



# **The GHG Protocol Land Sector and Removals Standard - Context**

**Annette Cowie**

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# The Four Layers of GHG Accounting

CONCEPTUAL  
STRUCTURE

ACCOUNTING  
SCOPE



Source:  
Takayoshi Yamagiwa, March 2026  
LinkedIn

# The Four Layers of GHG Accounting

## CONCEPTUAL STRUCTURE

## ACCOUNTING SCOPE



### Section 1 — What question does each system answer

| Core question  | How much does this territory emit? | How much does this organization and its value chain emit? | How much does this product emit?  | How much reduction does this activity create? |
|----------------|------------------------------------|---|-----------------------------------|---|
| Primary driver | Climate policy & UN reporting      | Corporate climate strategy & disclosure                   | Product transparency & regulation | Carbon markets & mitigation finance           |
| Typical users  | Countries, cities, regions         | Companies & institutions                                  | Manufacturers & supply chains     | Project developers                            |

### Section 2 — Which frameworks govern each system

| Framework            | UNFCCC / Paris Agreement reporting | GHG Protocol             | ISO LCA standards                  | ISO 14064-2  |
|----------------------|------------------------------------|--------------------------|------------------------------------|--|
| Methodological basis | IPCC Guidelines                    | IPCC factors + databases | ISO 14067 + Product Category Rules | Carbon credit methodologies (Verra, Gold Standard, etc.) |

### Section 3 — How emissions are defined and reported

| Boundary       | Geographic territory        | Organizational boundary + Scopes 1-3 | Product life cycle                     | Project boundary & baseline            |
|----------------|-----------------------------|--------------------------------------|--|--|
| Reporting unit | Mt CO <sub>2</sub> e / year | t CO <sub>2</sub> e / year           | kg CO <sub>2</sub> e / functional unit | t CO <sub>2</sub> e reduced or removed |

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Australian Government  
Department of Climate Change, Energy,  
the Environment and Water

## National Inventory Report 2023

*The Australian Government Submission to the United  
Nations Framework Convention on Climate Change*  
Australian National Greenhouse Accounts  
May 2025

VOLUME 1

ipcc

INTERGOVERNMENTAL PANEL ON climate change

## 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories

Volume 1

### General Guidance and Reporting

Edited by Calvo Buendia, E., Tanabe, K., Kranjc, A.,  
Baumann, J., Fukuda, M., Ntziaris, S.,  
Osako, A., Pysanenko, Y., Sherman, P. and Federico, S.



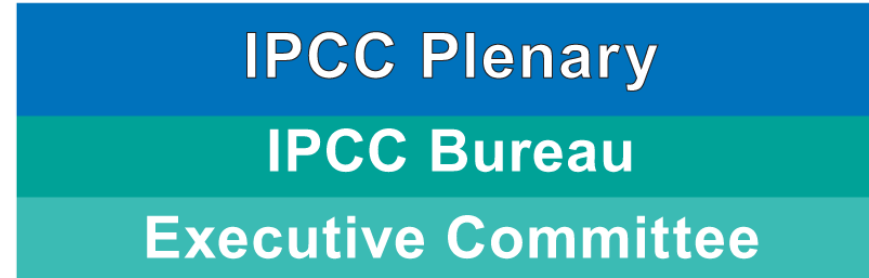
Task Force on National Greenhouse Gas Inventories



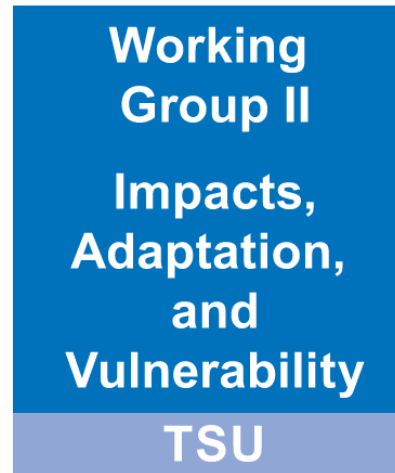
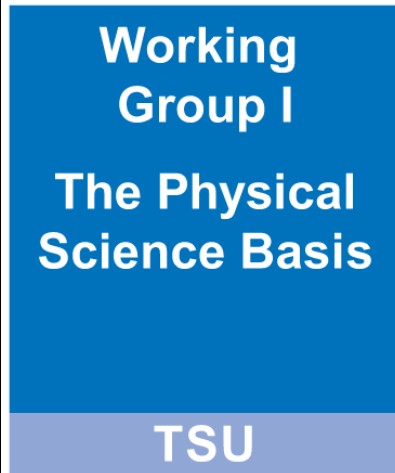
## Country level:

National GHG inventory  
reporting to UNFCCC/  
Paris Agreement  
(NIR/NGHGI/NGA)

- Annual emissions and removals
- within territorial boundary
- IPCC guidelines
- Review by UNFCCC



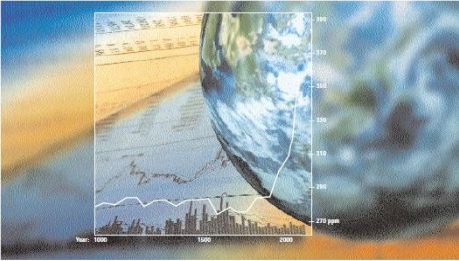
IPCC Secretariat



Authors, Contributors, Reviewers



## The Greenhouse Gas Protocol



A Corporate Accounting and Reporting Standard  
REVISED EDITION



GREENHOUSE  
GAS PROTOCOL



## Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Supplement to the GHG Protocol Corporate  
Accounting and Reporting Standard



## Company level GHG quantification:

- reporting GHG performance
  - GHG Inventory - annual emissions and removals
  - under financial or operational control
  - Plus life cycle emissions from products sold that year
- 
- Direct emissions - scope 1
  - Indirect emissions
    - scope 2 (energy)
    - scope 3 (other supply chain emissions)
  - GHG Protocol standards
  - ISO standard 14064-1

## ISO 14064-1:2018



### Greenhouse gases

Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals



## ISO 14040:2006

Environmental management —  
Life cycle assessment —  
Principles and framework

## ISO 14044:2006

Environmental management —  
Life cycle assessment —  
Requirements and guidelines

## ISO 14067:2018


Greenhouse gases — Carbon  
footprint of products —  
Requirements and guidelines for  
quantification

# Product level GHG quantification

- Product carbon footprint, LCA, carbon neutrality claims
- Life cycle emissions and removals: cradle to grave
- ISO 14040 Life cycle assessment — Principles and framework
- ISO 14044 Life cycle assessment — Requirements and guidelines
- ISO 14067 - Carbon footprint of products — Requirements and guidelines for quantification
- GHG Protocol Product Life Cycle Accounting and Reporting Standard



***Product Life Cycle  
Accounting and  
Reporting Standard***

ISO 14064-2:2019 



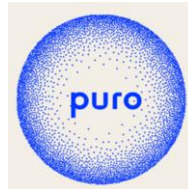
Greenhouse gases

Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements



GREENHOUSE  
GAS PROTOCOL

The GHG Protocol for Project Accounting



International  
Carbon Reduction  
& Offset Alliance



Voluntary Carbon  
Markets Integrity  
Initiative

07.06.2022 by VCM

VCM Claims Code of  
Practice



# Project level GHG quantification

- Generate credits for emissions trading
- Project (direct and indirect) net emissions compared with (historical or dynamic) baseline
- Integrity criteria are critical: additional, “permanent”, verifiable
- ISO 14064-2 -guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
- GHG Protocol for Project Accounting
- Carbon market methodologies
- Paris Agreement Article 6.4

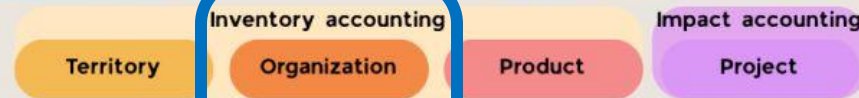


# The Four Layers of GHG Accounting

## ACCOUNTING SCOPE



## CONCEPTUAL STRUCTURE



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Source:  
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## International Sustainability Standards Board

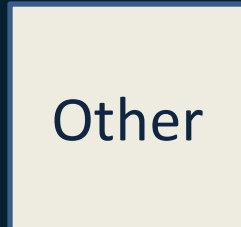
June 2023

### IFRS S2

IFRS® Sustainability Disclosure Standard



### Climate-related Disclosures



## Corporate Sustainability Reporting Directive (CSRD)



## Australian Sustainability Reporting Standard

## Climate-related Disclosures

AASB S2  
September 2024

# Issues for agriculture and forestry industries

- IFRS S2 requires GHG Protocol for quantification
  - » *(unless jurisdictional requirement to use alternative method)*
  - » Scope 1 and 3 corporate standards:
    - high level, generic, not tailored to land sector companies
    - C sequestration cannot be included in Scope 3 reporting
  - » Land Sector and Removals Standard / Guidance required by GHGP if significant land sector emissions





## *Land Sector and Removals Standard*

Version 1.0: Agriculture and CO<sub>2</sub> removal technologies

*Supplement to the GHG Protocol Corporate Standard and Scope 3 Standard*

**Scope of the Land Sector and Removals Standard and Guidance, version 1.0**

This version of the *Standard* and *Guidance* applies to agriculture and CO<sub>2</sub> removal technologies. It does not apply to forestry. Future versions of this *Standard* may include forestry.



