World Business Council for Sustainable Development

WORLD RESOURCES INSTITUTE

The Greenhouse Gas Protocol Initiative
the foundation for sound and sustainable climate strategies

Scope 3 Accounting and Reporting Standard

Supplement to the GHG Protocol
Corporate Accounting and Reporting Standard

EXECUTIVE SUMMARY

REVIEW DRAFT FOR STAKEHOLDER ADVISORY GROUP
NOVEMBER 2009

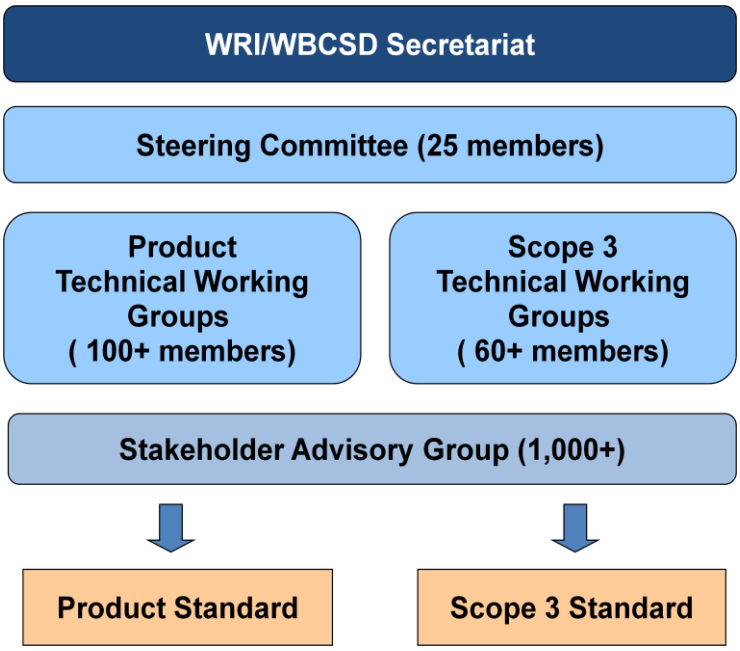
Introduction to Stakeholder Review Draft

Standard Development Process

The GHG Protocol Initiative follows a multi-stakeholder, consensus-based process to develop greenhouse gas accounting and reporting standards with participation from businesses, government agencies, nongovernmental organizations, and academic institutions from around the world.

This draft standard was developed between January and October 2009 by two technical working groups collectively comprised of over 70 members from a diversity of businesses, government agencies, NGOs, and academic institutions. The development was led and coordinated by WRI and WBCSD. A Steering Committee consisting of 25 organizations met three times between September 2008 and September 2009 to provide strategic and technical direction to the process.

Process Structure



Timeline

Date	Activity
November 2007	✓ Survey and consultations to assess need for new standards
September 2008	✓ Steering Committee Meeting #1 (Washington DC) ✓ Technical Working Group Meeting #1 (London)
January 2009	✓ Working groups begin drafting
March 2009	✓ Steering Committee Meeting #2 (Geneva)
June 2009	✓ Technical Working Group Meeting #2 (Washington DC)
August 2009	✓ Stakeholder webinar and comment period
October 2009	✓ Steering Committee Meeting #3 (Washington DC)
November - December 2009	✓ First draft of standards released for stakeholder review ▪ Five stakeholder workshops (in Berlin, Germany; Guangzhou, China; Beijing, China; London, UK; Washington, DC, USA) ▪ Stakeholder comment period on first drafts
January - June 2010	▪ Pilot testing by several companies
Summer 2010	▪ Public comment period on second drafts
December 2010	▪ Publication of final standards

Process for Submitting Written Comments

- This draft is open for stakeholder comment from November 11, 2009 through December 21, 2009.
- To provide written comments, please use the comment template provided, instead of sending comments in a separate file or e-mail, in order to streamline the comment process.
- When using the comment template, please organize comments by chapter/section and reference page numbers and line numbers.
- If you have questions during the public comment process, please email Holly Lahd at hlahd@wri.org.
- Submit comments as an attached MS Word file by email to Holly Lahd at hlahd@wri.org no later than **Monday, December 21st, 2009**. We appreciate any effort to submit written comments before the deadline.

Process for Revising the Draft Standard

In 2010, WRI and WBCSD, in collaboration with the Steering Committee and Technical Working Groups, will:

- Revise the draft standard based on feedback received during five stakeholder workshops and the stakeholder comment period (November 11 – December 21, 2009)
- Road test the draft standard with 10-15 companies from a diversity of industry sectors and geographic locations during January to June 2010
- Revise the draft standard based on feedback received during road testing
- Circulate a second draft for public comment in mid-2010
- Revise the second draft based on feedback received
- Publish the final standard in December 2010

Part 1: General Requirements and Guidance for Scope 3 Accounting & Reporting

1. Introduction

The Greenhouse Gas Protocol Initiative (*GHG Protocol*) 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, Switzerland-based coalition of over 200 international companies. Launched in 1998, the Initiative's mission is to develop internationally accepted accounting and reporting standards and guidelines for corporate greenhouse gas (GHG) emissions inventories and GHG projects, and to promote their use by businesses, governments, NGOs and other organizations.

The GHG Protocol Initiative has previously produced the following standards and guidelines:

- GHG Protocol *Corporate Accounting and Reporting Standard*[1] (2004)
- GHG Protocol for Project Accounting (2005)
- GHG Protocol *Land Use, Land-Use Change and Forestry Guidance for GHG Project Accounting* (2006)
- GHG Protocol *Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects* (2007)

The GHG Protocol launched a new initiative in 2008 to develop two new standards for:

- Product life cycle accounting and reporting
- Corporate scope 3 (value chain) accounting and reporting

1.1 What is the motivation for new standards?

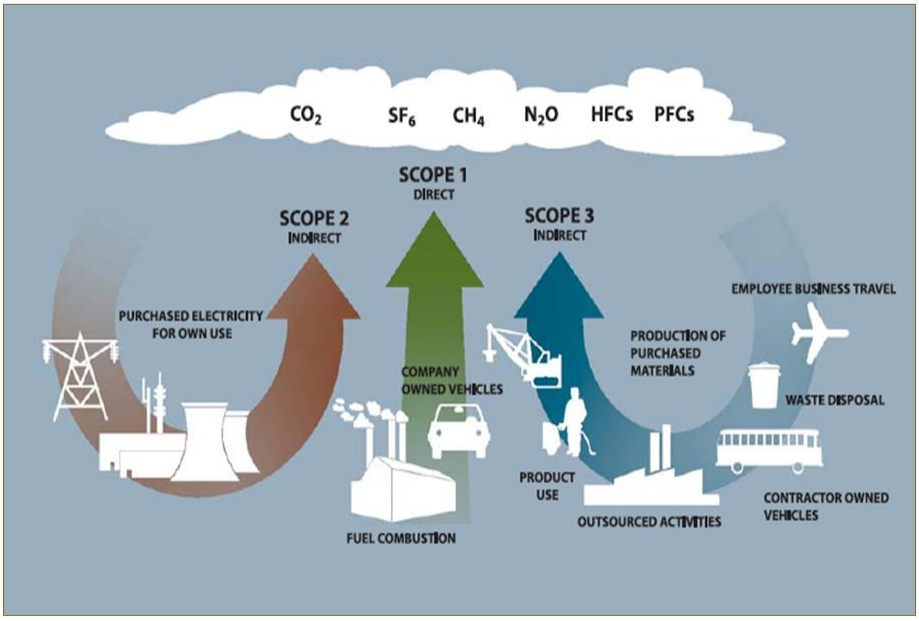
Since the launch of the *GHG Protocol Corporate Standard* in 2001 and its revision in 2004, business capabilities in the field of GHG accounting have grown significantly. Corporate leaders in this area are now adept at calculating emissions from GHG sources that they own or control (i.e., scope 1 emissions) and emissions from grid-sourced electricity and the other utility services of heat, steam and cooling (i.e., scope 2 emissions). See Figure 1 for an overview of the scopes.

