

newtral

GHG Accounting- Handbook

Mastering GHG Accounting: Your
Comprehensive Handbook for
Understanding Greenhouse Gas Emissions
Reporting



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Introduction

GHG Accounting handbook

Your Comprehensive Handbook for
Understanding Greenhouse Gas
Emissions Reporting

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About This Guide

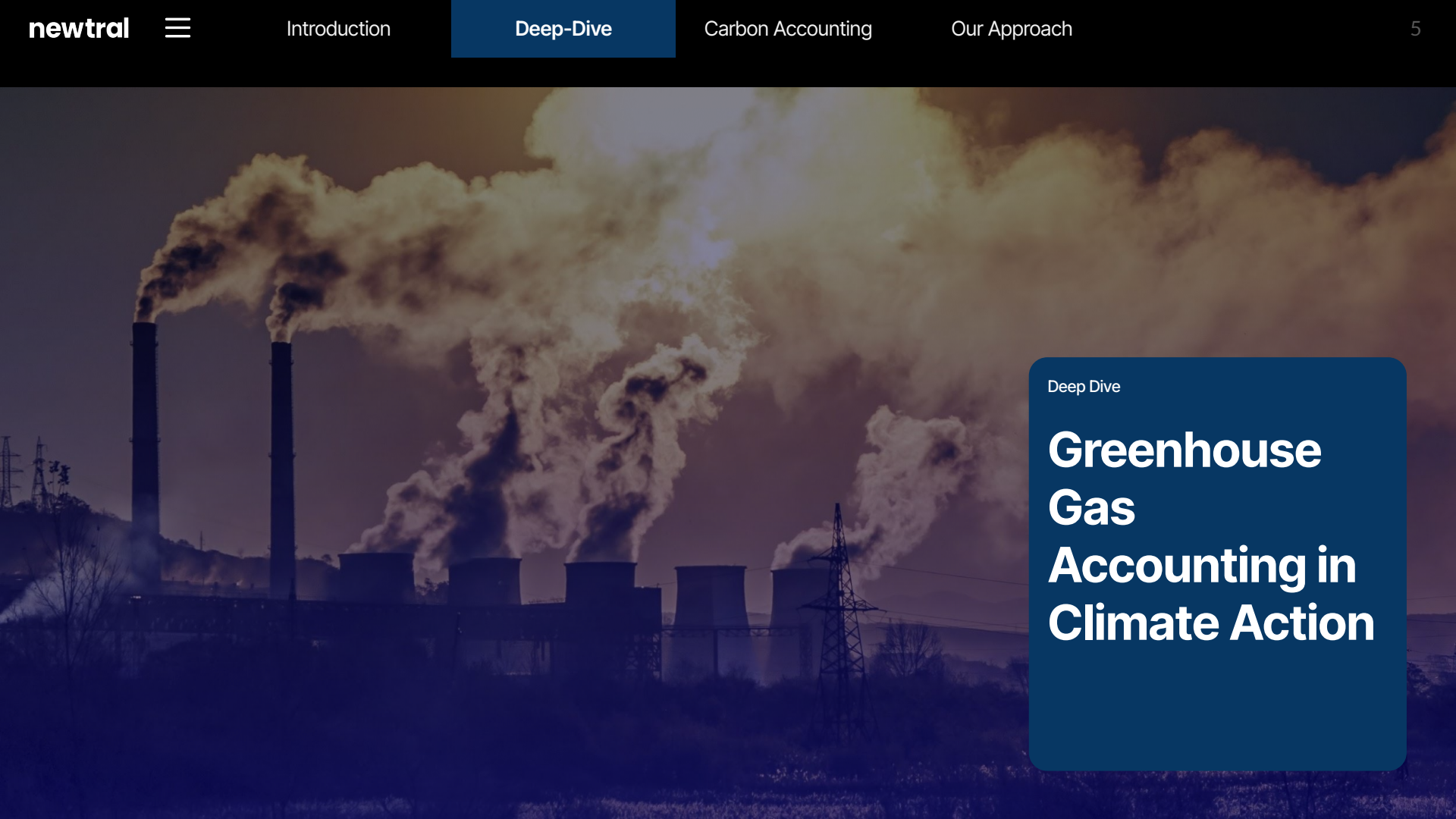
The "GHG Accounting Handbook" is a comprehensive guide to understanding and implementing greenhouse gas (GHG) accounting practices. It serves as a valuable resource for organizations looking to measure, report, and manage their carbon footprint effectively.

Within its pages, you will find detailed explanations of the various GHG accounting principles, methodologies, and protocols widely recognized and adopted globally. The handbook covers the entire process, from identifying emission sources and determining organizational boundaries to quantifying emissions and developing reduction strategies.

This guide provides practical guidance on data collection, calculation methods, and reporting frameworks, ensuring compliance with relevant standards and regulations.

Whether you are a seasoned sustainability professional or new to the field of GHG accounting, this handbook serves as a comprehensive reference, equipping you with the knowledge and tools necessary to navigate the complexities of carbon management and contribute to a more sustainable future.





