

Facilitator and Learner Resource

FPICOT5206A

Implement forest chain-of-custody certification system

This Facilitator and Learner Resource has been developed to support FPI60111 Advanced Diploma of Forest Industry Sustainability

Unit Descriptor:

This unit describes the outcomes required to implement a forestry chain of custody certification system.

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas: all occupational health and safety and environmental requirements that are raised in the Australian Standard (AS) 47072006 Chain of custody for certified wood and forest products.

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Getting started

Welcome to the facilitator and learner's guide for *FPICOT5206A: Implement forestry chain-of-custody certification systems*. This is a unit of *FP160111 Advanced Diploma of Forest Industry Sustainability*.

This unit involves developing the skill and knowledge required to implement a forestry chain-of-custody certification system. Chain-of-custody systems assure users that the forest resources supplied for certified wood products comes from forest managed in accordance with the principles of environmentally sustainable development (ESD). With chain-of-custody in place, the consumer can trace the chain-of-custody of the material from a forest managed under a certified forest management system through the production chain to the timber delivered on the project.

This guide is one component of the training resources provided in the package for this unit. The others are described below. The information and activities in the package will help to prepare learners for the formal assessment tasks that the workplace trainer will give once training is finished.

This facilitator and learner's guide:

- Describes the structure of the package's components, their sequence and delivery method.
- Provides additional discussion of the topics covered in the flexible delivery components.

Package structure and components

The resource package has five components:

1. This guide
2. Flexible delivery components.
3. Resource interviews.
4. Reference documents.
5. Workplace assessments.

The relationship of components in the package is shown in Figure 1.

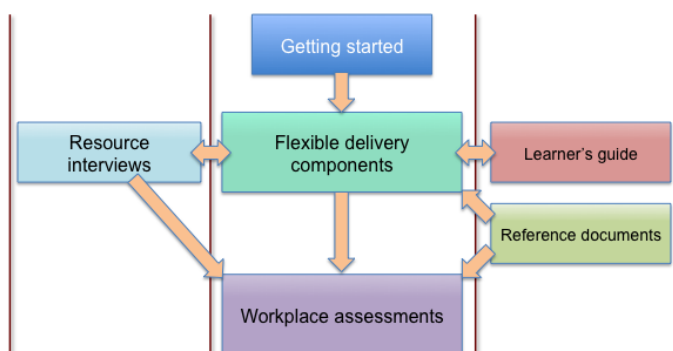


Figure 1: Relationship of resource package components

1. Flexible delivery components

Flexible delivery components are video-rich recorded presentations that focus on particular topics of the unit. There are seven flexible delivery components in this package. Each is aligned to a key topic. The components are:

1. Introduction to the unit – Implement chain-of-custody.

This component deals with introductory concepts about forest and CoC certification and describes the structure of the various flexible delivery components.

Topic 1: Introductory concepts

- Forest and Chain of Custody certification and sustainability
- Forestry and Chain of Custody basics
- Chain of Custody certification as a procedurally-based activity.

Topic 2: Training Limitations

- Wood products industry
- Adapting guidelines
- Competencies and skills.

Topic 3: Unit Component Overview

- Flexible delivery components
- Resource interview collections
- Learner's Guide
- Resource and reference documents
- Assessment tasks.

2. Planning the task – Chain-of-custody Operational implementation plan.

This component deals with refining or adapting a Chain-of-custody operational implementation plan for the site.

Topic 1: Planning the task

- Establishing Chain of Custody
- Developing and reviewing the plan
- Chain of Custody management plan
- Operational implementation plan
- Change management.

Topic 2: Internal aspects affecting the plan

- Other company divisions
- Staff structure, capability and availability
- Existing QA and management procedures
- Existing information and stock management systems
- Uncertified stock at hand
- Budgetary constraints.

Topic 3: External aspects affecting the plan

- Scheme and audit requirements
- External relationships
- Environmental protection requirements
- Customer market demands and constraints.

Topic 4: Plan approval and implementation

- Commitment to Chain of Custody
- Management approval.

3. **Forest and chain-of-custody certification - key concepts.**

This component describes the key concepts associated with forest and chain-of-custody certification.

Topic 1: Sustainability and drivers for verification of forestry sustainability

- The need for renewable products
- Illegal logging
- Sustainable wood supply.

Topic 2: Forest and Chain of Custody certification systems: an overview

- Accreditation process
- Certification schemes.

Topic 3: Forest and Chain of Custody certification systems in Australia and internationally

- International schemes
- Australian schemes.

Topic 4: Models of structuring Chain of Custody

- The configuration of Chain of Custody in the supply chain.

Topic 5: Wood flow options

- Operation before establishing Chain of Custody
- Operation with Chain of Custody through physical separation
- Operation with Chain of Custody through inventory control and accounting.

