, ensuring continuity of your carbon management roadmap. It builds awareness and monitoring internally, and, done right, can mean your solution is tailored for your industry and workflow.

CONS

It's extremely resource-intensive to set up and maintain sophisticated in-house solutions. Top talent with the right expertise — across carbon markets, domain integration, product management and reporting — is limited.

2. Consultants



3-8 months*



Historical snapshot

PROS

Consultancy firms can bring deep sector understanding and organizational change expertise, providing a long-term Paris-aligned carbon strategy to present to shareholders and stakeholders, with multi-year forecasting.

CONS

Consultancies can be the most expensive solution, requiring on-hand internal resources, with significantly slower calculations than in-house AI solutions or automated third-party software. Data tends to be retrospective and reliant on broad-based estimates, without accurate asset-level emissions information for commodities supply chains.

3. Software



2-3 weeks*



Live tracking

PROS

Software can bring an unparalleled level of speed, automation, and actionable insights. Cloud-based AI-powered solutions can be extremely cost-effective, saving time and internal resources, with immediate real-time or forward-looking tracking. Software companies specializing in supply chain modeling, with independent asset-level emissions databases, can provide more accurate results.

CONS

Some software solutions don't specialize in Scope 3, and lack industry-specific expertise for the commodities sector. Sharing sensitive operational information with a software company requires vetting: ensure transparency on usage, and that you have an NDA in place.

*Estimated best-case onboarding time, and time-sensitivity of carbon footprinting data.



13. Compile your questions for the free demo or discovery call



- Do they understand your industry and workflow?
- Do they have any case studies?
- Are there any new features they're working on?
- How have they responded to customer feedback in the past?

Once you've shortlisted external solution providers, check if they offer a free demo or discovery call. This is a great opportunity to dive into the features and get information that's not available in marketing materials.

If it's a software product, use the opportunity to understand the people behind the technology. Ensure this is a credible team that will give you reliable customer support, and help you navigate the unique complexities of commodity supply chains and emissions.

Guiding principles:

1

Accuracy is the north star

In carbon accounting, there can be trade-offs between speed, completeness, and accuracy. This is especially true with Scope 3 calculations.

Yet accuracy in carbon accounting is vital, especially for the commodities sector. Scrutiny of inaccurate emissions reporting increases year by year, together with pressure on high-emitting industries to disclose and decarbonize. You need to ensure your carbon accounting is robust, thorough, and can stand up to scrutiny.

There are still some big emissions data gaps for the extractive, logistics, and agricultural industries, and sometimes getting accurate, verifiable data for an asset or supplier is simply impossible, whichever approach you take. The items in our checklist above will help you find a solution that's as close to fully accurate footprinting as possible, so you can demonstrate best practice to your stakeholders, while being transparent about the challenges.

2

The supply chain imperative

The business risks of carbon-intensive supply chains are set to rise, and stakeholders want to know the embodied carbon footprint of the products they're purchasing or the trades they're financing. A credible net-zero strategy must include supply chain (Scope 3) emissions.⁵



Half of the world's fossil fuel assets could be worthless by 2036 in a net-zero transition

Commodity supply chains wrap around the world in complex ways, and it's challenging to obtain timely, accurate emissions data up to the cradle. But if you're serious about understanding and tackling your black boxes of hidden carbon risk and the carbon intensity of your products, you need to ensure your carbon accounting is focused on Scope 3 emissions, from mine to processing to port.



The COP26 agreement explicitly commits to phasing down coal and fossil fuel subsidies

3

Long-term planning

In 2022, there's no doubt that carbon management needs to be part of a commodity traders' business strategy. The urgency will intensify as we near the 2030 global deadline to halve emissions for a net-zero future. Policymakers and your stakeholders and consumers are set to take further action to enact change in high-emitting industries. Examine your long-term as well as short-term needs. Check which legislative changes to expect in your—and your suppliers'—industry and geography (for example, mandatory disclosure, carbon pricing, and the EU Carbon Border Adjustment Mechanism).

With more regulation comes more risk and we can expect tightening requirements for accurate and comprehensive accounting across all scopes. Ensure your chosen solution will future-proof your business and help you get ahead of legislation. The more robust your carbon accounting is now, the better you can prepare, and the better you can quantify the impacts of legislation and carbon pricing trickling down your supply chain.