Deep Dive

Greenhouse Gas Accounting in Climate Action

Deep- Dive

Importance of Greenhouse Gas Accounting in Climate Action

Environmental Responsibility: Greenhouse Gas Accounting fosters a deeper understanding of an organization's carbon footprint, facilitating informed decisions and actions to mitigate its environmental impact. By recognizing the interplay between emissions and climate change, businesses can adopt more sustainable practices, aligning with broader conservation efforts.

Regulatory Compliance: In an era characterized by heightened environmental regulations, accurate GHG accounting is not merely a choice but a necessity. Governments worldwide are implementing stringent emission reporting requirements, mandating organizations to monitor and disclose their carbon footprint. Compliance ensures adherence to legal standards, safeguarding against penalties and promoting regulatory transparency.

Risk Management: Climate change poses multifaceted risks to businesses, ranging from operational disruptions to reputational damage. Greenhouse Gas Accounting serves as a risk management tool, enabling organizations to identify vulnerabilities associated with carbon emissions. By quantifying these risks, companies can devise mitigation strategies to enhance resilience and protect long-term viability.

Cost Savings: Adopting GHG accounting practices can unlock cost-saving opportunities through enhanced resource efficiency and optimized operations. By pinpointing areas of high emissions, organizations can implement measures to reduce energy consumption, streamline processes, and minimize waste. These efficiency gains not only contribute to environmental sustainability but also yield tangible financial benefits.

Stakeholder Expectations: In an era of heightened corporate accountability, stakeholders, including investors, customers, and communities, demand transparency regarding environmental performance. Greenhouse Gas Accounting enables organizations to meet these expectations by providing comprehensive emissions data and demonstrating commitments to sustainability. Enhanced transparency fosters trust and credibility, strengthening stakeholder relationships and bolstering brand reputation.

The Science Behind Greenhouse Gases

Greenhouse gases (GHGs) are pivotal players in the intricate dynamics of Earth's climate system. These gases trap heat within the atmosphere, creating a natural phenomenon known as the greenhouse effect. By absorbing and re-emitting infrared radiation emitted by the Earth's surface, GHGs regulate the planet's temperature, making it habitable for life as we know it. However, human activities have significantly intensified the greenhouse effect, leading to accelerated global warming and unprecedented climate change.

At the heart of the greenhouse effect lies the interaction between sunlight and Earth's surface. When sunlight reaches the Earth, it warms the surface, causing it to emit infrared radiation. Greenhouse gases in the atmosphere absorb this outgoing radiation, trapping heat and preventing it from escaping into space. This process effectively maintains the Earth's temperature within a range conducive to life, creating a delicate equilibrium that is now under threat due to anthropogenic activities.



Common Greenhouse Gases and Their Sources

Several greenhouse gases contribute to the intensification of the greenhouse effect, each with distinct sources and properties. The primary greenhouse gases include:

- **Carbon Dioxide (CO₂):** The most prevalent greenhouse gas emitted by human activities, carbon dioxide is primarily generated through the combustion of fossil fuels such as coal, oil, and natural gas for energy production, transportation, and industrial processes. Deforestation and land-use changes also release significant quantities of CO₂ into the atmosphere by reducing the Earth's capacity to absorb carbon through photosynthesis.
- **Methane (CH₄):** Methane is a potent greenhouse gas with a significantly higher heat-trapping capacity than carbon dioxide. It is emitted from various sources, including livestock digestion, rice paddies, landfills, and the extraction and distribution of fossil fuels. Agricultural practices, such as enteric fermentation in ruminant animals and the anaerobic decomposition of organic matter, are major contributors to methane emissions.
- **Nitrous Oxide (N₂O):** Nitrous oxide is primarily released through agricultural activities, including the use of synthetic fertilizers, manure management, and biomass burning. Industrial processes, such as combustion in fossil fuel power plants and wastewater treatment, also contribute to N₂O emissions. Although less abundant than CO₂ and CH₄, nitrous oxide possesses a significantly higher global warming potential per molecule.

- **Fluorinated Gases:** Fluorinated gases encompass a group of synthetic compounds, including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), which are used in various industrial applications such as refrigeration, air conditioning, and electronics manufacturing. Despite their relatively low atmospheric concentrations, fluorinated gases exhibit exceptionally high global warming potentials, making them potent contributors to climate change

Global Warming Potential (GWP) of Greenhouse Gases

The Global Warming Potential (GWP) is a metric used to quantify the relative potency of greenhouse gases in contributing to global warming over a specified time horizon, typically 100 years. It measures the heat-trapping ability of a gas compared to carbon dioxide, which serves as the reference gas with a GWP of 1.

Each greenhouse gas has a unique GWP value based on its atmospheric lifetime, radiative efficiency, and absorption spectrum. For example, methane has a GWP of approximately 25 over a 100-year period, indicating that it is 25 times more effective at trapping heat than carbon dioxide on a per-molecule basis. Similarly, nitrous oxide has a GWP of around 298, highlighting its substantial warming potential relative to CO₂.