4. **Adapting chain-of-custody procedures for the site**

This component discusses procedures required for a CoC certification management system on a production site and means of adapting existing procedures.

Topic 1: Procedure structure

- Chain of Custody standards
- Chain of Custody system manual.

Topic 2: Procedures for control of documents

- Register of documents
- Records
- Internal audit
- Continuous improvement
- Register of legislative compliance.

Topic 3: Procedures for the organisation of staff

- Responsibilities
- Staff competencies and recruitment
- Training
- Occupational health and safety
- Enterprise bargaining.

Topic 4: Procedures for operational requirements

- Verification of origin
- Goods receipt
- Storage of goods
- Processing
- Material flow accounting
- Storage of final products
- Final inspection
- Labelling
- Invoicing and delivery documentation
- Chain of Custody certificate use.

5. **Site implementation 1 – Transition to a chain-of-custody operation**

This component discusses the steps required to transition from an operation without chain-of-custody certification to an operation with chain-of-custody certification.

Topic 1: Progressing the implementation plan

- Review site Chain of Custody implementation plan
- Implementing Chain of Custody
- Challenges.

Topic 2: Staff transition

- Chain of Custody policy and procedures
- Transitional stock arrangements
- Monitoring and feedback process
- Involvement of future procedure developments.

Topic 3: Supply chain relationships

- Implementation plan
- Managing external relationships.

Topic 4: System modification

- Wood receipt and stock control
- Sales and invoicing
- Wood flow monitoring.

Topic 5: Existing uncertified stock

- Material in stock
- Transition approaches.

Topic 6: Internal audits

- Interaction with auditors
- Trial audits
- Final audit.

6. **Site implementation 2 – Operating as a chain-of-custody business.**

This component discusses the aspects of operating as a chain-of-custody business.

Topic 1: Operational aspects of Chain of Custody procedures

- Adequate resourcing
- On-going training

- Internal and external audits
- Continuous improvement.

Topic 2: Continuous improvement

- Corrective and preventative action
- Complaints and comments
- Management review.

2. Resource interviews

Resource interviews are recorded video interview of industry members discussing topics relevant to the unit. They provide additional sector-specific detail about topics covered in the flexible delivery components.

The resource interviews available include:



David Gover

Heyfield Hardwood Mill

Topics discussed:

- Chain-of-custody as a product attribute
- Certified material supply profiles
- Chain-of-custody customer profiles
- Chain-of-custody market overview in Australia and overseas
- Chain-of-custody marketing, branding and use of official logos



Trevor Innes

Gunns Timber Products, Bell Bay Softwood Mill.

Topics discussed:

- Wood sourcing & Material flow
 - Chain-of-custody operations and systems management
 - Chain-of-custody non-compliances
 - Chain-of-custody procedure structuring and continuous improvement
-

Greg Nolan

Director, Centre for Sustainable Architecture with Wood,
University of Tasmania

Topics discussed:

- The importance of sustainable forestry practice.

Topics discussed:

Wood as a natural, renewable & carbon friendly material. It is natural, renewable and carbon friendly.

**Katy Edwards**

Forest Resources Team Leader &

Alex Bradley

Forest Certification Co-ordinator,
Norske Skog, Tasmania

**Topics discussed:**

- Developing & implementing chain-of-custody system
- Demand for chain-of-custody in paper industry
- Importance of commitment from highest company level
- Cultural change within workplace
- Chain-of-custody to improve business, not just meet audit needs
- Incorporating existing systems & procedures



Katy Edwards

Forest Resources Team Leader &

Alex Bradley

Forest Certification Co-ordinator,
Norske Skog, Tasmania



Topics discussed:

Comparing FSC and AFS:

- Key differences, e.g. FSC controlled wood
- Coverage of schemes
- Different standards required by schemes
- Common procedures between schemes
- Paper trail of two schemes
- Audit requirements of schemes
- Key differences between external/internal audits

Topics discussed:

Wood sourcing - Timber input/output:

- Existing wood tracking system, new documentation
- Tracking/recording wood input/output
- Paperwork trail for each system
- Percentage system
- Wood certified under one or both schemes
- Market versatility

Topics discussed:

External & internal auditing:

- Finding an auditor/pre-certification audit
- Auditors role
- Auditing process
- Description of what is an 'internal audit'

Topics discussed:

Non-compliance & compliance reporting:

- What is non-compliance?
- Gauging levels of non-compliance
- Examples of major & minor non-compliance
- Discovering & reporting non-conformances
- Keeping records & reports of non-conformances
- Corrective actions register



Roland Freyer

Assistant manager: Huon district, Forestry Tasmania.