How to get C-Suite buy-in for your chosen solution



1. Reinforce the business benefits of carbon accounting

The extractive and agricultural sectors face high risks of disruption in the transition to a net-zero economy. Carbon accounting prepares commodity traders to withstand the coming climate shock and stay competitive and resilient.

Manage risk:



The cost of carbon: Commodity trading faces major risks with the spread of carbon regulation, the rising price of carbon⁶, and a potential sharp decline in extraction and production — from stranded assets⁷ to a hike in the cost of business-as-usual.



Reputation and legislation: Banks, buyers, shareholders, policymakers, and civil society are increasingly expecting transparency and action in high-emitting sectors. Increasing media scrutiny brings heavy reputational risks, and more legislation is on the horizon, such as G7-backed mandatory disclosure.⁸

Carbon accounting helps tame the complexity of ESG regulation, mitigate risks early, and identify opportunities.

Seize opportunities:



Sustainability leadership: Aim for ESG leadership by showing proactive transparency, decarbonization, innovation with suppliers and buyers, and voluntary disclosure. With accurate emissions data, use offsets credibly under increased scrutiny.



Green products: Access green finance opportunities from lenders by managing and reporting your climate risk, respond to the demand for low-carbon products, and secure green suppliers before increased demand creates a market premium.



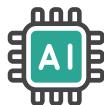
Shareholders are demanding [boardroom change](#) based on climate governance.

2. Demonstrate the value of your chosen solution

Show that your chosen solution fulfills the key principles of accuracy, supply chain coverage, and long-term planning (see page 8). If your executives are unfamiliar with the organization behind your third party solution, they will want to know it's credible and understand the rationale for your choice. Emphasize the need for integrity of numbers above all else, and the need for solutions providers who provide specific supply chain emissions data for your commodities, using robust methodologies.



Over **90%** of companies incorrectly measure emissions⁹



Boston Consulting Group recommends using AI¹⁰ to measure emissions - exhaustively, accurately and frequently

3. Rally key internal colleagues

Carbon accounting can bring a **range of benefits** for key teams across the organization:

CEO

Carbon accounting helps your C-Suite harness reputational opportunities in the net-zero transition. Shareholders and board members want to see CEO leadership on carbon issues, as a proxy to good risk management and ESG stewardship. Tracking emissions underpins any long-term climate strategy and future-proofs businesses. Sustainability attracts talent, and is a lever for strategic partnerships.

CFO

Good carbon accounting is a climate insurance policy. It's a clear path to navigating ESG complexity and benchmarking, and can open opportunities for emissions reductions without changing core products. Traders may be able to access interest rate reductions on trade loans from banks beginning to offer incentives for carbon disclosure.