Understanding the GWP of greenhouse gases allows policymakers, scientists, and stakeholders to prioritize emission reduction efforts and assess the climate impact of different mitigation strategies. By focusing on gases with higher GWPs and implementing measures to curb their emissions, societies can maximize the effectiveness of climate mitigation initiatives and strive towards a more sustainable and resilient future.

Deep-Dive

Introduction to the GHG Protocol

A Beginner's Guide to the GHG Protocol

The Greenhouse Gas Protocol (GHG Protocol) serves as the cornerstone of greenhouse gas accounting, providing standardized methodologies and guidelines for quantifying and managing greenhouse gas emissions. Developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), the GHG Protocol offers a comprehensive framework that enables organizations to measure, report, and verify their emissions in a consistent and transparent manner.

At its core, the GHG Protocol delineates three scopes of emissions—Scope 1, Scope 2, and Scope 3—which encompass direct and indirect emissions associated with an organization's activities. By adhering to the principles and guidelines outlined in the GHG Protocol, organizations can gain insights into their emissions profile, identify emission hotspots, and develop targeted strategies to reduce their carbon footprint.

Setting Organizational Boundaries

One of the fundamental principles of greenhouse gas accounting is setting clear organizational boundaries to define the scope of emissions included in the inventory. Organizational boundaries delineate the extent to which emissions from an organization's activities, operations, and facilities are accounted for, providing clarity on the entities and operations covered by the emissions inventory.

When setting organizational boundaries, organizations must consider factors such as ownership, control, and financial consolidation. Scope 1 emissions typically include direct emissions from sources owned or controlled by the organization, such as onsite combustion and industrial processes. In contrast, Scope 2 and Scope 3 emissions encompass indirect emissions associated with purchased electricity, heat, and other activities occurring along the value chain.

Setting Operational and Legal Boundaries

In addition to organizational boundaries, organizations must establish operational and legal boundaries to delineate the geographic and jurisdictional scope of their emissions inventory.

Operational boundaries define the geographic regions and facilities covered by the emissions inventory, ensuring comprehensive coverage of emissions from all relevant sources.

Legal boundaries, on the other hand, are defined by the regulatory requirements and reporting obligations applicable to the organization. Compliance with legal boundaries ensures that organizations adhere to relevant environmental laws, regulations, and reporting frameworks governing greenhouse gas emissions in their operating jurisdictions.

By setting clear operational and legal boundaries, organizations can accurately quantify their emissions, comply with regulatory requirements, and enhance the transparency and credibility of their emissions reporting.

Identifying Emissions Sources and Data Collection

Once organizational boundaries are established, the next step in greenhouse gas accounting is identifying emissions sources and collecting relevant data to populate the emissions inventory. This process involves gathering comprehensive data on energy consumption, fuel use, process emissions, and other activities contributing to greenhouse gas emissions within the organization's operational boundaries.

Data collection methods may vary depending on the nature of the emissions sources and the availability of data. Common data collection approaches include direct measurement using meters, sensors, and monitoring equipment, as well as indirect estimation based on activity data, emission factors, and mathematical models.

To ensure the accuracy and reliability of emission data, organizations should implement robust data management systems, quality assurance procedures, and validation protocols. By collecting high-quality data on emissions sources, organizations can enhance the accuracy of their emissions inventory, identify opportunities for emission reduction, and demonstrate their commitment to environmental stewardship.

Through adherence to the principles of greenhouse gas accounting outlined in the GHG Protocol, organizations can establish a solid foundation for measuring, reporting, and managing their greenhouse gas emissions, thereby contributing to global efforts to address climate change and build a sustainable future.



The GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains, and mitigation actions. The key GHG Protocol standards include:

Corporate Standard: Provides guidance for companies and other organizations to prepare a GHG emissions inventory that represents a true and fair account of their emissions through the use of standardized approaches and principles.

Scope 2 Guidance: Provides additional guidance for corporations on accounting for GHG emissions from purchased or acquired electricity, steam, heat, and cooling (called scope 2 emissions).

Corporate Value Chain (Scope 3) Standard: Allows companies to assess their entire value chain emissions inventory in order to set reduction goals, track performance, and guide efforts to lower emissions in their value chains.

Product Standard: Provides requirements and guidance for quantifying and publicly reporting a partial or complete carbon footprint for a product, based on systematic standards.

The standards cover topics such as setting organizational and operational boundaries, tracking emission sources, calculating emissions, managing inventory quality, reporting, setting reduction targets, and more.

Organizational Boundaries

The GHG Protocol outlines two approaches for determining the organizational boundaries when quantifying emissions:

Equity share approach: Accounts for GHG emissions from operations according to the organization's equity stake.

Control approach: Accounts for 100% of GHG emissions from operations over which the organization has operational control.

Most companies select the operational control approach, accounting for emissions from operations they control.

