



Australian Government

FWPFRM5006 Analyse ecology of commercial native forests and plantations

Release: 1

FWPFRM5006 Analyse ecology of commercial native forests and plantations

Modification History

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to conduct biodiversity evaluations and monitor biodiversity management and conservation in forestry operations.

The unit applies to individuals who conduct and monitor biodiversity studies in native forest and plantation settings.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Forest Resource Management (FRM)

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. Research the impact of forestry operations on biodiversity	1.1 Identify structure and composition of native forests and plantations 1.2 Explain ecological processes in native forests and plantations that contribute to biodiversity to forestry personnel 1.3 Classify ecosystem services provided by commercial native forests and plantations

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify flora and fauna species of high conservation significance and their habitats and the ways these are managed in commercial native forests and plantations 1.5 Explain the impact of forest management activities on biodiversity to forestry personnel
2. Outline the regulatory framework applying to biodiversity management and conservation in forestry operations	2.1 Confirm the international conventions, and relevant national, state and territory legislation, policies and agreements relating to biodiversity management and conservation that are relevant to commercial forestry operations 2.2 Explain how the regulatory framework is addressed in the prescriptions for forest management activities to forestry personnel
3. Conduct a biodiversity evaluation	3.1 Select methods for evaluating biodiversity values in operational areas, including the use of ground survey techniques, planning tools and databases 3.2 Select procedures for assessing habitat suitability for forest-dependant threatened or priority species in operational areas and developing appropriate management actions 3.3 Select procedures for identifying and assessing vegetation communities 3.4 Plan and implement a biodiversity evaluation 3.5 Liaise with and seek support from senior personnel during planning and implementation of biodiversity evaluation, as required 3.6 Analyse findings of the biodiversity evaluation, and suggest ways of improving biodiversity management and conservation 3.7 Report outcomes of biodiversity evaluation and recommendations to appropriate personnel
4. Monitor biodiversity management and conservation practices in forestry operations	4.1 Select and implement methods for monitoring biodiversity management and conservation practices in forestry operations 4.2 Gather and assess information on performance at key milestones or established review periods, and suggest ways for improving biodiversity management and conservation measures 4.3 Report on outcomes of monitoring activities and recommendations to appropriate personnel

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	Interpret complex written, technical information in source documents related to optimising biodiversity conservation and management
Writing	Design, develop and revise strategic documents appropriate to audience and context
Oral communication	Use active listening and questioning techniques to convey and clarify information
Numeracy	Analyse and compare complex statistical information related to biodiversity conservation and management

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPFRM5006 Analyse ecology of commercial native forests and plantations	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFRM5006 Analyse ecology of commercial native forests and plantations

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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:

- conducted one biodiversity evaluation in either a native forest or a plantation. In undertaking this activity, the individual has:
 - applied knowledge of forest ecology, biodiversity and the impact of forestry practices on biodiversity
 - established objectives of biodiversity evaluation and its relationship with the regulatory framework
 - planned and implemented biodiversity evaluation according to workplace procedures
 - briefed forestry personnel on biodiversity evaluation
 - gathered, collated and analysed data
 - sought support from senior personnel during planning and implementation of biodiversity evaluation
 - analysed and reported findings of biodiversity evaluation to appropriate personnel
- monitored biodiversity management and conservation practices in one forestry operation in either a native forest or plantation. In undertaking this activity, the individual has:
 - applied knowledge of forest ecology and the impact of forestry practices on biodiversity
 - selected an appropriate method and identified personnel and resources required for monitoring biodiversity management and conservation practices in one forestry operation
 - briefed forestry personnel on the reasons and methods for monitoring biodiversity management and conservation practices in the selected forestry operation
 - gathered, collated and analysed data on forestry operation
 - reported outcomes of monitoring activities to appropriate personnel.

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:

- structure and composition of native forests and plantations
- ecological processes:
 - succession
 - disturbance
 - predation
 - competition
 - climatic
 - hydrological
 - nutrient cycles
 - element cycling, such as carbon sequestration
- flora and fauna species of high conservation significance:
 - types
 - habitat
 - conservation and management strategies
- ecosystem services provided by commercial native forests and plantations:
 - provisioning – water provision, biomass for timber, biomass for firewood, honey, fodder
 - regulating – water flow regulation, soil retention, carbon sequestration and storage, pollination, habitat for species, air filtration, pest and disease control
 - cultural – recreation and tourism, social and community connection, cultural heritage connection, amenity, education and research
- impact of forest management activities on biodiversity:
 - establishment
 - harvesting
 - regeneration
 - road and track construction
 - silvicultural practices
 - haulage
- international conventions and national, state and territory legislation, policies and agreements relating to biodiversity management and conservation
- biodiversity evaluation:
 - methods for evaluating biodiversity values
 - ground survey techniques
 - planning tools and databases
 - procedures to assess habitat suitability for forest-dependant threatened or priority species
 - procedures for identifying and assessing vegetation communities

- procedures for planning and implementing a biodiversity evaluation
- procedures for monitoring biodiversity management and conservation practices in forestry operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - a native forest or plantation stand
 - computing hardware and software for preparing reports and analysing data related to biodiversity conservation and management
 - stand data related to biodiversity conservation and management
- specifications:
 - workplace policies and procedures related to the conduct of biodiversity evaluations
 - access to workplace policies and procedures that cover current Environment Protection Acts, regulations and related industry standards and codes of practice applicable to forestry operations.

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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