Topics discussed:

- Key principles in implementing chain-of-custody and Forest certification
- Quality assurance and other existing systems in relation to CoC implementation
- Managing and supporting the implementation of chain-of-custody procedures across a company.

3. Reference documents

Reference documents are selected technical and research reports, best practice manuals, and industry guides and brochures collected together into an electronic resource available at www.forestworks.com.au/learningresources. They provide additional detail to the topics covered in the *Flexible delivery components* and the *Resource interviews*.

Additional resources are also available by searching the Internet. Particularly, look for standards, report and guides at:

- Forest and Wood Products Australia at www.fwpa.com.au.
- The Australian Forestry Standard at www.forestrystandard.org.au.
- Forest Stewardship Council at www.fscaustralia.org.
- Programme for Endorsement of Forest Certification at www.pefc.org.

4. Workplace assessment

The assessments included in this resource package included:

- Quizzes. These include tasks and ask questions that can be answered directly from the content of the Flexible delivery components, the Resource interviews and the text in this guide. They usually require a short written answer.
- Intermediate tasks. These set a problem based on operations in the workplace. Learners will need to discuss the problems in this guide with Facilitators and adjust them to be relevant for the workplace.
- Advanced tasks. These set a more complex problem based on the organisation and operations in the workplace. Learners and Facilitators will need to discuss the assignments in this guide and adjust them to the requirements of the workplace.

Using this guide

This guide expands on the content covered in the Flexibility Delivery Components and Resources interviews. It is divided into seven chapters; generally align with the Flexible Delivery Components, and a section of Workplace-based assessments. The chapters are:

Getting started.

This chapter provides an overview of the training resource package and this guide.

1. **Introduction to the unit – Implement chain-of-custody.**
This chapter deals with introductory concepts about forest and chain-of-custody certification.
2. **Planning the task – Chain-of-custody Operational implementation plan.**
This chapter deals with refining or adapting a chain-of-custody operational implementation plan for the site.
3. **Forest and chain-of-custody certification - key concepts.**
This chapter describes the key concepts associated with forest and chain-of-custody certification.
4. **Adapting chain-of-custody procedures for the site**
This chapter discusses procedures required for a chain-of-custody certification management system on a production site and means of adapting existing procedures.
5. **Site implementation 1 – Transition to a chain-of-custody operation**
This chapter discusses the steps required to transition from an operation without chain-of-custody certification to an operation with chain-of-custody certification
6. **Site implementation 2 – Operating as a chain-of-custody business.**
This chapter discusses the aspects of operating as a chain-of-custody business.

Workplace assessments.

Each chapter has three sections

- **Topic Summary**
This section includes the summary points for the topic and lists of resources: the Flexible delivery component, Resource interviews, and Resource documents relevant to the topic.
- **Topic discussion**
This section expands on the key points in the Flexible delivery components
- **Quiz**
This section includes a quiz on aspects of chain-of-custody, based around workplace practices. Learners should answer the questions having gone through the videos and other learning material. Trainers can then assess whether or not learners are competent in the unit elements.

Formal assessment

An assessor from a Registered Training Organisation (RTO) must conduct assessment for this unit. To find out the RTOs currently delivering this qualification go to www.ntis.gov.au

Limitations

The timber and wood products industry includes enterprises of different sizes operating in activities from forest planning to sawmilling and building supply, They handle dozens of different timber species at harvest, processing and production site of varying scale across all parts of Australia.

Given this diversity, the resources provided for this training can only give guidelines to action and there will always be exceptions to them.

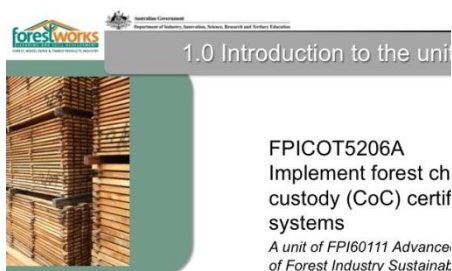
Topics covered in this training also draw on competencies and skills developed in other units. Generally, this training will not cover skills in budgeting or work programming that may be discussed in some components.

1. Introductory Concepts

Topic summary

- A *forestry certification system* provides assurance that a company's forest products are *legally sourced* and that forest management is structured, encompasses economic, environmental and social values and outcomes, and is based on the standards of a forest certification scheme.
- If a consumer wants to be certain that the products they use come from a certified forest then chain-of-custody certification is needed.
- Forest and chain-of custody certification is voluntary for the forest grower, timber producer, the building designer, developer or owner.
- Chain-of-custody certification is a procedurally based activity.