Operational Boundaries

The GHG Protocol groups an organization's GHG emissions into three "Scopes":

Scope 1 Emissions

- Scope 1 includes all direct GHG emissions from sources owned or controlled by the organization, such as:
- Stationary combustion (e.g. boilers, furnaces)
- Mobile combustion (e.g. fleet vehicles)
- Physical/chemical processes (e.g. cement, aluminum production)
- Fugitive emissions (e.g. equipment leaks, refrigerant losses)

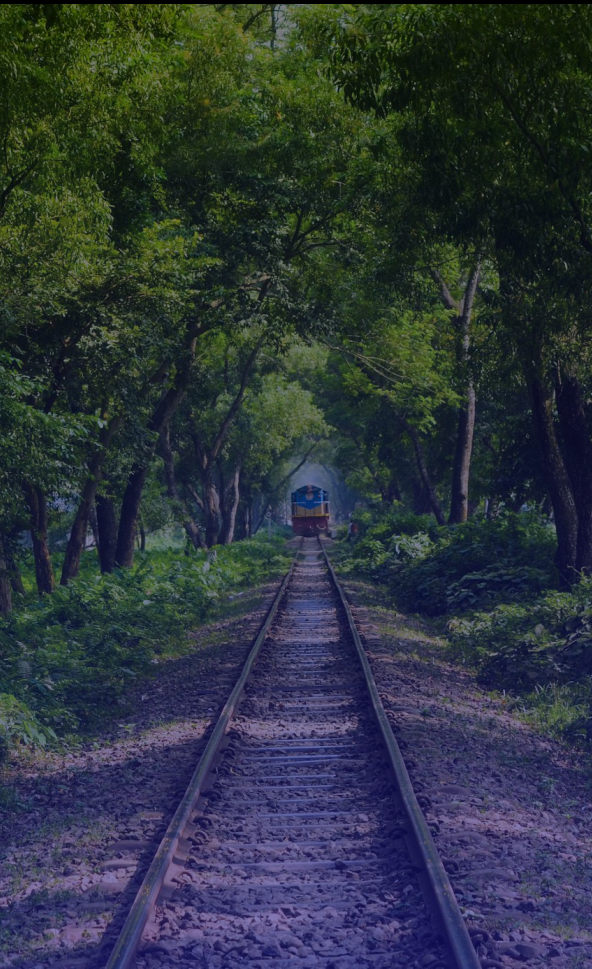
Scope 2 Emissions

Scope 2 accounts for indirect GHG emissions associated with the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the organization.

Scope 3 Emissions

Scope 3 includes all other indirect GHG emissions that occur across the organization's upstream and downstream value chain activities. Common examples include:

- Purchased goods and services
- Capital goods
- Fuel and energy related emissions
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Use of sold products
- End-of-life treatment of sold products



Calculating Carbon Emissions

To calculate an organization's total carbon footprint, GHG emissions from each scope must be quantified separately and reported in metric tons of carbon dioxide equivalent (CO₂e).

Data Collection

Accurate data on emission sources (e.g. fuel combustion, electricity usage, product volumes) is required across the organization's operations and value chain activities. Processes should be implemented for consistent and complete data collection over the inventory period. Primary data should be obtained from sources including fuel use records, purchase records, activity data from specific processes, and direct monitoring. Secondary data sources like industry averages can fill gaps.

Emission Factors

Fuel combustion, electricity usage, and other emission source data is multiplied by an emission factor to derive the associated GHG emissions. Factors vary by region, energy source, and data source (e.g. government agencies, third-party databases). For each GHG emission source/activity, the emissions are calculated by multiplying data on the consumption/usage by an emission factor. Factors are typically expressed in kilograms or metric tons of each GHG per unit of activity data.

Global Warming Potentials

Different GHGs vary in their ability to absorb energy and warm the atmosphere. Global warming potentials (GWPs) are used to convert emissions of different gases into a standard unit of carbon dioxide equivalents (CO₂e) over a given timeframe, typically 100 years. As different GHGs differ in their heat-trapping ability, their emissions are converted to carbon dioxide equivalent (CO₂e) using their 100-year global warming potential (GWP). This expresses their warming impact relative to CO₂ over 100 years.

The GHG Protocol provides calculation tools, spreadsheets, and guidance documents to assist in quantifying emissions across all scopes.

Setting Carbon Targets

Science-Based Targets

To reduce emissions in line with climate science, companies are increasingly adopting science-based emissions reduction targets validated by the Science Based Targets initiative (SBTi). Targets are evaluated for consistency with levels required to limit global warming as per the Paris Agreement.

Companies are increasingly setting emissions reduction targets in line with climate science and the Paris Agreement goals of limiting global warming. The Science Based Targets initiative (SBTi) evaluates whether targets align with keeping warming below 2°C or 1.5°C above pre-industrial levels.

