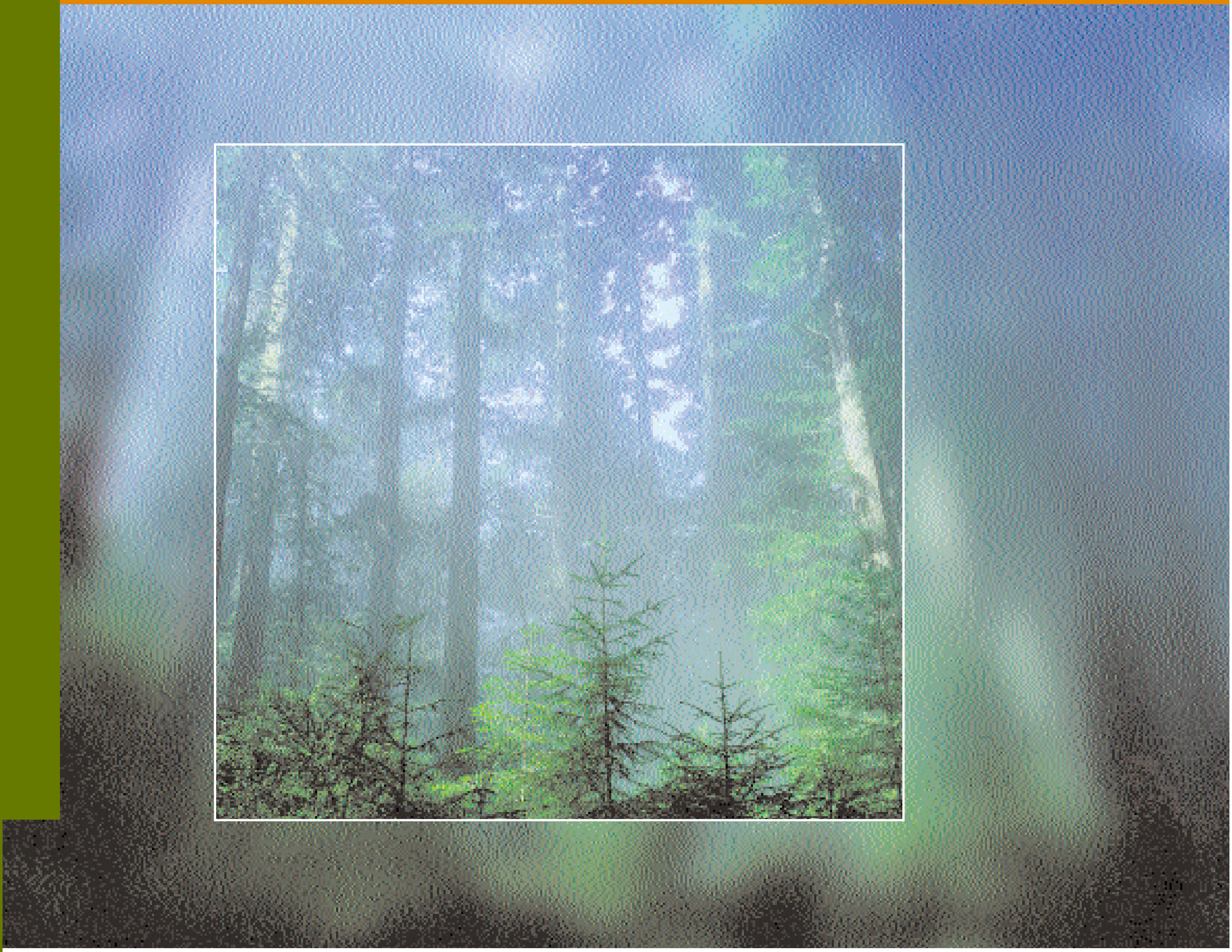
Introduction



The Greenhouse Gas Protocol Initiative is a multi-stakeholder partnership of businesses, non-governmental organizations (NGOs), governments, and others convened by the World Resources Institute (WRI), a U.S.-based environmental NGO, and the World Business Council for Sustainable Development (WBCSD), a Geneva-based coalition of 170 international companies. Launched in 1998, the Initiative's mission is to develop internationally accepted greenhouse gas (GHG) accounting and reporting standards for business and to promote their broad adoption.