[1] The GHG Protocol *Corporate Standard* is sometimes referred to as "the GHG Protocol." The term GHG Protocol is an umbrella term for the collection of standards, tools and other publications provided by the WRI/WBCSD GHG Protocol Initiative.

As accounting expertise has grown, so has the realization that significant emission sources linked to business activities are often outside scopes 1 and 2. These other indirect emissions are defined in the *Corporate Standard* as "scope 3" or "other indirect "emissions. There is increasing interest by reporting companies and increasing demand from stakeholders for scope 3 emissions to be accounted and reported.

Companies are increasingly looking beyond their own boundaries and developing strategies to reduce emissions in their value chains and in the products they make and sell. The new GHG Protocol standards provides a standardized method to inventory the emissions of corporate value chains, taking into account impacts upstream and downstream of the company's operations. By taking a comprehensive approach to GHG measurement and management, businesses and policymakers can focus attention on the greatest opportunities to reduce emissions within the full value chain, leading to more sustainable decisions about the products companies buy, sell, and produce.

Figure 1: Overview of Scopes 1, 2 and 3



There are a number of drivers for reporting scope 3 emissions, including:

- Corporate GHG management and reporting is moving beyond companies' own operations (i.e., scope 1 and 2), toward the full value chain to include upstream and downstream emissions (scope 3)
- Increasing focus on GHG emissions associated with production and consumption of goods and services
- Increasing awareness and management of climate-related risk in the value chain
- Stakeholder and investor requests for supply chain emissions and risk disclosure
- Increasing public reporting of scope 3 emissions
- Increasing business to business requests for GHG information through the supply chain
- Increasing emphasis on scope 3 emissions in corporate GHG management and reduction goals

Companies, investors and other stakeholders have called for standard approaches to accounting and reporting scope 3 emissions because of the wide variety of emissions sources, calculation methods and lack of consistency of approach.

Both business and external stakeholders benefit from converging on a common accounting and reporting standard for GHG inventories. As common principles and standards become widely used, companies facing GHG accounting issues for the first time will have an easier time in calculating their GHG inventories, than if confronted with a variety of different approaches to consider. For business, it will reduce costs if their GHG inventory is capable of meeting both internal and external information requirements. For external stakeholders, the use of a common standard improves the consistency, transparency and accessibility of reported information, making it easier to track and compare progress over time.

Like the GHG Protocol *Corporate Standard*, the goal of this standard is to provide a consistent and robust reporting methodology to support GHG emissions transparency and management by companies worldwide.

1.2 Relationship to the GHG Protocol *Corporate Standard*

This Scope 3 Accounting and Reporting Standard is a supplement to the GHG Protocol *Corporate Accounting and Reporting Standard, Revised Edition* (2004) and is meant to be used in conjunction with the existing *Corporate Standard*. Under the *Corporate Standard*, companies are required to report all scope 1 and scope 2 emissions, while reporting scope 3 emissions is optional. Accordingly, companies report their GHG emissions have two reporting options, portrayed in Figure 2 below:

Figure 2: Organization's Reporting Options

Report in Conformance with the GHG Protocol *Corporate Standard*	Report in Conformance with the GHG Protocol *Corporate Standard* and *Scope 3 Standard*
• Shall report all scope 1 and 2 emissions • May optionally report scope 3 emissions	• Shall report all scope 1 and 2 emissions • Shall report scope 3 emissions (following the requirements/ guidance in this standard)

1.3 Who should use this standard?

This standard is designed for companies and organizations of all sizes in all economic sectors. It is especially designed for companies with significant scope 3 emissions.

1.4 Relationship to GHG Protocol *Product Life Cycle Standard*

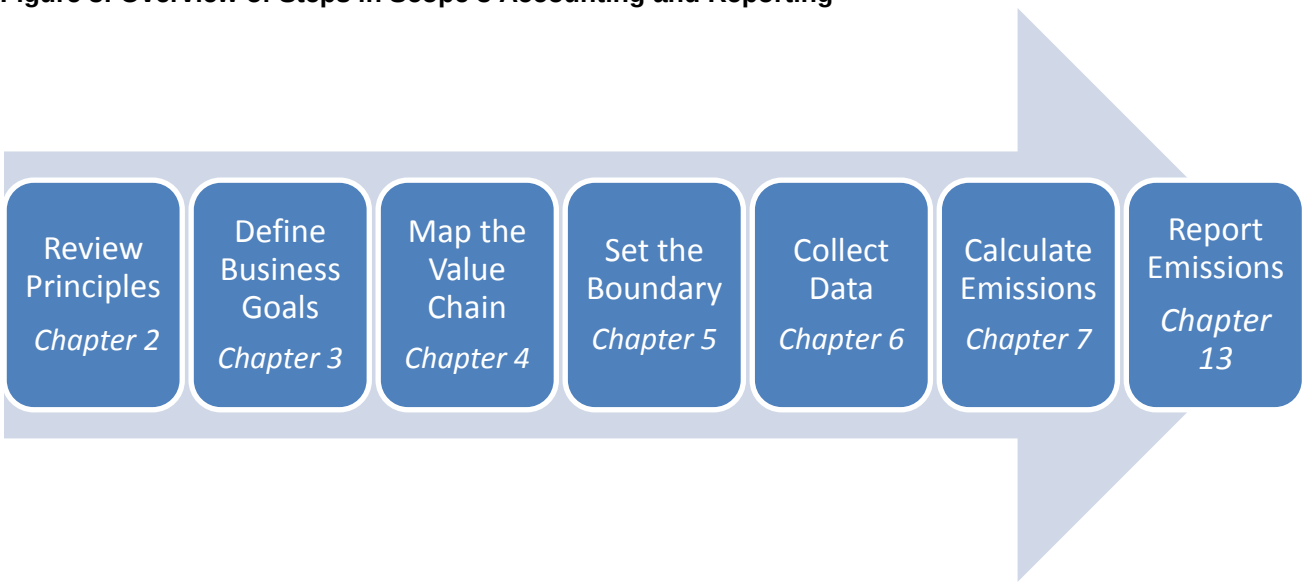
The GHG Protocol *Product Life Cycle Standard* was developed simultaneously within the same standard development process as this standard. The two standards are complementary. Companies are encouraged to use both standards to meet complementary but distinct goals. This standard contains standards and guidance for developing a corporate-wide inventory of GHG emissions throughout the value chain across all product categories and company activities. The *Product Standard* contains standards and guidance for developing a GHG inventory of a single product across its life cycle. For companies implementing both standards, a product level inventory will inform and support the development of a corporate-wide scope 3 inventory. (*To be developed further*)

1.5 Navigating your way through this document

This standard is divided into two parts. Part 1 provides general requirements and guidance for scope 3 accounting and reporting, applicable to all scope 3 emissions categories. The chapters in Part 1 are organized according to the steps companies should follow in accounting and reporting scope 3 emissions, such as defining business goals, mapping the value chain, setting boundaries, collecting data, calculating emissions, reporting emissions, etc.