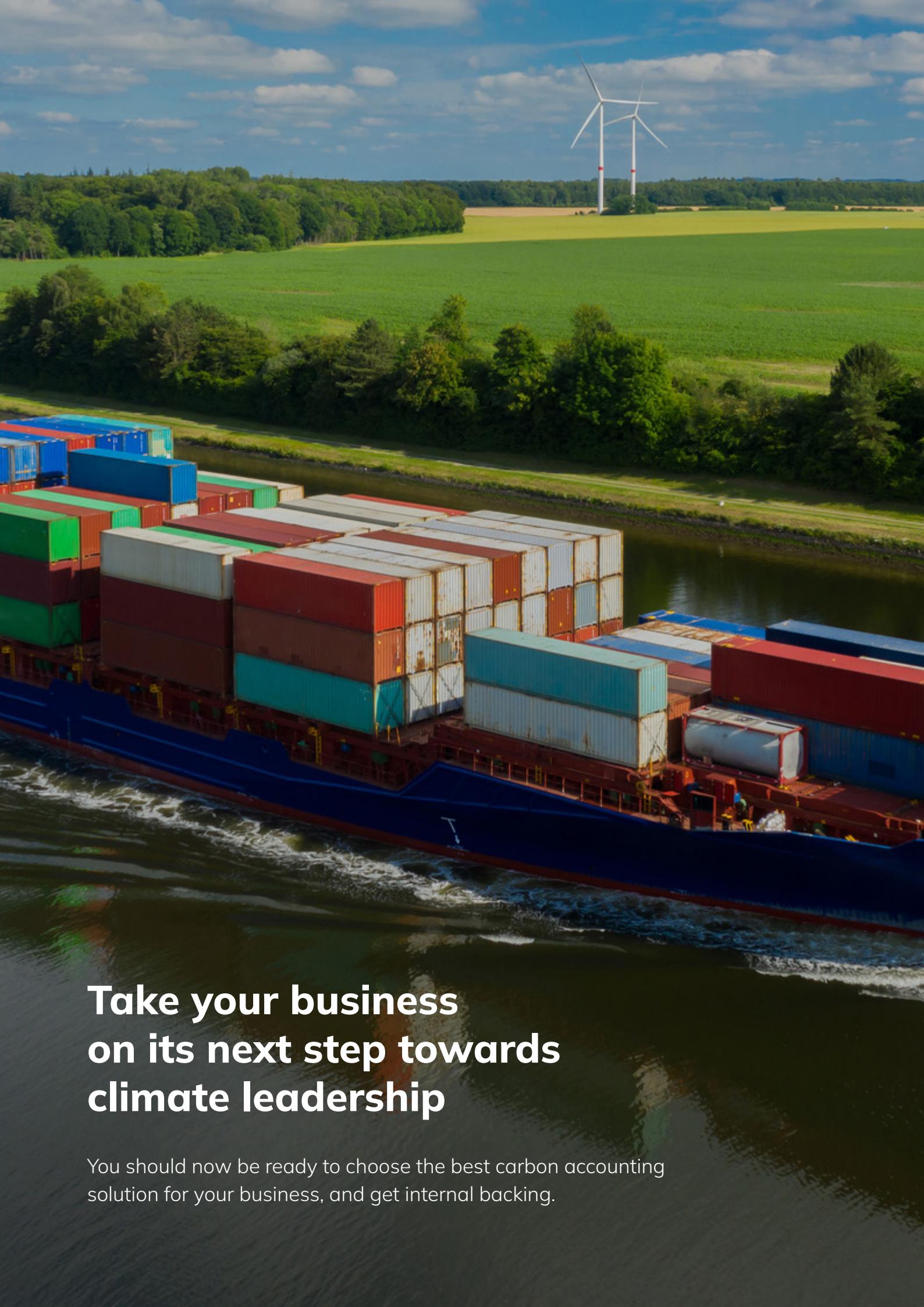


Carbon data helps traders navigate market disruption, respond to disclosure requests, and aid customers in understanding their Scope 3 carbon footprint and risk. Carbon accounting reveals emissions variations between suppliers and assets, opening opportunities for reductions and product differentiation, and quantifying risk in purchasing decisions amidst growing carbon regulation.

Tracking emissions helps tame the complexity of ESG regulation and its associated administrative and logistical challenges. Carbon accounting helps your back office get ahead of legislation and reporting demands, revealing the potential impact of carbon pricing, and identifying which assets and suppliers meet industry standards. Involve your operations colleagues in checking a solution will smoothly integrate with existing workflows; for example, automated software often requires a simple raw data dump.

Trader

Operations



Take your business on its next step towards climate leadership

You should now be ready to choose the best carbon accounting solution for your business, and get internal backing.

Need more guidance on carbon accounting?



Learn more

[Case study: How CarbonChain helped Gunvor meet customer demand for disclosure](#)

[Case study: How Concord gains industry-leading carbon insight for their trade portfolio](#)

[How commodity traders are tackling demand for carbon disclosure and action](#)



Contact us

Want to know how CarbonChain can help you?
[Get in touch.](#)



[CarbonChain.com](#)



Footnotes and sources

- ¹ <https://www.carbonchain.com/blog/access-to-commodity-trade-finance-after-cop26>
- ² <https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdsb-vrf-publication-of-prototypes/>
- ³ [BHP's 2021 report](#)
- ⁴ [Pole Star's PurpleTRAC solution](#)
- ⁵ A credible net zero strategy that can withstand greenwashing challenges must account for downstream emissions. This is essential not only for meeting global climate targets but for tackling supply chain carbon risks that threaten business performance.
[https://www.carbonchain.com/blog/netzero-and-scope-3-how-to-avoid-exxons-mistake](https://www.carbonchain.com/blog/net-zero-and-scope-3-how-to-avoid-exxons-mistake)
- ⁶ <https://openknowledge.worldbank.org/handle/10986/33809>
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- ¹⁰ <https://www.bcg.com/en-gb/publications/2021/measuring-emissions-accurately>