The GHG Protocol Initiative comprises two separate but linked standards:

- *GHG Protocol Corporate Accounting and Reporting Standard* (this document, which provides a step-by-step guide for companies to use in quantifying and reporting their GHG emissions)

- *GHG Protocol Project Quantification Standard* (forthcoming; a guide for quantifying reductions from GHG mitigation projects)

The first edition of the *GHG Protocol Corporate Accounting and Reporting Standard (GHG Protocol Corporate Standard),* published in September 2001, enjoyed broad adoption and acceptance around the globe by businesses, NGOs, and governments. Many industry, NGO, and government GHG programs[1] used the standard as a basis for their accounting and reporting systems. Industry groups, such as the International Aluminum Institute, the International Council of Forest and Paper Associations, and the WBCSD Cement Sustainability Initiative, partnered with the GHG Protocol Initiative to develop complementary industry-specific calculation tools. Widespread adoption of the standard can be attributed to the inclusion of many stakeholders in its development and to the fact that it is robust, practical, and builds on the experience and expertise of numerous experts and practitioners.

This revised edition of the *GHG Protocol Corporate Standard* is the culmination of a two-year multi-stakeholder dialogue, designed to build on experience gained from using the first edition. It includes additional guidance, case studies, appendices, and a new chapter on setting a GHG target. For the most part, however, the first edition of the Corporate Standard has stood the test of time, and the changes in this revised edition will not affect the results of most GHG inventories.

This *GHG Protocol Corporate Standard* provides standards and guidance for companies and other types of organizations[2] preparing a GHG emissions inventory. It covers the accounting and reporting of the six greenhouse gases covered by the Kyoto Protocol — carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6). The standard and guidance were designed with the following objectives in mind:

- To help companies prepare a GHG inventory that represents a true and fair account of their emissions, through the use of standardized approaches and principles
- To simplify and reduce the costs of compiling a GHG inventory
- To provide business with information that can be used to build an effective strategy to manage and reduce GHG emissions
- To provide information that facilitates participation in voluntary and mandatory GHG programs
- To increase consistency and transparency in GHG accounting and reporting among various companies and GHG programs.

Both business and other stakeholders benefit from converging on a common standard. For business, it reduces costs if their GHG inventory is capable of meeting different internal and external information requirements. For others, it improves the consistency, transparency, and understandability of reported information, making it easier to track and compare progress over time.

The business value of a GHG inventory

Global warming and climate change have come to the fore as a key sustainable development issue. Many governments are taking steps to reduce GHG emissions through national policies that include the introduction of emissions trading programs, voluntary programs, carbon or energy taxes, and regulations and standards on energy efficiency and emissions. As a result, companies must be able to understand and manage their GHG risks if they are to ensure long-term success in a competitive business environment, and to be prepared for future national or regional climate policies.

A well-designed and maintained corporate GHG inventory can serve several business goals, including:

- Managing GHG risks and identifying reduction opportunities
- Public reporting and participation in voluntary GHG programs
- Participating in mandatory reporting programs
- Participating in GHG markets
- Recognition for early voluntary action.

Who should use this standard?

This standard is written primarily from the perspective of a business developing a GHG inventory. However, it applies equally to other types of organizations with operations that give rise to GHG emissions, e.g., NGOs, government agencies, and universities.[3] It should not be used to quantify the reductions associated with GHG mitigation projects for use as offsets or credits—the forthcoming *GHG Protocol Project Quantification Standard* will provide standards and guidance for this purpose.

Policy makers and architects of GHG programs can also use relevant parts of this standard as a basis for their own accounting and reporting requirements.

Relationship to other GHG programs

It is important to distinguish between the GHG Protocol Initiative and other GHG programs. The *GHG Protocol Corporate Standard* focuses only on the accounting and reporting of emissions. It does not require emissions information to be reported to WRI or WBCSD. In addition, while this standard is designed to develop a verifiable inventory, it does not provide a standard for how the verification process should be conducted.

The *GHG Protocol Corporate Standard* has been designed to be program or policy neutral. However, many existing GHG programs use it for their own accounting and reporting requirements and it is compatible with most of them, including:

- Voluntary GHG reduction programs, e.g., the World Wildlife Fund (WWF) Climate Savers, the U.S. Environmental Protection Agency (EPA) Climate Leaders, the Climate Neutral Network, and the Business Leaders Initiative on Climate Change (BLICC)
- GHG registries, e.g., California Climate Action Registry (CCAR), World Economic Forum Global GHG Registry
- National and regional industry initiatives, e.g., New Zealand Business Council for Sustainable Development, Taiwan Business Council for Sustainable Development, Association des entreprises pour la réduction des gaz à effet de serre (AERES)
- GHG trading programs,[4] e.g., UK Emissions Trading Scheme (UK ETS), Chicago Climate Exchange (CCX), and the European Union Greenhouse Gas Emissions Allowance Trading Scheme (EU ETS)
- Sector-specific protocols developed by a number of industry associations, e.g., International Aluminum Institute, International Council of Forest and Paper Associations, International Iron and Steel Institute, the WBCSD Cement Sustainability Initiative, and the International Petroleum Industry Environmental Conservation Association (IPIECA).

