



Australian Government

FPIFGM6203 Manage sustainable tree inventory

Release 1

FPIFGM6203 Manage sustainable tree inventory

Modification History

Version	Code and title of equivalent unit of competency
1.0	Equivalent to FPIFGM6202A Manage tree inventory for sustainable tree management

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop a tree inventory plan to manage an inventory of forestry timber assets.

Application of the Unit

Application of the unit The unit mainly applies to people who manage forests for enterprises but may also apply to people who have responsibility for sustainable tree management in urban or rural enterprises.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit, however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct risk assessment for managing tree inventory	1.1. Applicable <i>work/occupational health and safety</i> (WHS/OHS), <i>environmental</i> , <i>legislative</i> and <i>organisational requirements</i> relevant to managing tree inventory for sustainable tree management are identified and followed 1.2. Nature of <i>resource</i> and <i>site characteristics</i> are identified 1.3. <i>Enterprise requirements</i> and <i>enterprise outputs</i> are identified 1.4. <i>External influences</i> are researched and assessed 1.5. <i>Risk</i> and potential <i>outcomes</i> are identified
2. Use developed risk assessment to support development of a tree inventory plan	2.1. Sustainable tree management requirements are researched and analysed 2.2. Appropriate <i>stakeholders</i> are consulted and support obtained for the development of a tree inventory plan 2.3. Management approval is obtained for identified inventory management approach
3. Prepare tree inventory plan for sustainable forest management	3.1. <i>Administrative tools</i> , <i>physical resources</i> and <i>recording methodology</i> are identified 3.2. Forest estate is identified 3.3. Necessary human resources are identified 3.4. <i>Financial requirements</i> are forecast 3.5. <i>Quality assurance</i> system is established 3.6. <i>Communication plan</i> is established
4. Manage the implementation of tree inventory plan	4.1. Action is taken to ensure participating stakeholders are clear about their responsibilities and the plan requirements 4.2. Support is provided to stakeholders to ensure the quality of expected outcomes and objectives are met 4.3. Record keeping systems are maintained 4.4. Plans for monitoring finances and resources are implemented and monitored 4.5. Review of risk management is undertaken as required to ensure outcomes are met 4.6. Review of plan outcomes and objectives is undertaken
5. Review tree inventory plan	5.1. Data is collected and analysed 5.2. Variations from plan are identified and investigated 5.3. Appropriate stakeholders are consulted about

ELEMENT

PERFORMANCE CRITERIA

desired and actual outcomes

5.4. Outcomes and processes are reviewed against tree inventory plan

5.5. Lessons learned are documented and reported within the organisation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Research, technical, planning and organisational skills to manage a sustainable tree inventory
- Technical skills to undertake surveys and map information; and interpret data generated from manual and electronic surveying and mensuration
- Management skills to manage databases, prepare a tree inventory plan, undertake appropriate consultation, and undertake risk assessment
- Communication skills to use appropriate communication and interpersonal techniques with stakeholders
- Literacy skills to record and report workplace information, maintain documentation, and collect data
- Numeracy analytical skills to analyse relevant workplace information and collected data
- Problem-solving skills to identify problems and appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing a sustainable tree inventory
- Environmental protection requirements, including the safe disposal of waste material and minimising environmental impact
- Organisational and site standards, requirements, policies and procedures for managing a sustainable tree inventory
- Environmental risks and hazards associated with managing a sustainable tree inventory
- Role of wood or waste products in generating renewable energy through biomass
- Using energy effectively and efficiently
- Using materials effectively and efficiently
- WHS/OHS in relation to operations
- Database management and document control systems
- Relevant species behavioural characteristics
- Silvicultural practices associated with management objectives
- Key sustainability indicators
- Mensuration theory
- Inventory tools and their application
- Trigonometry associated with surveying and tree measuring
- Established communication channels and protocols, including notification of authorities

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage a sustainable tree inventory.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing a sustainable tree inventory
- following organisational policies and procedures relevant to developing and managing a tree inventory plan in line with sustainable tree management principles
- gaining support for the development of a tree inventory plan in line with sustainable tree management principles
- preparing a tree inventory plan in line with sustainable tree management principles
- managing the implementation of a tree inventory plan
- reviewing a tree inventory plan in meeting organisational and sustainable tree management requirements
- communicating the plan to all stakeholders.

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
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- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

WHS/OHS requirements:

- are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment and clothing
 - safety equipment
 - first aid equipment
 - fire fighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling, including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

- are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - Australian standards
 - WHS/OHS procedures
 - the environment
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and

RANGE STATEMENT

- standards
 - WHS/OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Resource** may include:
- species identification
 - size
 - age and class
 - condition
 - forest or land area
- Site characteristics** may include:
- elevation
 - slope
 - orientation
 - neighbouring estates
 - microclimate
 - rainfall
 - soil type
- Enterprise requirements** may include:
- quality policy
 - environmental policy
 - cost-benefit or net present value analyses
 - management objectives
- Enterprise outputs** may include:
- solid timber
 - chip
 - carbon storage
 - nature reserve
 - streetscapes
 - community forestry
 - recreational use
- External influences** may include:
- international forestry and environmental standards
 - Australian forestry and environmental standards
 - state, territory and local legislation and subordinate legislation
 - advisory standards and codes of practice
 - land tenure and access

RANGE STATEMENT

- neighbouring tenure and access
 - habitat
 - cultural and heritage sites
 - agriforestry arrangements
 - fire management
 - data availability
 - human resource skills and availability
- Risk** may include:
- biological
 - pests and diseases
 - weather/climate change
 - economic risk
 - erosion
 - fire
 - market failure
 - natural disaster
 - sabotage
 - water
 - structural failure
- Outcomes** may include:
- established growth rates
 - established volumes
 - forecasted outputs
 - forecasted sustainability
 - monitored sustainability
 - preserved forest sustainability
- Stakeholders** may include:
- shareholders or investors
 - customers
 - contractors
 - operational staff or contractors
 - administrative staff or contractors
 - technical staff or contractors
 - professional staff or contractors
 - government
 - community
- Administrative tools** may include:
- computer hardware and software
 - filing systems
 - field templates
 - operational manual
 - land access information
 - gantt charts
 - flow charts

RANGE STATEMENT

- Physical resources** may include:
- measuring/diameter tapes
 - dataloggers and laptops
 - log sheets
 - compass
 - clinometer
 - height sticks
 - prisms
 - mobile GPS
 - maps
 - survey and title data
 - survey equipment
- Recording methodology** may include:
- dataloggers
 - log sheets
 - manual or electronic data transfer
 - analytical techniques and formulae
 - radio/UV/laser advanced technology
 - digital dataloggers and laptop computers
 - desk or field surveys
 - testing and calibration records
- Financial requirements** may include:
- budget and forecast financials
 - appropriate allocations to field and desk activities
 - time-adjusted forecasts
 - management overhead
- Quality assurance** may include:
- data collection and submission protocols
 - data verification protocols
 - documented analytical protocols
 - documented and controlled system
 - testing and calibration protocols
- Communication plan** may include:
- accessibility
 - organisational chart
 - consultation
 - directives
 - monitoring procedures
 - recording and reporting procedures
 - time management
 - emergency procedures
 - contingency procedures
 - confidentiality

Unit Sector(s)

Not applicable.

Competency field

Competency field Forest Growing and Management