Flexible delivery component



Video file

Length: 16.01 minutes

Topic discussion

This topic introduces introductory concepts about forest certification and chain-of-custody. These are covered again further in Part 3 of this guide. An understanding of these concepts is necessary to develop and manage effective and efficient CoC certification systems for an enterprise. The concepts include:

1. Forest and chain-of-custody certification and sustainability.
2. Forestry and chain-of-custody certification basics.
3. Chain-of-custody certification as a procedurally based activity.

Certification and Sustainability

Wood is a natural, renewable, and carbon-friendly material and most environmental concerns about wood products focus on aspects of forestry, particularly the legality and sustainability of forest management systems and harvesting practice.

Forests provide the raw material for timber and wood products. To acquire this raw material, trees have to be grown and then harvested. The quality of forest management then affects the sustainability of these processes. One of the major considerations is biodiversity and eco-system maintenance during harvesting and forest re-establishment. Best-practice forest management can minimise local environmental impacts while maximising other benefits. Poor forest management and harvesting can irresponsibly damage local biodiversity, ecosystems and communities.

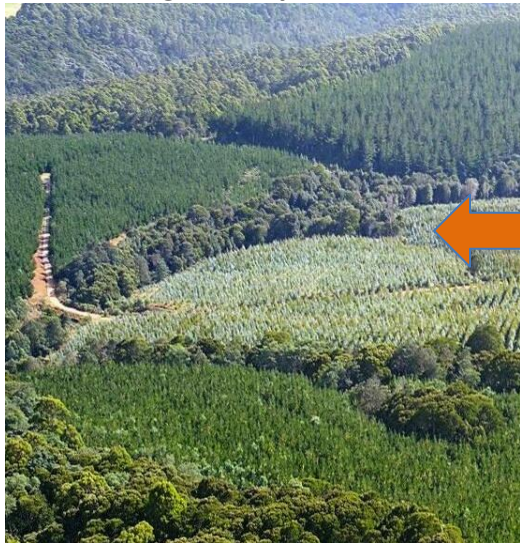


Figure 2: Harvested logs in southern Australia.

A key question for timber users is *'how can they determine that their wood products come from well-managed forests, not illegally harvested ones, especially if the selected species is from another region or country?'*

One answer to this is external, third-party certification of the forest management used to supply the timber. If it is based on accepted quality assurance processes, this can provide the link between sustainable forest management and responsible consumer decisions. Certification can provide consumers of timber and wood products with an assurance that the material they buy has originated in forests managed to a suitable and recognised standard.

Accredited sustainable forest management processes



Confident consumer decisions



Figure 3: Certification can provide the link between forest management and confident consumer decisions

Forest and chain-of-custody basics

Forest certification is a forest management process that provides customers of wood products with the assurance that

- Logs are harvested through a legally compliant forestry operation.
- Forest management is structured and complies with the values and outcomes incorporated in an internationally recognised standard.
- Compliance with that standard is subject to third party assessment.

The relationship between the external standard, the third party accreditation and the forest manager in a forest certification scheme is shown in Figure 4.



Figure 4: The relationship of the external standard, the 3rd party accreditation and the forest manager in a forest certification scheme.

Forest certification only deals with the forest management process. If a consumer wants to be certain that the products they use come from a certified forest, and not timber from a poorly or illegally harvested site, chain-of-custody certification is needed.

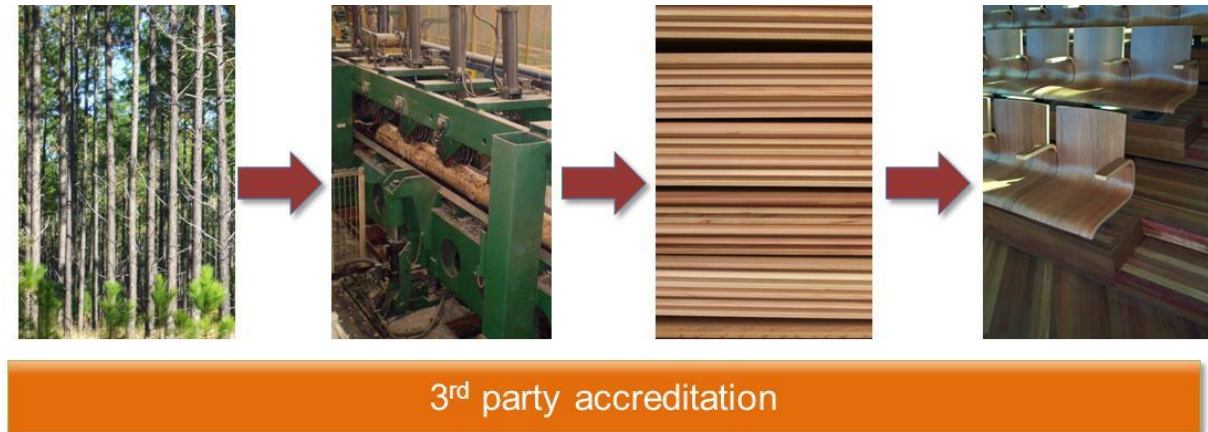


Figure 5: Chain of custody certification allows material to be tracked from the forest through the production chain to the project.