Since GHG programs often have specific accounting and reporting requirements, companies should always check with any relevant programs for any additional requirements before developing their inventory.

GHG calculation tools

To complement the standard and guidance provided here, a number of cross-sector and sector-specific calculation tools are available on the GHG Protocol Initiative website (www.ghgprotocol.org), including a guide for small office-based organizations (see chapter 6 for full list). These tools provide step-by-step guidance and electronic worksheets to help users calculate GHG emissions from specific sources or industries. The tools are consistent with those proposed by the Intergovernmental Panel on Climate Change (IPCC) for compilation of emissions at the national level (IPCC, 1996). They have been refined to be user-friendly for non-technical company staff and to increase the accuracy of emissions data at a company level. Thanks to help from many companies, organizations, and individual experts through an intensive review of the tools, they are believed to represent current "best practice."

Reporting in accordance with the *GHG Protocol Corporate Standard*

The GHG Protocol Initiative encourages the use of the *GHG Protocol Corporate Standard* by all companies regardless of their experience in preparing a GHG inventory. The term "shall" is used in the chapters containing standards to clarify what is required to prepare and report a GHG inventory in accordance with the *GHG Protocol Corporate Standard.* This is intended to improve the consistency with which the standard is applied and the resulting information that is publicly reported, without departing from the initial intent of the first edition. It also has the advantage of providing a verifiable standard for companies interested in taking this additional step.

Overview of main changes to the first edition

This revised edition contains additional guidance, case studies, and annexes. A new guidance chapter on setting GHG targets has been added in response to many requests from companies that, having developed an inventory, wanted to take the next step of setting a target. Appendices have been added on accounting for indirect emissions from electricity and on accounting for sequestered atmospheric carbon.

Changes to specific chapters include:

- CHAPTER 1: Minor rewording of principles.
- CHAPTER 2: Goal-related information on operational boundaries has been updated and consolidated.
- CHAPTER 3: Although still encouraged to account for emissions using both the equity and control approaches, companies may now report using one approach. This change reflects the fact that not all companies need both types of information to achieve their business goals. New guidance has been provided on establishing control. The minimum equity threshold for reporting purposes has been removed to enable emissions to be reported when significant.
- CHAPTER 4: The definition of scope 2 has been revised to exclude emissions from electricity purchased for resale—these are now included in scope 3. This prevents two or more companies from double counting the same emissions in the same scope. New guidance has been added on accounting for GHG emissions associated with electricity transmission and distribution losses. Additional guidance provided on Scope 3 categories and leasing.
- CHAPTER 5: The recommendation of pro-rata adjustments was deleted to avoid the need for two adjustments. More guidance has been added on adjusting base year emissions for changes in calculation methodologies.
- CHAPTER 6: The guidance on choosing emission factors has been improved.
- CHAPTER 7: The guidance on establishing an inventory quality management system and on the applications and limitations of uncertainty assessment has been expanded.
- CHAPTER 8: Guidance has been added on accounting for and reporting project reductions and offsets in order to clarify the relationship between the *GHG Protocol Corporate* and *Project Standards*.
- CHAPTER 9: The required and optional reporting categories have been clarified.
- CHAPTER 10: Guidance on the concepts of materiality and material discrepancy has been expanded.
- CHAPTER 11: New chapter added on steps in setting a target and tracking and reporting progress.

Frequently asked questions

Below is a list of frequently asked questions, with directions to the relevant chapters.

NOTES

[1] GHG program is a generic term used to refer to any voluntary or mandatory international, national, sub-national government or non-governmental authority that registers, certifies, or regulates GHG emissions or removals.

[2] Throughout the rest of this document, the term "company" or "business" is used as shorthand for companies, businesses and other types of organizations.

[3] For example, WRI uses the *GHG Protocol Corporate Standard* to publicly report its own emissions on an annual basis and to participate in the Chicago Climate Exchange.

[4] Trading programs that operate at the level of facilities primarily use the GHG Protocol Initiative calculation tools.