Part 2 provides guidance specific to individual scope 3 categories. The chapters in Part 2 are organized by scope 3 categories, such as purchased materials and services, transportation and distribution, business travel, waste generated in operations, leased assets, use of sold products, etc. Each chapter in Part 2 provides a description of each category, guidance on determining relevant emissions for each category, guidance on calculating emissions for each category and case studies.

Figure 3: Overview of Steps in Scope 3 Accounting and Reporting



1.6 Summary of Requirements in this Standard

1.6.1 Boundary Requirements (see section 5 for more information):

Companies shall account for and report:

- The largest scope 3 sources that collectively account for at least 80% of total anticipated scope 3 emissions;[2]
- The use phase emissions of all sold products that contain and emit GHGs in the use phase, all sold products that consume fossil fuels or electricity in the use phase, and all sold fuels; and
- All scope 1 and scope 2 emissions, as required by the GHG Protocol *Corporate Standard*.

Companies should account for and report any other relevant scope 3 emissions.

1.6.2 Reporting Requirements (see section 8 for more information):

A public GHG emissions report that is in accordance with the *GHG Protocol Scope 3 Standard* shall include the following information:

- A description of the company and inventory boundary, including an outline of the organizational boundaries chosen and the chosen consolidation approach
- The reporting period covered
- Total scope 1 emissions, total scope 2 emissions, and all required scope 3 emissions, separately reported for each scope
- Emissions data for all six Kyoto Protocol GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6), separately in metric tonnes and in tonnes of CO_2 equivalent
- Scope 3 emissions reported separately for each scope 3 category included in the inventory
- Scope 3 emissions reported separately for sources calculated using primary data (e.g. company-specific data) and sources calculated using secondary data (e.g. industry average data)
- Methodologies used to calculate or measure emissions
- A description of the uncertainties of reported emissions data
- A list of scope 3 activities included in the report
- A description of the screening assessment approaches used and a description of their associated uncertainties
- A list of excluded scope 3 emission sources with justification of their exclusion
- Emissions data reported separately for activities calculated using primary data and activities calculated using secondary data, extrapolated data and proxy data
- A summary of data types used to calculate the inventory (e.g., the percentages of total scope 3 emissions calculated using primary data, secondary data, and extrapolated/proxy data)

[2] The selection of an 80% threshold is tentative pending further information learned during the road testing phase (to be conducted during early 2010) on which threshold is most feasible and appropriate across different companies and sectors.

2. Accounting and Reporting Principles

- **Relevance:** Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
- **Completeness:** Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.
- **Consistency:** Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
- **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
- **Accuracy:** Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

3. Business Goals and Inventory Design

Accounting and reporting of scope 3 emissions can serve a variety of business goals including:

- **GHG management**, including identifying GHG reduction opportunities in the value chain; guiding investment and procurement decisions; cost containment; managing climate-related risk including financial, regulatory, supply chain, product and technology, litigation, and reputational risks; etc.
- **Performance tracking**, including setting a baseline, setting GHG reduction goals, and tracking progress over time.
- **Engaging partners** in the value chain to expand GHG accountability, transparency and management throughout supply chains such that additional companies in the value chain (e.g. customers, suppliers, service providers, etc.) manage their scope 1, 2, and 3 emissions.
- **Public reporting** of GHG emissions in order to inform and meet the decision-making needs of stakeholders (e.g., policy-makers, investors, purchasers, customers, suppliers, employees, NGOs, etc.), as well as participation in corporate-level GHG reporting programs and registries.

4. Mapping the Value Chain

After defining the company's business goals, the next step in accounting for GHG emissions is to map the value chain. To the extent possible, companies should create a complete process map and/or a complete list of sources and activities in the company's value chain.[3] The purpose of mapping of the value chain is to identify the full range of possible scope 3 activities before a company determines which are most relevant and should be included in the scope 3 inventory.

To the extent possible, the process map and/or list of sources should reflect the complete value chain, including:

- All suppliers and customers;[4]
- All inputs (purchased materials and services) and outputs (sold goods and services); and
- All scope 3 activities, such as production of purchased materials and services, transportation & distribution of purchased and sold products, warehousing, outsourced activities, waste disposal, overhead and administrative activities, retail, use & disposal of sold products, business travel, employee commuting, etc.

Refer to Table 1 below for a list of the 16 categories of scope 3 emissions.

4.1 Introduction to Upstream and Downstream Emissions

This standard divides scope 3 emissions into upstream and downstream categories to help companies better understand their scope 3 emissions, to avoid double counting between companies in a supply chain, and to make reported GHG data most useful to stakeholders. The distinction between the two categories is based on the financial transactions of the company. Upstream emissions are those related to purchased goods and services. Downstream emissions are related to sold goods and services.

- Upstream emissions are the emissions that occur in the life cycle of inputs (i.e., purchased or acquired goods, services, materials, and fuels), up to the point of receipt by the reporting company.[5]

- Downstream emissions are the emissions that occur in the life cycle of outputs (i.e., sold goods and services) subsequent to sale by the reporting company.

- Other scope 3 emissions are limited to employee activities such as commuting, which are neither purchased nor sold.

[3] Companies should strive for completeness in mapping the value chain, but it is acknowledged that a 100% complete process map and/or list of sources, suppliers, customers, etc. may not be feasible.
[4] Because supply chains are dynamic and a company's suppliers and customers can change frequently throughout the reporting year, the list of suppliers and customers may represent a fixed point in time such as December 31 of the reporting year or a representative average over the course of the reporting year.
[5] Upstream activities include external services used for the reporting company's production, e.g. disposal of waste generated in own operations, third party transportation and distribution, etc.