As shown in Figure 5, *chain of custody certification* is a production and materials management process that provides an assurance that the timber in delivered products complies with the claims made about their source. With chain-of-custody in place, the consumer can trace the chain-of-custody of the material from a forest managed under a certified forest management system through the production chain to the timber delivered on the project.

There are limitations to forest and chain of custody certification. Certification can assure us that:

- Forest products are *legally sourced* from forests.
- Forest management is structured and encompasses *economic, environmental and social* values and outcomes, and satisfies the requirement of publicly available standards.
- Products can be traced back to certified forests.

Certification can't assure us about the quality of the wood from the forests, its characteristics and or its fitness for any particular purpose. Also, certification can't assure us about the many of the ESD values of the supply chain after the forest.

Certification does not replace the normal legal obligations that exist on forest management in Australia. However, compliance with legal obligations is a critical part of forest certification.

Certification and the market for wood products

Forest certification and subsequent chain-of-custody certification are market-based performance requirements. They are not regulated performance requirements.

Companies must want to provide this certification to their customers. It may be provided even if the customer:

- Doesn't specifically ask for it, or
- Is unwilling to pay the premium required to provide it.

A chain-of-custody certification system may not be required in enterprises that handle the timber but do not break up the unit with chain-of-custody certification. For example, a stockist who only buys in full packs of certified timber and sell them out again as full packs may not need CoC certification if the supplier's chain-of-custody and pack number are preserved. However, if the stockist breaks open the pack and mixes packs in a delivery, chain-of-custody from the supplier is lost, and the stockist will need a chain-of-custody certification system.



Figure 6: Softwood logs



Figure 7: Hardwood logs

Chain-of-custody certification procedures

As forest certification and subsequent chain-of-custody certification system provide a customer with assurance of a particular *attribute* of the timber, they are similar to the quality assurance (QA) systems in place in an enterprise and they should form part of these systems.

Chain-of-custody is a procedurally-based activity. Chain-of-custody certification assures the existence and operation of procedures in an organisational and operational structure that complies with the relevant chain-of-custody standards.

The procedures specifically cover:

- The source of wood in an enterprise and how that wood is handled.

- Recognition of and compliance with the company's legal requirements.

The procedures are discussed further in Part 7 and 8.

2. Developing a chain-of-custody management plan

Topic summary

- Enterprises committed to sustainable operations need a chain-of-custody *management plan* and an *operational implementation plan* for each site.
- The structure of the site's chain-of-custody *operational implementation plan* needs to be adapted for its scale, complexity and industry sector.
- Internal and external factors will influence the plan.
- The plan, budget and implementation program need management discussion and approval.

Flexible delivery component



Video file

Length: 20.46 minutes

Relevant resource interviews



David Gover

Heyfield Hardwood Mill



Trevor Innes

Gunns Timber Products, Bell Bay Softwood Mill.

Topic discussion

This topic describes aspects that have to be considered in implementing an enterprise's forestry chain-of-custody certification system. These include:

1. Planning the task: the need for chain-of-custody management and operational implementation plans
2. Internal aspects affecting the plan
3. External aspects affecting the plan
4. Plan approval and implementation

Planning the task

The basis of chain-of-custody in an enterprise producing or using timber and wood products is a chain-of-custody *management plan*. The basis of chain-of-custody operations in a production facility or site is a chain-of-custody *operational implementation plan*.

A chain-of-custody *management plan* is a structured series of documents and procedures in a manual that details the enterprise's policy framework for chain-of-custody and the structure and operation of its chain-of-custody systems.

A *Co* chain-of-custody *operational implementation plan* details the modifications required on a site to:

- Operation procedures, particularly the receipt and flow of wood.
- Staff roles and responsibilities.
- Customer and supply chain relationships
- Internal and external auditing.

In an enterprise that wishes to establish chain-of-custody in its operations, these plans will have to be developed. In enterprises or sites with chain-of-custody in place, these plans have to be kept relevant through regular review, assessment and upgrade.

The structure and relationship of the chain-of-custody *management and operational implementation plans* will vary for enterprises:

- With different scales and complexity of operation, such as large and small companies working on single or multiple sites, with single or varied wood supply arrangements.
- Working in or across different industry sectors, such as primary producers, secondary processors, fabricators, merchant, and builders.

Chain-of-custody management plan

As shown in Figure 8, a chain-of-custody *management plan* often has two sections or parts:

- A chain-of-custody *management plan* that covers enterprise-wide issues, such as the company's chain-of-custody policy; and
- An *operational implementation plan* for each major site or group of sites in enterprise.