All SBTs must cover scope 1 and 2 emissions at a minimum, with scope 3 targets required when those emissions are over 40% of total emissions. Targets span 5-15 year timeframes, with companies required to review and revalidate every 5 years. Methods include absolute reduction, intensity reduction, renewable energy, emissions removals, and more.

Net Zero Targets

Net zero refers to achieving a balance between emissions produced and emissions removed from the atmosphere over a defined period. Many organizations are committing to reaching net zero emissions by mid-century, with interim emission reduction targets over the short and medium terms.

Many organizations are committing to achieving net zero emissions across all scopes by 2050 or sooner. Net zero is achieved by deeply reducing emissions as much as viable, with any residual emissions neutralized through carbon removals.

The Science Based Targets initiative is developing its net zero standard, providing certification that targets are truly aligned with 1.5°C scenarios. This covers interim targets every 5-10 years to get to net zero by 2050 at the latest.



Carbon Offsets

Carbon credits represent the removal or avoidance of one metric ton of carbon dioxide equivalent (CO₂e) from the atmosphere. Organizations can offset part of their emissions by purchasing carbon offset credits.

Carbon offsets provide a way for organizations to compensate for emissions by financing equivalent emission reductions or removals elsewhere. Key aspects include:

Carbon Credits: Each carbon credit represents one metric ton of carbon dioxide equivalent emissions reduced or avoided compared to a baseline scenario. Credits are issued by certified offset programs.

Carbon Offset Projects: Offsets are generated from projects that either prevent GHG emissions (e.g. renewable energy) or remove and sequester emissions from the atmosphere (e.g. forestry projects). These projects must follow approved methodologies and undergo third-party verification. Common offset standards include Verra's Verified Carbon Standard (VCS), Gold Standard, American Carbon Registry, and Climate Action Reserve. Typical offset project types include renewable energy (solar, wind), energy efficiency, forestry & land use (reforestation, avoided deforestation), industrial gas destruction, household device distribution, and more. Projects follow approved methodologies.

Standards & Certification: Major programs certifying offset projects include Verra's Verified Carbon Standard (VCS), Gold Standard, American Carbon Registry, Climate Action Reserve, and UN Clean Development Mechanism (CDM). Third-party verification is required.

Carbon offset purchases can meet a portion of an organization's emissions reduction goals in the shorter term. However, organizations must prioritize reducing their own emissions first before offsetting remaining unavoidable emissions.

Reporting Carbon Emissions

Carbon Footprint Reports

Organizations should annually publish a carbon footprint or GHG emissions inventory report, detailing their scope 1, 2, and 3 emissions data, methodologies, targets, and progress. This may be part of a broader sustainability report.

Carbon Footprint Reporting: Companies should annually disclose their GHG emissions inventory across all scopes in a publicly available carbon footprint report. This may be part of a broader sustainability or integrated report.

Report Contents: Contents typically include total emissions data by scope, emissions sources, calculation methodologies, emissions reduction activities and performance versus targets, assurance details, and more.

Reporting Guidance: The GHG Protocol's "Corporate Standard" provides requirements and guidance on preparing such public GHG reports. ISO 14064 also has standards on GHG quantification, monitoring and reporting.

Assurance of Carbon Emissions

To enhance data quality and credibility, organizations can have their carbon footprint independently verified by accredited third-party assurance providers against the GHG Protocol and other standards like ISO 14064-3. Limited and reasonable assurance levels are available.

External Assurance: Having emissions data and associated information verified by an independent third party assurance provider enhances stakeholder trust and report credibility. Assurance can range from limited to reasonable.

Climate Disclosure Frameworks: Organizations should align their climate-related disclosures with leading frameworks like the GHG Protocol, CDP, Taskforce for Climate-Related Financial Disclosures (TCFD), and mandated standards like the EU's ESRS.



Overview of Scope 1, Scope 2, and Scope 3 Emissions

Greenhouse gas emissions are categorized into three distinct scopes based on their source and relationship to an organization's activities. Understanding these scopes is essential for organizations to comprehensively assess and manage their emissions profile:

Scope 1 Emissions: Direct emissions from sources owned or controlled by the organization, such as onsite combustion, industrial processes, and vehicle fleets.

Scope 2 Emissions: Indirect emissions associated with the generation of purchased or acquired electricity, heat, and steam consumed by the organization.

Scope 3 Emissions: Indirect emissions that occur as a result of an organization's activities but are not directly owned or controlled by the organization, including emissions from the supply chain, business travel, employee commuting, and product lifecycle.

Each scope presents unique challenges and opportunities for emissions management, requiring tailored strategies and approaches to measurement, reporting, and reduction.

Characteristics and Categories of Scope 1 Emissions

Scope 1 emissions are characterized by their direct association with an organization's operations and activities. They encompass emissions from sources that are owned or controlled by the organization, making them relatively straightforward to measure and manage. Scope 1 emissions can be categorized into the following key categories:

Stationary Combustion: Emissions from the combustion of fuels in stationary sources such as boilers, furnaces, and industrial equipment used for heating and electricity generation.