Figure 4.1: Overview of Upstream and Downstream Emissions

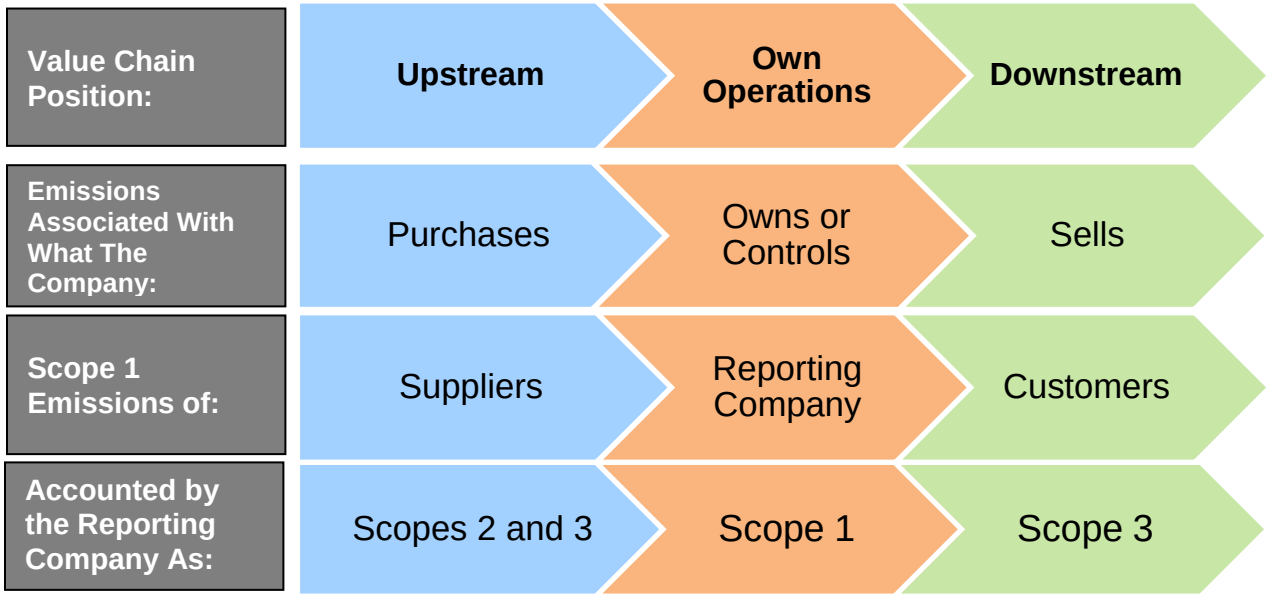


Figure 4.2: Overview of Emissions Across the Value Chain

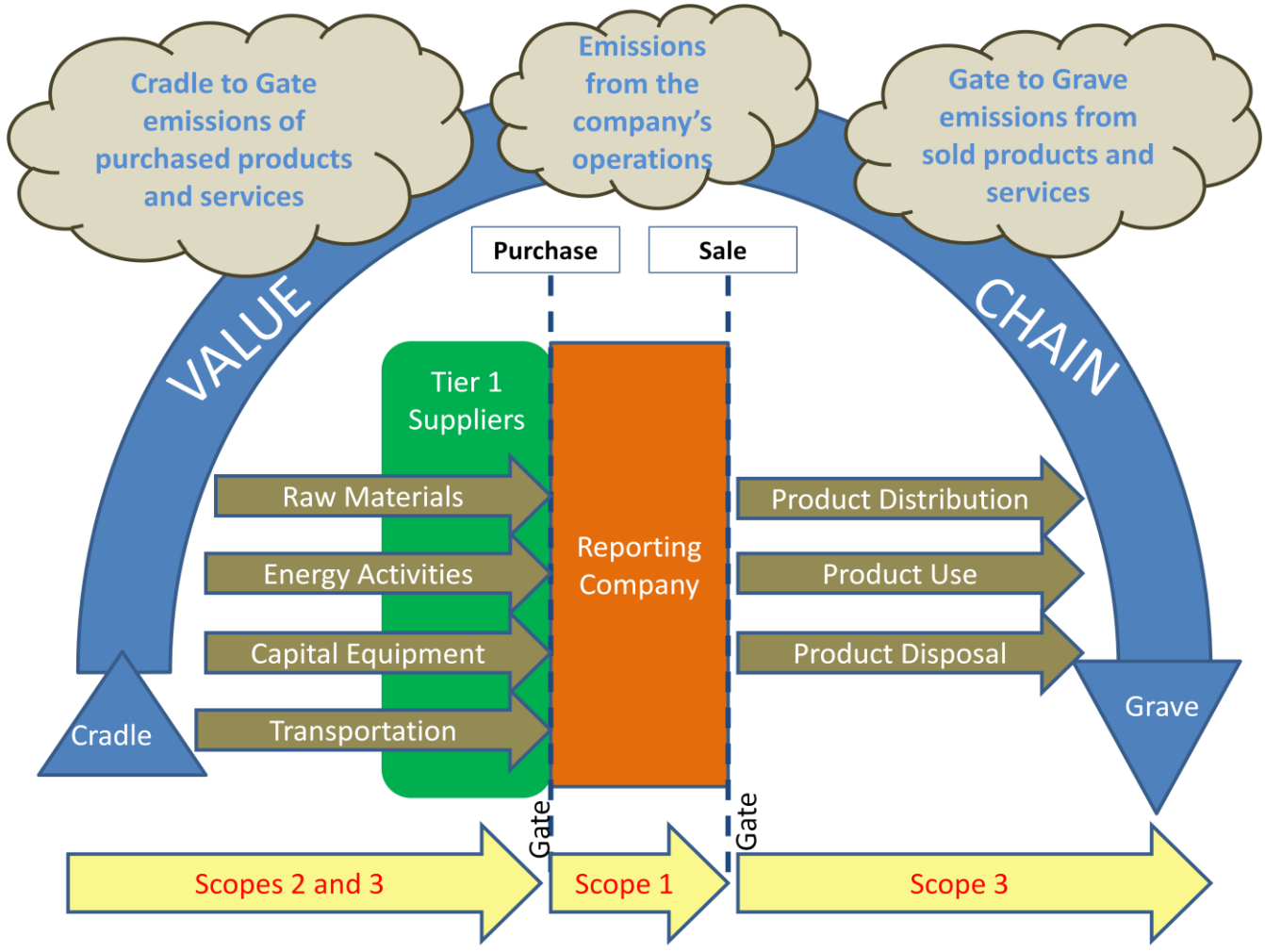


Figure 5: Emitting Activities and Scopes Across a Value Chain

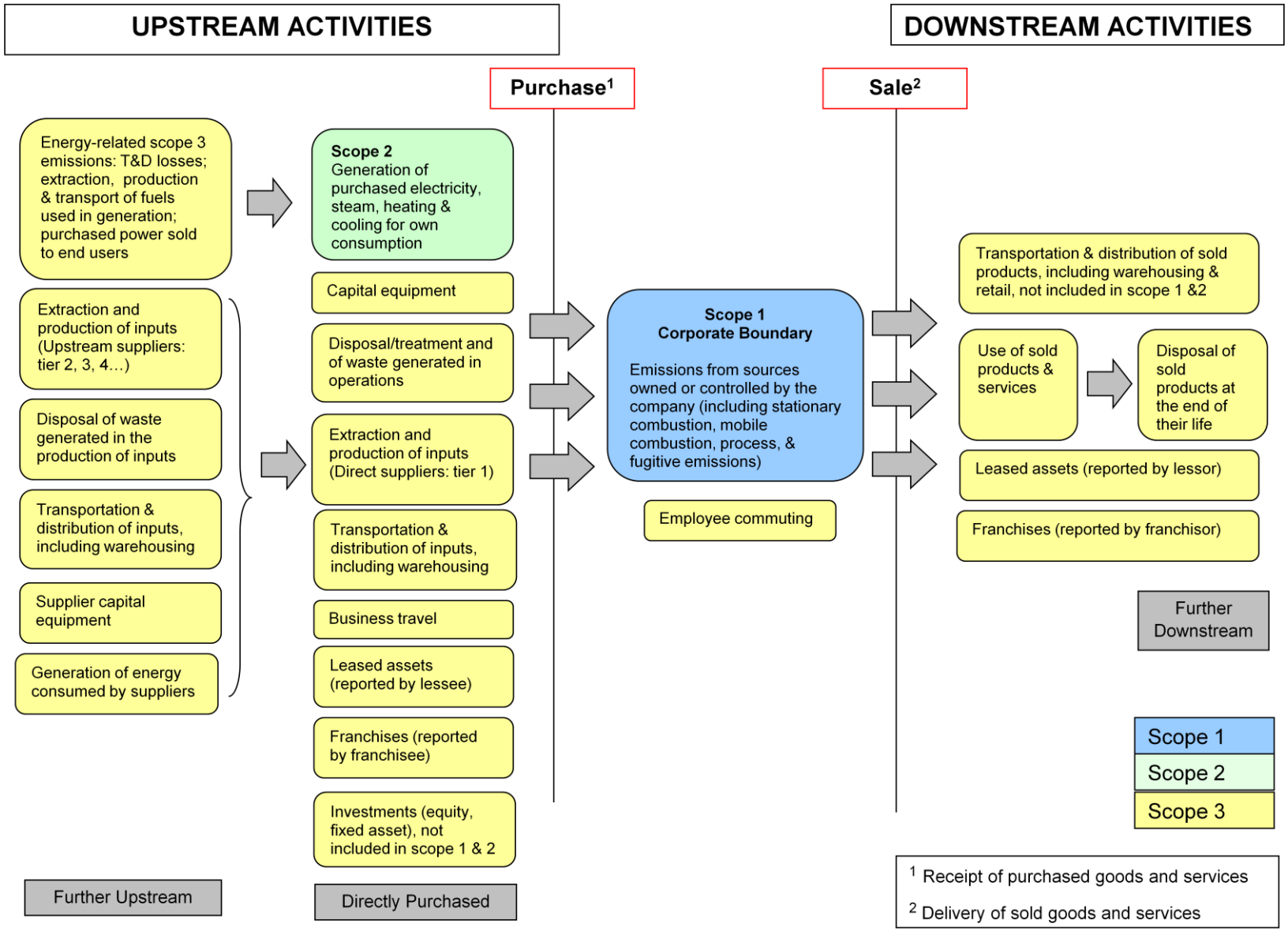


Table 1: Categorization of Scope 3 Emissions

	Category	Scope 1 Emissions of…	Source Description
Upstream Scope 3 Emissions from Purchased Products	1. Purchased Goods and Services – Direct Supplier Emissions*	Direct Suppliers -Tier 1	• Extraction and production of inputs (i.e., purchased or acquired goods, services, materials, or fuels) associated with direct (tier 1) suppliers • Outsourced activities, including contract manufacturing, data centers, outsourced services, etc.
	2. Purchased Goods and Services – Cradle-to-Gate Emissions*	Upstream Suppliers - Tier 1, 2, 3, 4…	• Extraction and production of inputs (i.e., purchased or acquired goods, services, materials, or fuels) associated with suppliers further upstream (tier 2, 3, 4, etc.) • Manufacturing/construction of tier 1, 2, 3, 4… suppliers' capital equipment • Generation of electricity, steam, heating, and cooling that is consumed by tier 1, 2, 3, 4… suppliers • Disposal/treatment of waste generated in the production of inputs (i.e., purchased or acquired goods, services, materials or fuels) • Transportation and distribution of inputs associated with suppliers further upstream (tier 2, 3, 4, etc.)
	3. Energy-Related Activities Not Included in Scope 2	Suppliers - e.g. electric utility, fuel producer	• Extraction, production, and transportation of fuels consumed in the generation of electricity, steam, heating and cooling (either purchased or own generated by the reporting company) • Generation of electricity, steam, heating, and cooling that is consumed in a T&D system (reported by end user) • Purchase of electricity, steam, heating, and cooling that is sold to an end user (reported by utility company)
	4. Capital Equipment	Capital equipment suppliers	• Manufacturing/construction of capital equipment owned or controlled by the reporting company
	5. Transportation & Distribution	Transportation/ logistics suppliers	• External transportation and distribution of inputs (i.e., purchased or acquired goods, services, materials or fuels), including intermediate (inter-facility) transportation & distribution, warehousing and storage, associated with direct transportation/logistics suppliers • Transportation of waste generated in operations
	6. Business Travel	Transportation suppliers, e.g. airline	• Employee business travel
	7. Waste Generated in Operations	Waste management suppliers	• Disposal/treatment of waste generated in operations
	8. Franchises	Franchisor	• Operations of franchisor (reported by franchisee)
	9. Leased Assets	Lessor	• Manufacturing/construction and operation of leased assets not included in lessee's scope 1 (reported by lessee)
	10. Investments	Company Receiving Investment	• GHG emissions associated with investments, including fixed asset investments and equity investments not included in scope 1
Downstream Scope 3 Emissions from Sold Products	11. Franchises	Franchisee	• Manufacturing/construction and operation of franchise not included in franchisor's scope 1 (reported by franchisor)
	12. Leased Assets	Lessee	• Manufacturing/construction and operation of leased assets not included in lessor's scope 1 (reported by lessor)
	13. Transportation & Distribution	Transportation company, retailer	• Transportation and distribution of sold products, including warehousing and retail
	14. Use of Sold Products	Consumer	• Use of sold goods and services
	15. Waste	Waste management company	• Disposal of sold products at the end of their life
Other Scope 3 Emissions	16. Employee Commuting	Employees	• Employees commuting to and from work • Employee teleworking

* Not otherwise included in categories 3-10

5. Setting the Boundary

5.1 Prioritizing Relevant Emissions