A small enterprise may combine both parts into a single plan. A large enterprise may have one enterprise level plan and several operational implementation plans.

The content areas likely to be included in the chain-of-custody *management plan* and the *operational implementation plan* are shown in Table 1. They have been grouped as areas of:

- Internal change. These generally affect aspects inside the enterprise, such as the structure of staff responsibilities.
- External change. These generally influence aspects of the enterprise's interaction with external groups, such as their suppliers or customers.



Figure 8: The components of a chain-of-custody *management plan*.

Some areas may be included in both plans but be dealt with at different levels of detail. For example, the chain-of-custody *management plan* may cover the staff structure for those with managerial responsibility for developing and implementing chain-of-custody across the enterprise. The *operational implementation plan* may have a more specific focus and detail the staff members or work teams responsible for particular procedures.

Table 1: Areas of change in management and operational plans.

<i>Change</i>	<i>Management plan</i>	<i>Operational plan</i>
<i>Internal change</i>		
Company chain-of-custody policy	?	
Chain-of-custody manual: Structured procedures set in a standard-compliant system, audited and operational.	?	?
Revised staff structure	?	?
Internal audit processes	?	?
<i>External change</i>		
External chain-of-custody auditors	?	?
Changed customer relationships	?	?
Different supply chain relationships.	?	?
Modified marketing	?	

Chain-of-custody management plan

Major aspects that need to be considered in preparing or reviewing the chain-of-custody management plan include action to:

- **Establish a commitment to set up chain-of-custody to a selected scheme.**
Board and senior management support is critical to effectively establishing CoC.
- **Engage staff and auditors for development and implementation.**
Developing and managing chain-of-custody is a responsibility that needs to be allocated to competent members of staff. Auditors are also needed.
- **Organise internal and external chain-of-custody relationships.**
Chain-of-custody can affect wood flow into and out of the enterprise and between its various sites.
- **Prepare a marketing plan for certified product.**
Chain-of-custody may open access to particular markets and preserve access to others. This needs to be communicated to customers.
- **Develop a chain-of-custody system of structured series of procedures.**
Like similar QA systems, chain-of-custody is a procedurally based activity and external chain-of-custody standards require an enterprise to establish a compliant system of procedures.
- **Establish operational implementation plans.**
Chain-of-custody requires change to operational practice and staff responsibilities. These have to be planned for each site.

All these aspects are all covered in more detail in FPICOT6202A

Operational implementation plan

Major aspects that need to be considered in preparing or reviewing the operational implementation plan include:

- **The relationship of enterprise-level and site-level requirements.**
Chain-of-custody affects practice on individual sites and site-based practice needs to be coordinated with requirements in the enterprise. This is covered further in part 5.
- **Chain-of-custody implementation policy and procedures for the site.**
This includes integrating chain-of-custody requirements into the site's existing operational and quality control policy and structures, and structuring the required changes. This is covered further in part 5.
- **Planned changes to staff roles and responsibilities.**
Changes in site policy and procedures mean changes in the roles and responsibilities of individual staff members. This is covered further in part 5.
- Modification of information and stock management systems Component 5
- **Transition to a chain-of-custody operation.**
This include staff induction to changes in management practices; handling material in stock; and managing supply chain relationships This is covered further in part 5.
- **Operating as a chain-of-custody operation.**
This includes the operational aspects of procedures and non-compliance reporting and continuous improvement in action. This is covered further in part 5.

Internal aspects influencing the plan

Major internal aspects that need to be considered in preparing or reviewing the chain-of-custody operational implementation plan include:

- **The site and its relationship to other company divisions.**
Product manufactured at the site may be supplied with or without chain-of-custody to other parts of the enterprise or be received at the site. This is covered further in part 5.
- **Staff structure, capability, and availability.**
Introducing chain-of-custody processes and managing their operation is a time-consuming and demanding exercise. Skilled staff are needed. This is covered further in part 5.
- **Existing QA and management procedures.**
Chain-of-custody processes must be an integrated part of the site's standard operations. This is covered further in part 4.
- **Existing information and stock management systems.**
These are vital parts of most operations and their change requires deliberate planning and testing. This is covered further in part 5.
- **Uncertified stock-in-hand.**
During implementations, certified and uncertified stock will exist on the site. This is covered further in part 5.
- **Budgetary constraints.**
The allocation of staff time to develop and manage chain-of-custody processes has definite costs. This is covered further in FPICOT6202A.