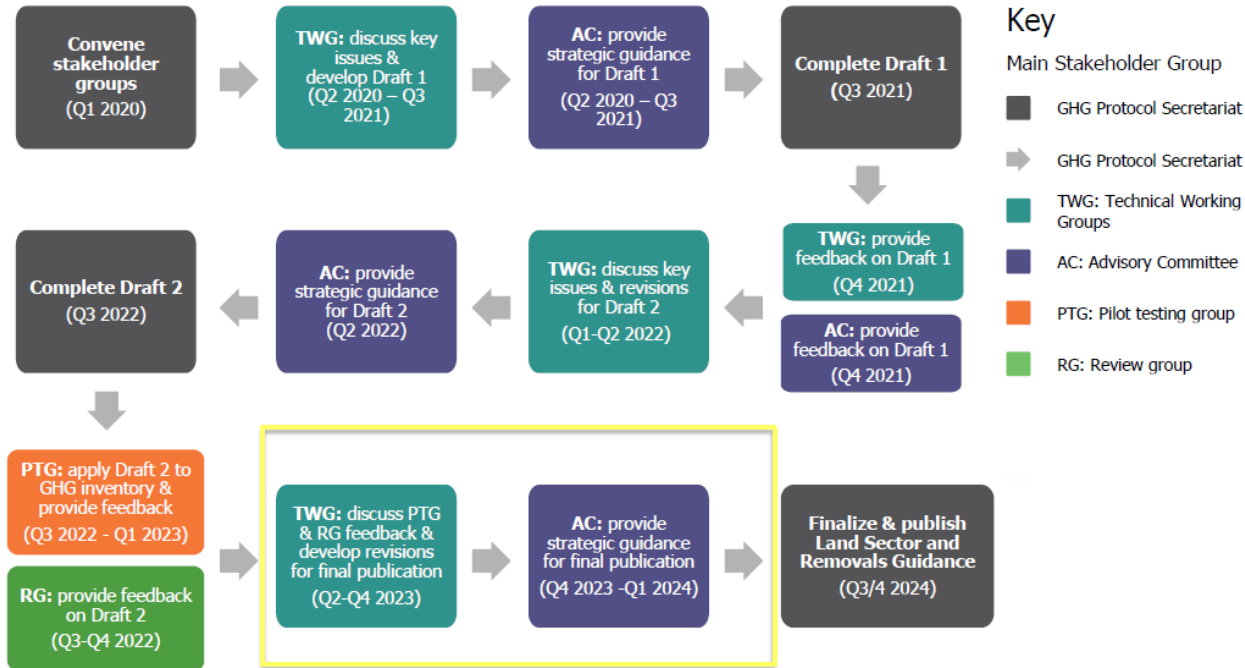
# GHGP Land Sector and Removals Standard



# Development timeline of GHGP Land Sector and Removals Standard/Guidance



## Guidance development process



- Commenced 2020
- Draft for Review and Pilot Testing September 2022
- Initial plan: publication in 2023
- Timeline extended: Q3/Q4 2024
- Extended again: Q1 2025
- Extended again: Q4 2025
- **Publication:**  
**30 January 2026 – LSR Standard**
- Q2 2026 LSR *Guidance*

## How is it developed and who is involved?

- **Global, multi-stakeholder development process**, including 100+ Advisory Committee & Technical Working Group members, 1000+ stakeholders signed up for the review process and 140+ pilot testing companies