After mapping the value chain, companies should identify which scope 3 emissions are most relevant for the company. Companies should prioritize scope 3 activities based on their relative size and significance, with a view to prioritizing those scope 3 activities where the most significant GHG emissions and reduction opportunities lie. These emissions sources are expected to be the focus of a company's GHG reporting and reduction efforts.

Companies shall account for and report all relevant scope 3 emissions of the reporting company.

Following the principle of relevance, companies should ensure the GHG inventory:

- Appropriately reflects the GHG emissions of the company, and
- Serves the decision-making needs of users – both internal and external to the company.

Which scope 3 activities are most relevant differs by industry sector and by reporting company depending on where a company's largest value chain GHG impacts lie (e.g., purchased materials, external transportation and distribution, use of sold products, business travel, etc.).As a result, a determination of relevance must be made on a company-by-company basis.[6]

5.2 Prioritizing Relevant Emissions Based on Size

Scope 3 activities shall be considered relevant if they are large (or expected to be large) compared to the reporting company's other sources of emissions.

Companies should calculate initial estimates of all sources to gain a basic understanding of the relative contributions of various scope 3 activities. Part 2 of this standard provides guidance on the use of screening methods and relevance tests for each scope 3 category.

To determine which scope 3 activities are most significant in size, companies should follow these steps:

1. Use screening methods to individually estimate the emissions from all scope 3 activities. See Part 2 of this standard for examples of screening methods by scope 3 category.[7]
2. Express each individual scope 3 activity's estimated emissions as a fraction of total anticipated scope 3 emissions.
3. Rank all scope 3 activities from largest to smallest to determine which activities are most significant.

Requirements

Companies shall account for and report:

- The largest scope 3 sources that collectively account for at least 80% of total anticipated scope 3 emissions;[8]
- The use phase emissions of all sold products that contain and emit GHGs in the use phase, all sold products that consume fossil fuels or electricity in the use phase, and all sold fuels; and
- All scope 1 and scope 2 emissions, as required by the GHG Protocol *Corporate Standard*.

[6] Industry sectors may also coordinate to define common scope 3 activities that should be reported within a sector.
[7] Part 2 also provides financial-based screening methods as an alternative to emissions-based screening methods.

5.3 Prioritizing Relevant Emissions Based on Other Criteria

In addition to accounting for all activities that collectively account for 80%[8] of total anticipated scope 3 emissions in terms of size, companies should consider other criteria to determine whether additional scope 3 activities should be accounted for and reported.

Scope 3 activities should be considered relevant if they meet any of the following criteria:

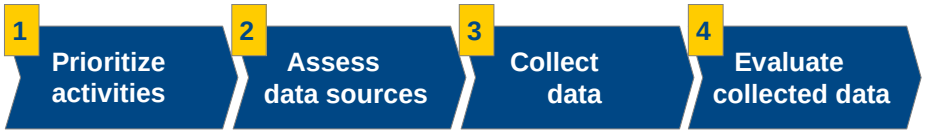
1. There are potential emissions reductions that could be undertaken or influenced by the company
2. They contribute to the company's risk exposure (e.g., climate change related risks such as financial, regulatory, supply chain, product and technology, compliance/litigation, reputational and physical risks)
3. They are deemed critical by key stakeholders (e.g., feedback from customers, suppliers, investors or civil society)
4. They are an outsourced activity that is typically insourced by other companies in the reporting company's sector
5. They meet additional criteria developed by the company or industry sector

[8] The selection of an 80% threshold is tentative pending further information learned during the road testing phase of this standard during early 2010 on which threshold is most feasible and appropriate across different companies and sectors.