Figure 9: Sun shading



Figure 10: Structural timber frame

External aspects influencing the plan

Major external aspects that need to be considered in preparing or reviewing the chain-of-custody operational implementation plan include:

- **The requirements of the selected scheme and auditors.**
Each scheme has its own standard and compliance requirements may differ significantly. This is covered further in part 5.
- **External relationships with suppliers and contractors.**
Chain-of-custody requires controlled wood flow and this will impact on current supplier and the ways contractors may handle the wood. This is covered further in part 5.
- **The site's environmental protection requirements.**
Chain-of-custody requires compliance with all environmental laws and regulations. This is covered further in part 4.
- **Customer & market demand and constraints.**
Specific customer and market demand exists for chain-of-custody. This is covered further in FPICOT6202A.

Approval and implementation

Management approval and implementation aspects that need to be considered in preparing or reviewing in the chain-of-custody management and operational implementation plans include

- **Board and senior management commitment to chain-of-custody.**
This support is critical to effectively establishing chain-of-custody in an enterprise. This is covered further in FPICOT6202A.
- **Budgetary commitments.**
Budgetary aspects will influence both the extent and timing of changes included in the plan. This is covered further in FPICOT6202A.
- **Staff re-assignment.**
Implementing change requires adequate numbers of staff with the correct skill set, assigned to the right tasks. This is covered further in part 5.
- **Systems modification.**
Changes to stock and delivery systems will affect core business systems, such as accounting processes. This is covered further in part 5.

- **Handling of uncertified stock.**
The value of uncertified stock has been recognised and defended during the transition. This is covered further in part 5.
- **Supplier and contractor adjustments.**
Some suppliers or contractors may not be able to comply with chain-of-custody requirements and interaction with these enterprises will need to change. This is covered further in part 5.
- **Implementation timetable, milestone and reports.**
Management needs to consider and approve the timetable, stages and reporting processes in the plan. This is covered further in FPICOT6202A.



Figure 11: Native forest



Figure 12: Hardwood logs

Quiz

Answers should be clear, concise, and generally no longer than 150 words.

-
- Q.1. What is the chain-of-custody operational implementation plan and how does it differ from the chain-of-custody management plan?
-
- Q.2. Briefly describe three areas of site operations that may be affected by chain-of-custody implementation.
-
- Q.3. Internal and external aspects will influence the *chain-of-custody operational implementation plan* for a site. List one internal aspect and one external aspect relevant to the site and briefly describe how each may influence the plan.
-
- Q.4. Briefly describe two areas of changed site operation that may require managerial review?
-

3. Forest and chain-of-custody certification—key concepts

Topic summary

- Sustainable development demands that society use more renewable materials and less non-renewable materials.
- A *forestry certification system* provides assurance that a company's forest products are *legally sourced* and that forest management is structured and based on a forest certification scheme's standards
- If a consumer wants to be certain that the products they use come from a certified forest then chain-of-custody certification is needed.
- Forest and chain-of custody certification is voluntary for the forest grower, timber producer, the building designer, developer or owner.
- There is a range of international schemes, operating in different ways. In Australia, two schemes operate.
- Imported material may be certified under other schemes.
- Chain-of-custody and wood supply can be structured in ways to suit site requirements.

Flexible delivery component



Video file

Length: 29.21 minutes

Resource interviews



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Resource documents

Crawford H. 2006, A review of forest certification in Australia, Forest and Wood Products Research and Development Corporation.

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Topic discussion

This topic expands on the introductory concepts about forest certification and chain-of-custody discussed in Part 1 of this guide and adds discussion on wood flow. An understanding of these concepts is necessary to develop and manage effective and efficient chain-of-custody certification systems for an enterprise. The concepts include:

1. Sustainability and drivers for verification of forestry management
2. Forest & chain-of-custody certification systems: an overview
3. Forest & chain-of-custody certification systems internationally and in Australia
4. Models of structuring chain-of-custody
5. Wood flow options

Forestry and sustainability

Sustainable development demands that society use more renewable materials and less non-renewable materials. This supports the greater use of timber and wood products to meet society's needs.

Timber is a renewable, carbon-friendly material ...



Milled from logs recovered from trees...



Harvested under controlled management regimes ...



From a native forest resource...



Or a plantation resource ...



And used in buildings and other items...



An alternative to energy-intensive, non-renewable materials.



Timber as a building material has been recognised for its desirable environmental qualities such as low embodied energy and storage of atmospheric carbon. As timber is sourced from forests that provide other benefits to society, forest management and timber harvesting have become key considerations in the determination of the environmental credentials of timber.

A key question for timber users is 'how can they determine that their wood products come from well-managed forests, not illegally harvested ones, especially if the selected species is from another region or country?'

Internationally, there is concern about the quality of forest management used in the supply of timber available in the marketplace. These concerns include:

- Global decline in forest areas and loss of forest values due to illegal logging and deforestation.
- Impacts of unsustainable practices such as illegal logging on the viability of forest biodiversity, soil quality, and clean water supplies. These practices impact communities and workers and can lead to social conflict.
- Significant trade in products of illegal harvesting.