Mobile Combustion: Emissions from the combustion of fuels in vehicles and mobile equipment owned or operated by the organization, including cars, trucks, buses, aircraft, and ships.

Fugitive Emissions: Unintentional releases of greenhouse gases that occur during the extraction, production, processing, storage, and transportation of fossil fuels and other substances.

Process Emissions: Emissions released during industrial processes, chemical reactions, and manufacturing operations, including emissions from the production of cement, steel, chemicals, and other products.

Sources and Measurement Techniques for Scope 1 Emissions

Measuring Scope 1 emissions requires the use of various measurement techniques and data collection methods:

Direct Measurement: Organizations can measure Scope 1 emissions directly using monitoring equipment such as meters, sensors, and emission analyzers installed at their facilities.

Emission Factors: Emission factors provide standardized coefficients for estimating emissions based on fuel consumption data and activity levels. Organizations can use emission factors provided by regulatory agencies or industry standards to estimate their Scope 1 emissions.

Inventory Management Systems: Implementing inventory management systems can facilitate the collection, storage, and analysis of data related to Scope 1 emissions, enabling organizations to track emissions over time and identify emission hotspots.



Characteristics and Challenges of Scope 2 Emissions

Scope 2 emissions are characterized by their indirect nature, resulting from the consumption of purchased electricity, heat, and steam. While Scope 2 emissions are generally easier to measure and control compared to Scope 3 emissions, they present unique challenges:

Data Availability and Quality: Obtaining accurate and reliable data on energy consumption and associated emissions from external providers can be challenging, as it often relies on data provided by utility companies or energy suppliers.

Emission Factors and Grid Intensity: Calculating Scope 2 emissions requires the use of emission factors or grid intensity factors, which can vary depending on factors such as the energy source mix and grid emissions intensity in the region where the organization operates.

Market-Based vs. Location-Based Reporting: Organizations have the option to report Scope 2 emissions using either market-based or location-based accounting methods, each with its own set of challenges and considerations.

Measurement and Reporting Methods for Scope 2 Emissions

Direct Measurement: Organizations can measure their electricity consumption directly using sub-meters or smart meters installed at their facilities.

Emission Factors: Alternatively, organizations can use emission factors provided by regulatory agencies or industry standards to estimate their Scope 2 emissions based on electricity consumption data.

Market-Based Reporting: Market-based reporting allows organizations to account for the environmental attributes of specific renewable energy purchases, providing additional transparency and flexibility in reporting Scope 2 emissions.

Understanding Scope 3 Emissions and Their Impacts

Scope 3 emissions encompass a broad range of indirect emissions associated with an organization's value chain, including upstream and downstream activities. While Scope 3 emissions are often the largest component of an organization's emissions footprint, they present significant challenges for measurement and management.

Scope 3 emissions can include emissions from sources such as purchased goods and services, upstream transportation and distribution, waste disposal, and employee commuting.

Measuring and managing Scope 3 emissions can be challenging due to the complexity and variability of supply chains, data availability and quality issues, and difficulties in engaging with upstream and downstream stakeholders.

Strategies for Measuring and Managing Scope 3 Emissions

Supply Chain Engagement: Collaborating with suppliers, customers, and other stakeholders across the value chain to gather data on emissions sources and identify opportunities for emission reduction.

Life Cycle Assessment (LCA): Conducting life cycle assessments to quantify the environmental impacts of products, processes, and services throughout their entire life cycle, including raw material extraction, production, distribution, use, and end-of-life disposal.

Carbon Offsetting: Offset programs can help organizations mitigate their Scope 3 emissions by investing in projects that remove or reduce greenhouse gases from the atmosphere, such as reforestation, renewable energy, and energy efficiency initiatives.



Carbon Accounting

Carbon Accounting and Measurement

Carbon Accounting

Carbon Accounting and Measurement

Carbon Accounting and Measurement Techniques for Carbon Emissions

Carbon accounting is a systematic approach used by organizations to quantify and track their emissions of greenhouse gases, particularly carbon dioxide (CO₂), into the atmosphere. It involves the measurement, reporting, and verification of an organization's carbon emissions across various activities and operations. Carbon accounting is crucial for environmental responsibility, regulatory compliance, risk management, cost savings, and meeting stakeholder expectations.

Measuring carbon emissions involves various methods and techniques to accurately quantify the amount of greenhouse gases released into the atmosphere:

Direct Measurement: Directly measuring emissions from sources such as smokestacks, tailpipes, and industrial processes using instruments like emission analyzers and gas sensors.

Indirect Measurement: Estimating emissions based on activity data, emission factors, and mathematical models. This includes methodologies like bottom-up inventories and top-down approaches.

Remote Sensing: Using satellite imagery, aerial surveys, and remote sensors to monitor emissions from large geographic areas.

Life Cycle Assessment (LCA): Assessing emissions throughout the entire life cycle of a product, process, or service.

Continuous Monitoring: Installing continuous monitoring systems in industrial facilities to track emissions in real-time.