6. Collecting Data

After a company has identified its relevant scope 3 activities for inclusion in the boundary, the next step is to collect the necessary data to calculate a company's scope 3 emissions. This chapter provides a four step approach to collecting and evaluating data (see Figure 6.1).

Figure 6.1: Four-step process for collecting and evaluating data



6.1. Prioritizing activities

Companies should collect data of the highest quality for each emissions source. However, the most effort should be focused on the activities that contribute most to total scope 3 emissions, based on the initial estimates calculated when setting the scope 3 boundary in Chapter 5.

6.2. Assessing data sources

Data includes directly measured emissions data, activity data and emission factors used to quantify emissions. The quality of reported emissions data depends on the quality of input data used to calculate emissions. The design of a corporate inventory system should facilitate the collection of high quality inventory data and the maintenance and improvement of collection procedures over time.

6.2.1 Available data types

There are two main types of data to use in calculating scope 3 emissions:

- Primary data
- Secondary data

Table 6.1: Types of Data

Data Type	Description	Examples
Primary Data	Observed data[9] collected from specific facilities owned or operated by the reporting company or a company in its supply chain	The reporting company surveys its suppliers and collects product-level data or scope 1 and 2 emissions data from specific facilities in its supply chain.
Secondary Data	Generic or industry average data from published sources that are representative of a company's operations, activities, or products	Data from life cycle inventory databases, literature studies, environmentally-extended input-output models; default IPCC emission factors; industry associations; etc.

[9] "Data" includes emissions data, activity data or emission factors

When primary or secondary data of sufficient quality are not available, two estimation methods can be used to fill data gaps:

- Use of extrapolated data
- Use of proxy data

Use of proxy data or extrapolation should be used to fill data gaps when primary or secondary data of sufficient quality are not available.

Table 6.2: Estimation Methods to Fill Data Gaps

Estimation Method	Description	Examples
Extrapolated Data	Primary or secondary data related to a similar (but not representative) input, processor activity to the one in the inventory that are adapted or customized to a new situation to make more representative. For example, using data from the same or a similar activity type and customizing the data to the relevant region, technology, process, temporal period and/or product.	For example, there is secondary data available for electricity in Ukraine but not for electricity in Moldova. The company customizes the data for electricity in Ukraine to make it more representative of electricity in Moldova (e.g., by modifying the electricity generation mix).
Proxy Data	Primary or secondary data related to a similar (but not representative) input, process, or activity to the one in the inventory, which can be used in lieu of representative data if unavailable. These existing data are directly transferred or generalized to the input/process of interest without adaptation.	For example, there is secondary data available for electricity in Ukraine but not for electricity in Moldova. The company uses the data for electricity from Ukraine without modification as a proxy for electricity in Moldova.

As a general rule, companies should apply the following hierarchy of data types in collecting data:

1. Primary data
2. Secondary data
3. Extrapolated data
4. Proxy data

When collecting primary data from value chain partners, companies should obtain the most product-specific data available, according to the following hierarchy:

1. Product-level data
2. Process-level data
3. Facility-level data
4. Business unit-level data
5. Corporate-level data

Companies shall disclose in the public report the types of data used to calculate the inventory.

Emissions calculated using primary data shall be reported separately from emissions calculated using secondary data, extrapolated data and proxy data.

6.2.2 Data Quality Criteria

Companies should assess data sources using the following criteria. All data quality indicators should be used to describe primary data, while technological, temporal and geographic representativeness are the most relevant for secondary data.

Companies should use the following criteria as a guide when choosing data sources to obtain the highest quality data available for a given emissions activity.

Table 6.4: Data Quality Criteria

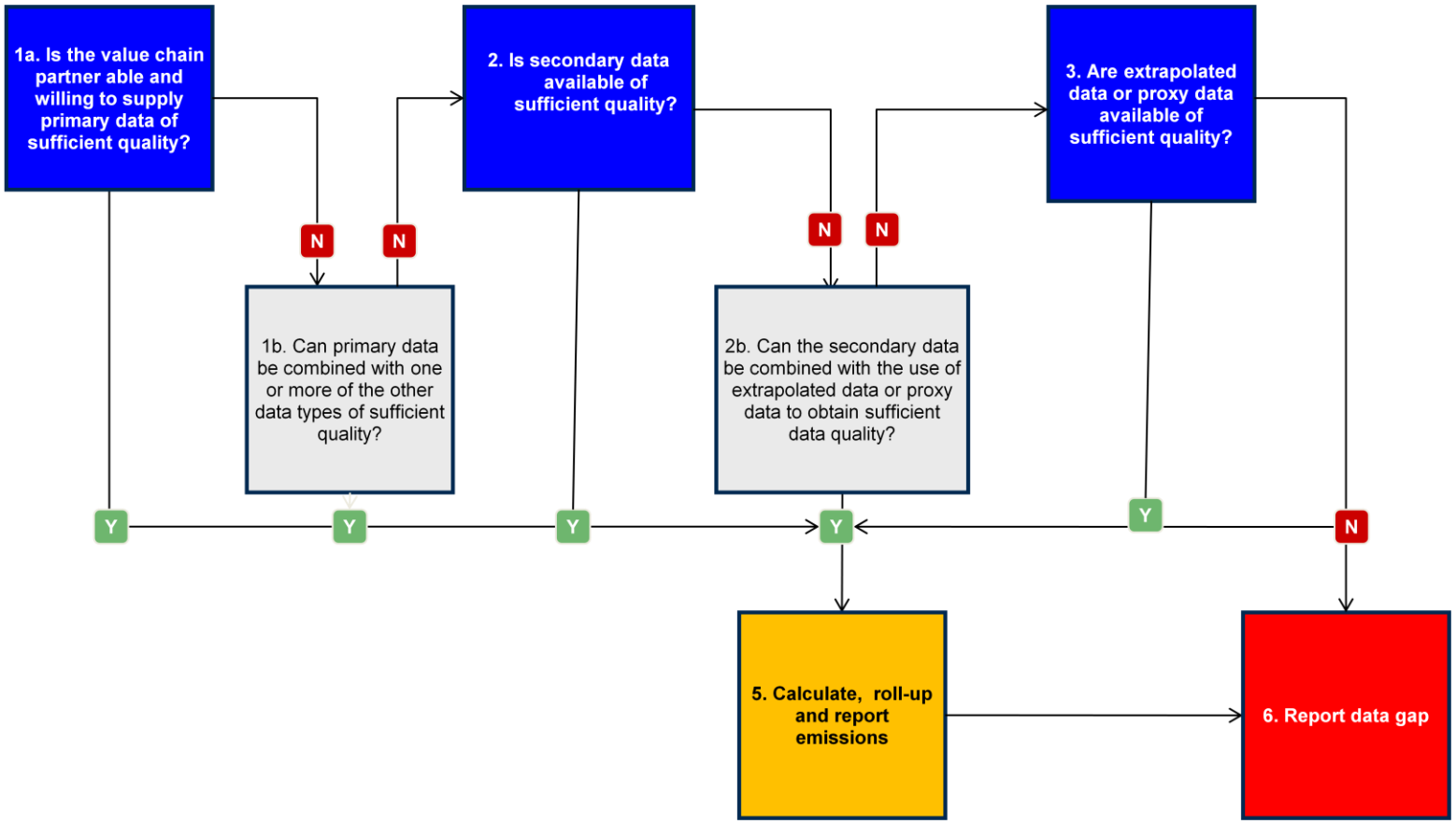
Criteria	Explanation
Technological representativeness	■ Degree to which the data set reflects the actual technology(ies) used
Temporal representativeness	■ Degree to which the data set reflects the actual time (e.g., year) or age of the activity or whether an appropriate time period is used (e.g., annual/seasonal averages may be appropriate to smooth out data variability due to factors such as weather conditions)
Geographical representativeness	■ Degree to which the data set reflects actual geographic location of the activity, e.g., country or site
Completeness	■ The degree to which the data represents the relevant activity ■ The percentage of locations for which site specific or generic data are available and used out of the total number that relate to a specific activity. Generally, a percent target is identified for the number of sites from which data is collected for each activity
Precision	■ Measure of the variability of the data points used to derive the GHG emissions from an activity (e.g., low variance = high precision). Relates mostly to where direct measurements have been used.

