



Australian Government

FWPCOT6204 Use carbon accounting to estimate emissions

Release: 1

FWPCOT6204 Use carbon accounting to estimate emissions

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT6204A Use carbon accounting to estimate emissions in the workplace which was first released with FPI11 Forest and Forest Products Training Package Version 2.2

Application

This unit of competency describes the outcome required to identify and apply carbon accounting methodologies to develop and analyse a carbon inventory. It applies to senior managers and can apply to the full scope of forest and wood products industry workplaces and to operations of all sizes.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Common Technical

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Evaluate context for carbon accounting	1.1 Determine organisational need to quantify stocks, sources and sinks of carbon and other greenhouse gas (GHG) emissions in line with anthropogenic impacts on global climate. 1.2 Investigate mandatory and voluntary obligations for carbon accounting under international conventions and protocols within national context. 1.3 Examine the principles of baseline scenario, leakage and

ELEMENTS	PERFORMANCE CRITERIA
	permanence. 1.4 Assess the role of forest and wood products industry in global balance of GHG emissions. 1.5 Establish organisational objective of conducting carbon emission accounting.
2. Identify carbon accounting methodologies and define approach	2.1 Identify and explore methodologies for carbon accounting. 2.2 Examine carbon accounting frameworks. 2.3 Identify protocols for carbon biomass pools including harvested wood products and non-CO2 emissions. 2.4 Establish approach for developing carbon inventory in line with nationally agreed standards.
3. Establish accounting area	3.1 Define organisational and operational boundaries for carbon inventory. 3.2 Determine time period over which carbon emissions will be assessed.
4. Collect data	4.1 Identify emissions and offset sources. 4.2 Determine collection of activity consumption and offset data, based on data availability, analytical capacity and available resources. 4.3 Construct carbon inventory summary table, listing and separating emission sources into correct scopes. 4.4 Include carbon offset sources outside scope in carbon inventory summary table. 4.5 Record available data in separate spreadsheet tabs. 4.6 Research and gather existing secondary and field data for carbon storage sources.
5. Calculate carbon emissions	5.1 Calculate carbon dioxide equivalent emissions consistent with GHG protocol within spreadsheets for each emissions source. 5.2 Calculate carbon storage according to standardised methodology for each carbon offset source in the inventory. 5.3 Populate carbon inventory summary with calculated emissions and offsets in descending order. 5.4 Calculate total emissions for each scope and for removals and offsets. 5.5 Calculate sum total of emissions and offsets for inventory.

ELEMENTS	PERFORMANCE CRITERIA
	5.6 Estimate change in carbon stock if a baseline exists. 5.7 Display emissions by scope and source, using charts or graphs. 5.8 Formulate suitable ratio indicator for organisation and calculate value based on total carbon emissions in the summary. 5.9 Report value of ratio indicator in carbon inventory summary.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	- interpret a range of complex abstract numerical data - complete highly technical and complex calculations using equations - record abstract data with precision and prepare interpretative charts and graphs.
Reading skills to:	interpret highly technical, complex and unfamiliar information within international and Australian protocol and convention documents.
Writing skills to:	document clear explanatory notes for calculations.
Planning and organising skills to:	- source, collect and organise a range of data to inform carbon emission calculations - plan and organise collection of all required information and manage own timing and productivity to complete calculations.
Technology skills to:	use a computer, keyboard and spreadsheet software to prepare and maintain calculations.

Unit Mapping Information

FPICOT6204A Use carbon accounting to estimate emissions in the workplace.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT6204 Use carbon accounting to estimate emissions

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT6204A Use carbon accounting to estimate emissions in the workplace which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement'.

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence that they can:

- For a given forest and wood products industry organisation within any sector:
 - identify mandatory and voluntary obligations for carbon accounting
 - define organisational objectives for participating in carbon accounting processes
 - define boundaries for the carbon inventory
 - select a methodology for carbon accounting calculations for emissions and offsets
- Complete two different carbon accounting calculations for two different time periods in line with the selected methodology and include the following factors:
 - direct greenhouse gas (GHG) emissions
 - indirect GHG emissions
 - on-site and off-site emissions (geographical)
 - upstream emissions
 - downstream emissions
 - full cycle accounting
 - non-CO2 emissions; soil disturbance, fertilisation, biomass combustion

In forest applications also consider the following:

- above ground biomass
- below ground biomass
- dead organic matter - wood, litter
- soil organic matter

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Methods to access, locate and select applicable objectives and key content in relevant international and national conventions, protocols, standards and guidance frameworks, including the following key references:
 - Kyoto Protocol
 - ISO 14000 essentials:
 - ISO 14064-1 2006 Greenhouse gases—Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
 - Greenhouse Gas Protocol Corporate Standard
 - Copenhagen Agreement
 - National Greenhouse Accounts (NGA) Factors Workbook
- Key drivers for carbon accounting
- Basic theory of the greenhouse effect and its impacts
- Basic principles of the carbon cycle and influences
- Carbon accounting terminology, frameworks and methods used to calculate carbon emissions and offsets
- Types of emissions and offset sources included in common calculations:
 - Direct GHG emissions
 - Indirect GHG emissions
 - On-site and off-site emissions (geographical)
 - Upstream emissions
 - Downstream emissions
 - Full cycle accounting
 - Non-CO2 emissions; soil disturbance, fertilisation, biomass combustion
- Sources of secondary data for carbon accounting
 - national statistical agencies
 - research institutes
 - information from sectoral experts
- Organisational and operational boundaries for the carbon inventory
- The full range of organisational emission sources and methods used to select key emission factors for calculations.

Assessment Conditions

The following resources must be made available:

- Computer, keyboard and spreadsheet software to prepare and maintain calculations
- Documents, spreadsheets and commonly used proformas for calculating carbon emissions
- Access to international and national conventions, protocols, standards and guidance frameworks including the following key references:

- Kyoto Protocol
- ISO 14000 essentials:
 - ISO 14064-1 2006 Greenhouse gases—Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- Greenhouse Gas Protocol Corporate Standard
- Copenhagen Agreement
- National Greenhouse Accounts (NGA) Factors Workbook

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- Hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

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