Sampling and Analysis: Collecting air, water, or soil samples from emission sources and analyzing them in laboratories.

Common Carbon Accounting Frameworks

Several frameworks and standards are used for carbon accounting, including:

The Greenhouse Gas Protocol: Developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), providing guidelines for measuring and managing GHG emissions.

ISO 14064: An international standard for GHG accounting and verification, published by the International Organization for Standardization (ISO).

EPA's GHG Inventory Guidance: Guidance provided by the U.S. Environmental Protection Agency (EPA) for organizations reporting GHG emissions in the United States.

The Climate Registry's General Reporting Protocol (GRP): A standardized framework for reporting GHG emissions developed by The Climate Registry.

GRI Standards: A framework for reporting economic, environmental, and social performance, including GHG emissions and climate impacts.

CDP: A platform for companies, cities, and regions to disclose GHG emissions, climate risks, and opportunities.

IPCC Guidelines: Methodologies for estimating national GHG inventories, used by countries for reporting to UNFCCC.

PCAF: A standardized methodology for financial institutions to measure and disclose GHG emissions associated with loans and investments.

Kyoto Protocol: An international agreement setting legally binding emission reduction targets and introducing mechanisms like emissions trading.

Bilan Carbone: A French methodology for organizations to calculate their overall carbon footprint across value chains.



Best Practices in Carbon Accounting

Setting Clear Objectives: Establishing clear objectives and targets for carbon accounting, aligned with organizational goals and stakeholder expectations.

Data Quality Assurance: Ensuring the accuracy, completeness, and reliability of data collected for carbon accounting purposes through quality assurance processes.

Transparency and Disclosure: Being transparent about carbon accounting methodologies, data sources, and assumptions used in reporting emissions to enhance credibility and trust.

Continuous Improvement: Continuously reviewing and updating carbon accounting practices in response to changes in technology, regulations, and organizational priorities.

Stakeholder Engagement: Engaging with stakeholders, including employees, customers, investors, and regulators, to understand their expectations and incorporate their feedback into carbon accounting processes.

Why Corporations Should Measure GHG Emissions

Environmental Responsibility: Measuring GHG emissions helps corporations understand their carbon footprint and take responsibility for their environmental impact.

Regulatory Compliance: Many governments and regulatory bodies require corporations to report their emissions, and accurate GHG accounting ensures compliance with these regulations.

Risk Management: Understanding and managing GHG emissions can mitigate risks associated with climate change, such as regulatory fines, reputational damage, and physical risks to infrastructure.

Cost Savings: Identifying areas of high emissions can lead to cost-saving opportunities through energy efficiency improvements and operational optimizations.

How Investors and Stakeholders Use GHG Accounting Information

Investors, customers, and other stakeholders increasingly expect corporations to disclose their GHG emissions and demonstrate efforts to reduce them. GHG accounting information can be used by investors to assess a corporation's environmental performance, risk exposure, and long-term sustainability. Similarly, customers may prefer to support corporations that prioritize environmental sustainability and have transparent GHG accounting practices.

