



**Australian Government**

# **AHCCFP301 Identify the effects of climate change as a factor in land management**

**Release: 1**

# AHCCFP301 Identify the effects of climate change as a factor in land management

## Modification History

| Release   | Comments                                                                                                                    |
|-----------|-----------------------------------------------------------------------------------------------------------------------------|
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0. |

## Application

This unit of competency describes the skills and knowledge required to identify climate change as a factor in land management. It incorporates knowledge of climate, climate change and the impacts of a range of land management practices on the production of greenhouse gases.

The unit applies to individuals who participate in land management activities, who require knowledge and skills to make decisions around activities that reduce greenhouse gas emissions.

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

## Pre-requisite Unit

Nil

## Unit Sector

Carbon Farming (CFP)

## 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.</i>                                                                                                    |
| 1. Identify the climate system and climate change as they relate to land management | 1.1 Identify the components of the climate system<br>1.2 Identify the role of the main greenhouse gases in the climate system<br>1.3 Identify and describe the natural factors that contribute to climate |

| Elements                                                                                     | Performance Criteria                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>                                             | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                 |
|                                                                                              | change<br>1.4 Identify and describe the factors that contribute to human-induced climate change<br>1.5 Identify the potential impacts of climate change on local natural and agricultural environments                                                                                                                                                                 |
| 2. Identify the roles of vegetation, animals and carbon in greenhouse gas production         | 2.1 Research the role of land, vegetation and animal management in greenhouse gas production<br>2.2 Identify carbon cycle processes in relation to own work role<br>2.3 Identify the forms of carbon in the carbon cycle and where they are stored<br>2.4 Research the role of vegetation and soil carbon in the mitigation of carbon dioxide levels in the atmosphere |
| 3. Identify and contribute to land management practices that reduce greenhouse gas emissions | 3.1 Identify and contribute to land management practices to reduce methane production<br>3.2 Identify and contribute to land management practices to reduce nitrous oxide production<br>3.3 Identify and contribute to land management practices to reduce carbon dioxide production                                                                                   |

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.*

| Skill   | Description                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading | <ul style="list-style-type: none"> <li>Engages with material focused on climate, climate change, greenhouse gas mitigation and land management techniques</li> </ul> |

## Unit Mapping Information

| Code and title current version | Code and title previous version | Comments | Equivalence status |
|--------------------------------|---------------------------------|----------|--------------------|
|                                |                                 |          |                    |

| <b>Code and title<br/>current version</b>                                                      | <b>Code and title<br/>previous version</b> | <b>Comments</b> | <b>Equivalence status</b> |
|------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------|---------------------------|
| ACMCFP301<br>Identify the<br>effects of climate<br>change as a<br>factor in land<br>management | Not applicable                             | New unit        | No equivalent unit        |

## Links

Companion Volumes, including Implementation Guides, are available at VETNet: -  
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

# Assessment Requirements for AHCCFP301 Identify the effects of climate change as a factor in land management

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## Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified the impacts of climate change on land management and land management techniques that reduce greenhouse gas emissions, including:

- identified at least three effects that climate change has had on a designated site
- identified three land management practices that would reduce greenhouse gas emissions, for a designated site
- identified at least one environmental, one social and one economic benefit that implementing new land management practices could have on a designated site.

## Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the climate system
- the main greenhouse gases and their role in the climate system
- climate change both natural and human-induced
- factors that contribute to human-induced climate change
- common land and agricultural management practices that reduce greenhouse gas emissions, including:
  - vegetation methods: including regenerating native forests, protecting native forests by reducing land clearing, and planting trees to grow carbon stocks
  - savanna burning: including managing bushfires in Australia's savannas to avoid harmful, high-temperature fires
  - agricultural practices: including building soil carbon through changed farming practices such as crop stubble retention, no till cropping, mulching, improved water management, use of organic fertilisers, composting and use of soil conditioners including biochar

- other agricultural practices: including protecting vegetation from stock grazing, reducing emissions from cattle, controlled grazing practices, or other industry-specific practices
- Australia's commitment to global emissions reduction targets
- environmental benefits of changed land management practices, including improved biodiversity above and below ground, improved air, water and soil quality, reduced greenhouse gas emissions, improved movement of water across landscape, increased resilience to drought, and increased land versatility
- social benefits of changed land management practices, including potential for increased social capital, Indigenous community empowerment, and increased resilience to drought
- economic benefits of changed land management practices, including potential for diversified income streams and potential increased farm productivity.

## Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
  - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- specifications:
  - access to information about climate, climate change and carbon farming practices
  - access to details and history of a designated site.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>