6.3. Collecting data

Companies should follow the decision tree in Figure 6.2 when choosing between primary data, secondary data, and extrapolated and proxy data.

Companies should apply the data quality criteria from Section 6.1 when determining the data quality of each data source. If data is unavailable or data quality is insufficient for a given activity, companies should move to the next data type in the decision tree.

Figure 6.2: Decision Tree for Collecting Data



7. Assurance

While assurance in accordance with the Scope 3 standard is not required, companies are encouraged to seek assurance.

Companies may follow either of the following types of assurance:

1. Internal (or "self") assurance – Persons from within the organization but independent of the GHG inventory determination process, conduct internal assurance;

2. External assurance – Persons from a certification or assurance body independent of the GHG inventory determination process, conduct independent external assurance.

8. Reporting and Communication

Companies shall report all relevant scope 3 emissions, following the requirements in this standard, in addition to reporting all scope 1 and 2 emissions according to the *GHG Protocol Corporate Standard*.

Requirements

A public GHG emissions report that is in accordance with the *GHG Protocol Scope 3 Standard* shall include the following information:

- A description of the company and inventory boundary, including an outline of the organizational boundaries chosen and the chosen consolidation approach
- The reporting period covered
- Total scope 1 emissions, total scope 2 emissions, and all relevant scope 3 emissions, separately reported for each scope
- Emissions data for all six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6), separately in metric tonnes and in tonnes of CO_2 equivalent
- Scope 3 emissions reported separately for each scope 3 category
- Methodologies used to calculate or measure emissions
- A description of the uncertainties of reported emissions data
- A list of scope 3 activities included in the report
- The percentage of total anticipated scope 3 emissions that has been accounted for and reported (i.e., the company's selected significance threshold) and a rationale for the selection of the chosen significance threshold
- A description of the screening assessment approaches used and a description of their associated uncertainties
- A list of excluded scope 3 emission sources with justification of their exclusion
- Emissions data reported separately for activities calculated using primary data and activities calculated using secondary data, extrapolated data and proxy data
- A summary of data types used to calculate the inventory (e.g., the percentages of total scope 3 emissions calculated using primary data, secondary data, and extrapolated/proxy data)

Optional information

A public GHG emissions report should include, when applicable, the following additional information:

- Emissions data further disaggregated within scope 3 categories where this adds relevance and transparency (e.g., reporting by different categories of purchased materials or product types)
- Qualitative information about emission sources not quantified
- Additional qualitative explanations to provide context to the data
- Information on performance metrics and intensity ratios
- Information on the company's GHG management and reduction activities, including supplier engagement metrics, product GHG reduction initiatives, product efficiency metrics, etc.
- Information on avoided emissions from the use of sold products
- Information on purchases of GHG reduction instruments, such as emissions allowances, offsets, etc.

Optional information on partner engagement and performance

Because scope 3 emissions are the scope 1 and 2 emissions of a company's partners in the value chain (including suppliers, customers, service providers, etc.), reporting on a company's efforts to engage their partners in the value chain provides additional transparency on a company's scope 3 management and reduction activities.

A public GHG emissions report should include, when applicable, the following additional information:

- Partner engagement metrics, such as the number and percentage of suppliers and other partners that have:
    - Received a request from the reporting company to provide primary GHG emissions data;
    - Provided primary GHG emissions data to the reporting company;
    - Publicly reported entity-wide GHG emissions;
    - Established a publicly available entity-wide GHG reduction target;
- The percentage of value chain emissions for which suppliers and partners have provided GHG data;
- Partner GHG emissions data, both in absolute terms and allocated to the reporting company on the basis of an established metric (companies shall disclose the allocation metric and methodology used); and
- Partner performance metrics, including the GHG emissions performance of suppliers and other partners over time.

Optional information on product performance

A public GHG emissions report should include, when applicable, the following additional information:

- Information on the GHG emissions and energy efficiency of a company's product portfolio
- Product performance metrics and intensity ratios such as the fuel efficiency of sold vehicles, the energy efficiency of sold appliances and electronics, the GHG intensity of sold fuels, etc.
- The percentage of sold products that are compliant with energy efficiency standards, regulations, and certifications, where applicable

1 **Illustrative Reporting Form**

GHG Emissions for Company X, Year Y	Primary[10]	Secondary[11]	Total[12]	Uncertainty[13]
Scope 1: Direct Emissions from Owned/Controlled Operations				
a. Direct Emissions from Stationary Combustion				
b. Direct Emissions from Mobile Combustion				
c. Direct Emissions from Process Sources				
d. Direct Emissions from Fugitive Sources				
Scope 2: Indirect Emissions from the Use of Purchased Electricity, Steam, Heating and Cooling				
a. Indirect Emissions from Purchased/Acquired Electricity				
b. Indirect Emissions from Purchased/Acquired Steam				
c. Indirect Emissions from Purchased/Acquired Heating				
d. Indirect Emissions from Purchased/Acquired Cooling				
Scope 3				
a. Indirect Emissions from Purchased Products (Upstream)				
1. Purchased Goods & Services (Cradle-to-Gate Emissions) (Not Otherwise Included in Categories 2-10)				
2. Energy-Related Emissions (Not Included in Scope 2)[14]				
3. Capital Equipment				
4. Transportation & Distribution				
5. Waste Generated in Operations[15]				
6. Business Travel				
7. Franchises (Not Included in Scope 1 or 2) – Reported by Franchisee				
8. Leased Assets (Not Included in Scope 1 or 2) – Reported by Lessee				
9. Investments (Not Included in Scope 1 or 2)				
10. Other				
b. Indirect Emissions from Sold Products (Downstream)				
1. Franchises (Not Included in Scope 1 or 2 – Reported by Franchisor)				
2. Leased Assets (Not Included in Scope 1 or 2 – Reported by Lessor)				
3. Distribution of Sold Products[16]				
4. Use of Sold Products				
5. Disposal of Sold Products at the End of Life				
6. Other				
c. Other Indirect Emissions				
1. Employee Commuting				
2. Other				
Direct (Tier 1) Supplier Emissions		N/A		
% of suppliers accounted for (as a % of total spend)				
CO_2 from Biomass Combustion				

[10] Based on primary (company-specific) data
[11] Based on secondary (industry-average) data
[12] Sum of measured and modeled data
[13] Description of the uncertainty of reported data, either in qualitative or quantitative terms
[14] Includes T&D losses; extraction, production, and transport of fuels used in generation; and purchased power not consumed
[15] Disposal/treatment of waste generated in operations
[16] Including transportation, storage, retail, etc. subsequent to sale to another entity

Part 2: Guidance for Specific Scope 3 Categories

Part 2 of the standard provides specific guidance for each scope 3 category, including:

- A description of each category and a list of activities included in each category
- Guidance for determining which emissions to report
- Guidance on how to calculate emissions
- Case studies and examples

Generic Example of Determining Relevant Emissions

To determine which scope 3 activities are most significant in size, companies should follow these steps:

1. Use screening methods to individually estimate the emissions from all scope 3 activities.
2. Express each individual scope 3 activity's estimated emissions as a fraction of total anticipated scope 3 emissions.
3. Rank all scope 3 activities from largest to smallest to determine which activities are most significant.