Incorporating GHG Accounting into Corporate Sustainability Strategies

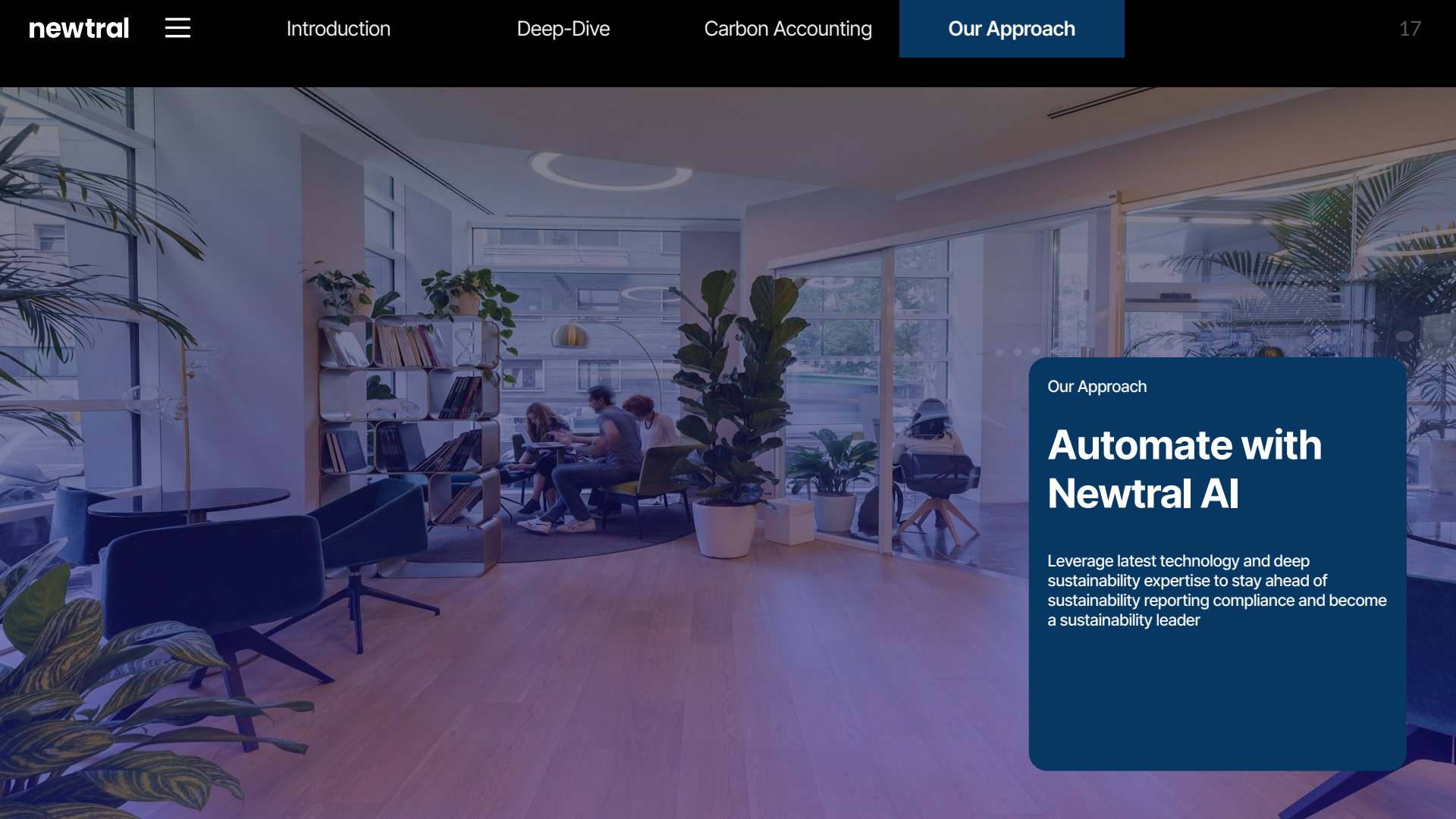
Incorporating GHG accounting into corporate sustainability strategies enables corporations to:

Enhance Transparency: Demonstrating transparency and accountability regarding GHG emissions and reduction efforts.

Mitigate Environmental Risks: Identifying and mitigating environmental risks associated with GHG emissions, such as regulatory non-compliance and reputational damage.

Drive Innovation: Encouraging innovation and investment in low-carbon technologies and sustainable practices to reduce GHG emissions.

Attract Investment and Customers: Attracting investment and customers by showcasing commitment to environmental sustainability and responsible business practices.



Our Approach

Automate with Newtral AI

Leverage latest technology and deep sustainability expertise to stay ahead of sustainability reporting compliance and become a sustainability leader

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Automate with Newtral AI

Leverage latest technology and deep sustainability expertise to stay ahead of sustainability reporting compliance and become a sustainability leader

At Newtral, we understand the challenges businesses face in navigating the complex landscape of sustainability reporting and ESG integration. That's why we've developed a cutting-edge, AI-powered sustainability platform that streamlines your entire sustainability workflow, ensuring compliance, transparency, and value creation for all stakeholders.

Key Features and Benefits:**Automated Sustainability Workflow:**

- Our AI-driven platform automates data collection, analysis, and reporting, saving time and resources
- Seamless integration with existing systems for efficient data management
- Ensures accuracy and consistency in sustainability reporting

Comprehensive Concierge Services:

- Dedicated sustainability experts to guide you through every step of your sustainability journey
- Tailored strategies and actionable insights based on your unique business needs
- Continuous support and expertise to help you achieve your sustainability goals

ESG Supply Chain Innovation:

- Advanced tools to assess and manage ESG risks and opportunities within your supply chain
- Collaborate with suppliers to improve sustainability performance and transparency
- Gain a competitive edge by demonstrating responsible supply chain practices

Scope 3 Emissions Management:

- Accurately measure and report your Scope 3 emissions with our AI-powered platform
- Identify hotspots and implement targeted reduction strategies
- Demonstrate leadership in addressing indirect emissions and climate change

Regulatory Compliance and Transparency:

- Stay ahead of evolving sustainability regulations and disclosure requirements
- Communicate your sustainability performance effectively to investors, customers, and other stakeholders
- Build trust and credibility through transparent and reliable sustainability reporting

Take the first step towards a more sustainable future with Newtral. Our AI-powered platform and expert concierge services provide the tools and guidance you need to integrate sustainability seamlessly into your business operations. Contact us today to schedule a demo and discover how Newtral can help you create lasting value for your stakeholders while contributing to a greener, more resilient world.



Newtral AI Platform- Enterprise ESG Platform for Corporates and Supply Chain

We help organizations automate their ESG metric measurements, tracking and reporting across company as well as their supply chain. Our platform solves for all corporate sustainability reporting and carbon accounting needs, visit newtral.io for more information.

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