

OUTLIERS ESG & SUSTAINABILITY CENTRE™

# Carbon & GHG Accounting Toolkit™

Measure emissions to the GHG Protocol

CSO / Sustainability / Operations · Flagship Edition 2026

*Outliers Professionals Ltd — ESG & Sustainability Centre Resource Library*

## 1. Executive Overview

This toolkit helps you measure and manage greenhouse-gas emissions to the GHG Protocol — boundary, Scope 1, 2 and 3 inventory, emission factors, calculation and assurance readiness.

This toolkit is part of the Outliers ESG & Sustainability Centre™ and is anchored to GRI, ISSB, TCFD and the GHG Protocol (by name). It gives boards, sustainability teams and assurance providers an applied, end-to-end kit to set, deliver, measure and disclose ESG performance in this domain.

## 2. Objectives

The outcomes this toolkit helps you achieve:

- Define the organisational and reporting boundary
- Build a Scope 1 and 2 inventory
- Estimate Scope 3 emissions
- Manage emission factors and data quality
- Reach assurance readiness

## 3. Governance

The GHG inventory is owned by sustainability with data from operations, procurement and finance, and assured where engaged:

Layer	Role
Board / ESG Committee	Oversees ESG strategy, risk and disclosure
Executive / CSO	Owns ESG and the operating model
Sustainability function	Runs ESG programmes and reporting
Business & functions	Deliver ESG in operations
Assurance / internal audit	Provides assurance over ESG

## 4. Control / Management Framework

The framework measures emissions to the GHG Protocol — organisational boundary, Scope 1, 2 and 3 inventory, emission factors, calculation and assurance readiness (GHG Protocol by name).

### Maturity model

L1 Initial	L2 Developing	L3 Defined	L4 Managed	L5 Optimised
Ad hoc / reactive	Basic, unstandardised	Structured & governed	Measured & assured	Strategic & value-creating

## 5. Roles & Responsibilities

Role	Responsibility
CSO / Sustainability	Own the GHG inventory
Operations / Facilities	Provide activity data
Procurement	Provide Scope 3 / supplier data
Finance	Provide spend data
Assurance provider	Independently assure (where engaged)

## 6. Risk-Control / Topic Matrix (sample)

*Illustrative matrix of ESG topics/risks and the management responses. Full working versions ship as editable XLSX with owners, scores, targets and RAG.*

Ref	Topic / Risk	Management Response	Owner	Freq	Type
G-01	Scope 1 sources	Activity data x emission factors	Sustainability	Quarterly	Measure
G-04	Scope 2 electricity	Consumption x grid factor	Sustainability	Quarterly	Measure
G-08	Scope 3 purchased goods	Spend/activity x factor	Procurement	Annually	Estimate
QA-01	Data quality	Review and verify activity data	Sustainability	Quarterly	Detective

## 7. Sample Controls / Actions

- Organisational boundary defined
- Scope 1 and 2 inventory built
- Scope 3 screened and estimated
- Emission factors documented and current
- Inventory quality-assured and assurance-ready

## 8. Measurement & Testing Approach

Measure performance against targets and test the reliability of ESG data and controls. Use the assessment scale: Effective / Partially effective / Ineffective for controls, and verified/estimated/unverified for data.

Area	Procedure	Basis	Frequency
Activity data	Verify activity data against source records	Sample	Quarterly
Emission factors	Check factors are current and correctly applied	Full	Annually
Calculation	Re-perform calculations on a sample	Sample	Quarterly

Record results in the relevant workbook (e.g. ESG KPI Workbook, ESG Data Collection Workbook) and track gaps to closure.

## 9. Implementation Roadmap

Phase	Focus	Outcome
Phase 1	Set boundary and data sources	Inventory scope
Phase 2	Build Scope 1 & 2 inventory	Operational footprint
Phase 3	Estimate Scope 3	Full inventory
Phase 4	Quality-assure and get assured	Assurance-ready inventory

## 10. Templates

This toolkit is supported by the following editable templates and working files in the Resource Library:

- Carbon / GHG Inventory Calculator (XLSX)
- Scope 1-3 Emissions Register (XLSX)
- Scope 3 Screening Template
- Emission Factors Register
- Carbon Accounting Guide

## 11. Checklists

- Organisational and reporting boundary set
- Emission sources mapped by scope

- Activity data collected
- Emission factors documented and current
- Scope 1 & 2 calculated
- Scope 3 screened and estimated
- Inventory quality-checked
- Assurance readiness assessed

## 12. Board Reporting Examples

Standard ESG report: executive summary · performance vs target (RAG) · key metrics · risks & actions · decisions sought.

Metric	Current	Target	RAG	Action
Scope 1+2 (tCO2e)	Measured	Reducing	Green	Maintain & reduce
Scope 3 coverage	Partial	Material categories	Amber	Extend coverage
Data quality	Mostly verified	Verified	Amber	Verify estimates
Assurance readiness	Developing	Ready	Amber	Close gaps

## 13. Board / ESG Committee Reporting

*Illustrative one-page summary for the board / ESG committee (replace with live data):*

Item	Status	Commentary
GHG inventory	Amber	Scope 1-2 solid; Scope 3 maturing
Data quality	Amber	Estimates being verified
Assurance	Amber	Readiness improving
Decisions sought	—	Approve Scope 3 programme

## 14. RAG Examples

How to read the RAG status used across this toolkit and its workbooks:

RAG	Meaning	ESG interpretation	Action
Green	On track	Performance at or above target; well managed	Maintain and monitor
Amber	Watch	Performance below target or partially managed	Improve and re-measure
Red	Off track	Significantly below target or unmanaged risk	Escalate and act

## Notes & Disclaimer

*This resource is a professional ESG and sustainability template, not assurance, legal, investment or regulatory advice. It is anchored to GRI, ISSB (IFRS S1 & S2), TCFD, SASB, the UN SDGs, the UN Global Compact, the GHG Protocol, ISO 14001, ISO 26000 and CDP, and to FRCN, NGX, SEC, the CBN Sustainable Banking Principles and NAICOM — referenced by name only, with no copyrighted standard content reproduced. Calibrate topics, metrics, targets, factors and thresholds to your organisation and confirm requirements against the current standards and applicable regulation. Bracketed fields [like this] and sample entries are editable, illustrative placeholders; emission factors and figures are not authoritative.*