## ***Land Sector and Removals Standard***

Version 1.0: Agriculture and CO<sub>2</sub> removal technologies

*Supplement to the GHG Protocol Corporate Standard and Scope 3 Standard*

*Scope of the Land Sector and Removals Standard and Guidance, version 1.0*

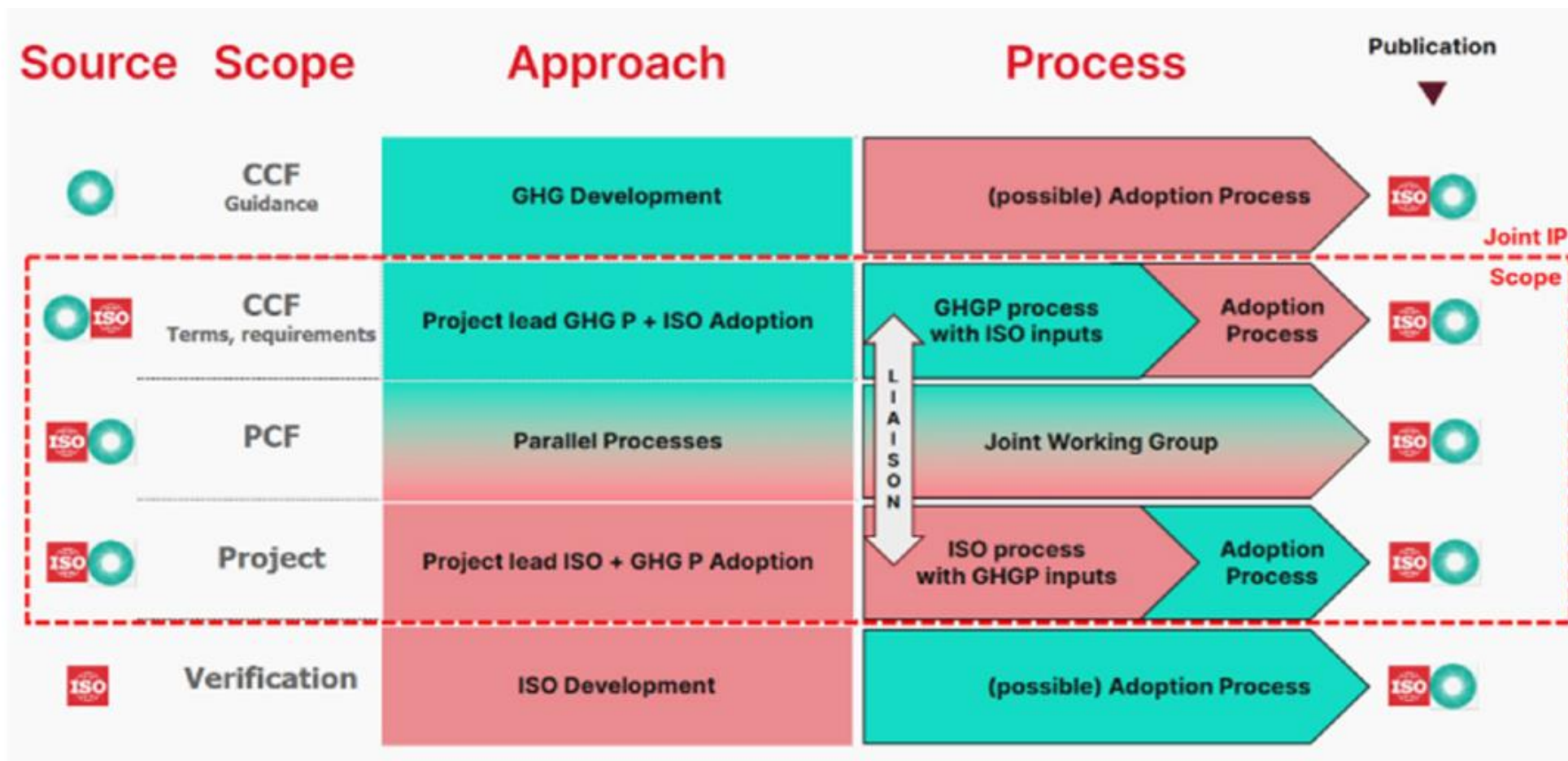
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## Scope of GHGP LSR

- » Land Sector and Removals Standard released 30 January 2026
- » Takes effect from 1 January 2027
- » Covers agriculture plus land-based and technological removals involving geological storage
- » Must be used if significant land sector emissions, scope 1 or 3, or want to include removals
- » V1 Excludes forestry due to lack of agreement on method
- » Companion Guidance to be released Q2 2026

# ISO-GHGP collaboration



CCF = GHGP “Corporate suite”  
 LSRS is excluded from collaboration

# Thank you

Watch this space:

- GHGP “request for information” on forest carbon accounting
- ISO-GHGP joint work on corporate, product and project standards
- CRFD legislation