Companies may use either:

- An emissions-based screening assessment, or
- A financial-based screening assessment.

Companies should give preference to an emissions-based screening assessment over a financial-based screening assessment, since an emissions-based approach more closely approximates actual emissions.

Companies shall account for and report the largest scope 3 sources that collectively account for at least 80%[17] of total anticipated scope 3 emissions.

Emissions-based screening assessments

- Example: Number of leased assets x industry average emissions per leased asset (tonnes CO_2-e)

Financial-based screening assessments

- Example: Revenues from leased assets as a share of your organization's total revenues (%)

Other Criteria for Determining Relevant Emissions

In addition to accounting for all activities that collectively account for 80%[18] of total anticipated scope 3 emissions in terms of size, companies should consider other criteria to determine whether additional scope 3 activities should be accounted for and reported.

Scope 3 activities should be considered relevant if they meet any of the following criteria:

[17] The selection of an 80% threshold is tentative pending further information learned during the road testing phase of this standard during early 2010 on which threshold is most feasible and appropriate across different companies and sectors.
[18] The selection of an 80% threshold is tentative pending further information learned during the road testing phase of this standard during early 2010 on which threshold is most feasible and appropriate across different companies and sectors.

1. There are potential emissions reductions that could be undertaken or influenced by the company
2. They contribute to the company's risk exposure (e.g., climate change related risks such as financial, regulatory, supply chain, product and technology, compliance/litigation, reputational and physical risks)
3. They are deemed critical by key stakeholders (e.g., feedback from customers, suppliers, investors or civil society)
4. They are an outsourced activity that is typically insourced by other companies in the reporting company's sector
5. They meet additional criteria developed by the company or industry sector

Use of Sold Products

Emissions from Use of Sold Products: Reporting Requirements by Product Type

Product Type	Examples	Reporting Requirement
1. Consumes fossil fuels in the use phase	Automobiles, engines, motors, buildings	**Report all**
2. Consumes electricity in the use phase	Appliances, electronics, lighting, buildings	**Report all**
3. Fuels	Petroleum products, natural gas, coal	**Report all**
4. Contains GHGs that are emitted during use	Aerosols, refrigerants, industrial gases, SF6, HFCs, PFCs, fire extinguishers	**Report all**
5. Indirectly consumes energy in the use phase	Pots & pans (heating), textiles (washing), food (refrigeration)	**Optional** *Should report if significant in size, if the company has the ability to influence reductions, or if otherwise relevant*
6. Other products that emit GHGs directly or indirectly during use	Fertilizers Financial products/services	**Optional** *Should report if significant in size, if the company has the ability to influence reductions, or if otherwise relevant*
7. When used, reduces the GHGs of other entities compared to a baseline	Wind turbine or solar panel (compared to coal plant); ICT (compared to air travel); CFL bulb (compared to incandescent bulb)	**Optional** *Report separately from scopes 1, 2, and 3*
8. No GHG impact in the use phase	Furniture	**Optional**
9. Raw materials and intermediate goods where the eventual end use is unknown	Iron ore, cement	**Optional**

Glossary

Term	Definition
Assurance	When an assurance provider expresses a conclusion designed to enhance the degree of confidence of the intended users (other than the preparer of the GHG inventory report) over the measurement of the GHG inventory and the Scope 3 emissions included therein against defined criteria.
Audit Trail	Well organized and transparent historical records documenting how an inventory was compiled.
CO_2 equivalent (CO_2-e)	The universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis.
Control	The ability of a company to direct the policies of another operation. More specifically, it is defined as either operational control (the organization or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation) or financial control (the organization has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities).
Downstream emissions	Indirect GHG emissions that occur in the life cycle of outputs (i.e., sold goods and services) subsequent to sale by the reporting company.
Emission Factor	A factor allowing GHG emissions to be estimated from a unit of available activity data (e.g. tonnes of fuel consumed, tonnes of product produced) and absolute GHG emissions.
Emissions	The release of GHG into the atmosphere.
Extrapolated data	Primary or secondary data related to a similar (but not representative) input, processor activity to the one in the inventory that are adapted or customized to a new situation to make more representative. For example, using data from the same or a similar activity type and customizing the data to the relevant region, technology, process, temporal period and/or product.
Global Warming Potential (GWP)	A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO_2.
Greenhouse gas inventory	A quantified list of an organization's GHG emissions and sources.
Greenhouse gases (GHG)	For the purposes of this standard, GHGs are the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).
Life cycle	Consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to end of life.
Material discrepancy	An error (for example, from an oversight, omission, miscalculation or fraud) that results in a reported quantity or statement being sufficiently different from the true value or meaning to influence a user's decisions.
Materiality threshold	A concept employed in the process of verification. It is often used to determine whether an error or omission is a material discrepancy or not. It should not be viewed as a de minimus for defining a complete inventory.
Operational boundaries	The boundaries that determine the direct and indirect emissions associated with operations owned or controlled by the reporting company. This assessment allows a company to establish which operations and sources cause direct and indirect emissions, and to decide which indirect emissions to include that are a consequence of its operations.

Organizational boundaries	The boundaries that determine the operations owned or controlled by the reporting company, depending on the consolidation approach taken (equity or control approach).
Outsourcing	The contracting out of activities to other businesses.
Primary data	Observed data (emissions data, activity data or emission factors) collected from specific facilities owned or operated by the reporting company or a company in its supply chain.
Product	Any good or service.
Proxy data	Primary or secondary data related to a similar (but not representative) input, process, or activity to the one in the inventory, which can be used in lieu of representative data if unavailable. These existing data are directly transferred or generalized to the input/process of interest without adaptation.
Reporting	Presenting data to internal management and external users such as regulators, shareholders, the general public or specific stakeholder groups.
Scope	Defines the operational boundaries in relation to indirect and direct GHG emissions.
Scope 1 Inventory	A reporting organization's direct GHG emissions
Scope 2 Inventory	A reporting organization's emissions associated with the generation of electricity, heating/ cooling, or steam purchased for own consumption.
Scope 3 Inventory	A reporting organization's indirect emissions other than those covered in scope 2. A company's scope 3 inventory includes the upstream and downstream emissions of the reporting company.
Secondary data	Generic or industry average data from published sources that are representative of a company's operations, activities, or products
Supply chain	A network of organizations (e.g., manufacturers, wholesalers, distributors and retailers) involved in the production, delivery, and sale of a product to the consumer.
Uncertainty	1. Statistical definition: A parameter associated with the result of a measurement that characterizes the dispersion of the values that could be reasonably attributed to the measured quantity. (e.g. the sample variance or coefficient of variation). 2. Inventory definition: A general and imprecise term which refers to the lack of certainty in emissions-related data resulting from any causal factor, such as the application of non-representative factors or methods, incomplete data on sources and sinks, lack of transparency etc. Reported uncertainty information typically specifies a quantitative estimates of the likely or perceived difference between a reported value and qualitative description of the likely causes of the difference.
Upstream emissions	Indirect GHG emissions that occur in the life cycle of inputs (i.e., purchased or acquired goods, services, materials, and fuels), up to the point of receipt by the reporting company.
Value chain emissions	The total scope 1, scope 2, and scope 3 emissions of a company, including emissions from the upstream and downstream activities associated with the operations of the reporting company.