- Poor recognition for good forestry practice. Illegal and unsustainable harvesting undermines the trade in timber from legal and well-managed operations managed by responsible companies.

Actions are being taken around the world to curb these impacts.

One solution to these concerns is external, third-party certification of the forest management used in the supply of the timber. Based on accepted QA processes, this certification provides consumers of timber and wood products with an assurance that the material they buy has originated in forests managed of a suitable standard.

Certification of forests and forest products grew out of the desire to reduce the uncontrolled cutting of the world's tropical hardwood forests by making it possible for customers to identify timber sourced from sustainably managed forests. Over time, this objective has been expanded into an overall goal to ensure forests throughout the world are sustainably managed.

Forestry and chain-of-custody overview

As shown in Figure 13, forest certification schemes generally have three key components:

- Performance-based standards for forest management.
- Standards for the wood's chain-of-custody from the forest through the production and supply chain to the customer.
- An external (3rd party) accreditation process that determines compliance with these standards.

The forest management and chain-of-custody standards may each be a single document or a combination of several documents.

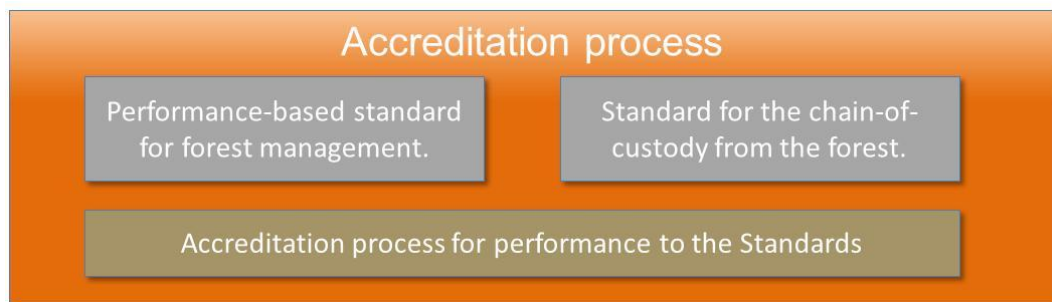


Figure 13: The key components of a forest certification scheme

Forest certification schemes now exist in most major wood-producing countries. As they have developed, several concerns arose. These included:

- Ways that customers could determine whether one certification scheme was better than or equivalent to another.

- Avoid differences between schemes being used to create non-tariff barriers between countries, restricting trade.
- Unfairly disadvantaging developing countries. Forest certification schemes can be organisationally complex and very difficult to establish in a developing country. Some saw requirements for forest certification from customers in wealthy countries as another form of discrimination.
- Reduced competitiveness as participation in forest certification adds costs. This can disadvantage timber demand, as comparable programs are not required for alternative building materials.

As shown in Figure 14, international participation in national schemes has helped overcome some of these concerns. This works in two basic ways. These are:

- **National schemes endorsed internationally.**

National schemes are developed in line with local laws and conditions and then assessed against the principles and standards of an international endorsement organisation. If the national scheme meets the required principles and standards, it is endorsed by the international endorsement organisation and awarded the right to use their logo. For example, the Australian Forest Certification Scheme (AFS) has been endorsed by the Programme for the Endorsement of Forest Certification (PEFC). Companies with AFS certification can use both logos on their products. The PEFC logo is widely recognised internationally.

- **International schemes sponsoring a national scheme.**

National initiatives are established and adapt internationally established principles and standards to accommodate local laws and conditions. The national scheme then uses the internationally recognised logo of the parent group. For example, the Forest Stewardship Council International (FSC) has sponsored a national initiative to establish FSC Australia. Companies with FSC certification use the internationally recognised FSC logo.



Figure 14: Relationship of national schemes to each other and international endorsement schemes

Forest certification

Forest certification is a forest management process structured in a system that provides assurance that a company's forest products are *legally sourced* and that forest management is:

- structured.
- encompasses economic, environmental and social values and outcomes.
- based on the standards of a forest certification scheme.

Compliance with the standard of the forest certification scheme is subject to third party assessment.

This requires:

- Auditing to compare management practices against the requirements of the standard.
- Collection and analysis of objective evidence. This includes the examination of documents, observations of practice and conditions, and interviews with staff, contractors, and stakeholders.

The relationship between the external standard, the third party accreditation and the forest manager in a forest certification scheme is shown in Figure 4. The third party auditors then report their finding to the forest certification body.

Chain-of-custody

Forest certification only deals with the forest management process. If a consumer wants to be certain that the products they use come from a certified forest, and not timber from potentially a poorly or illegally harvested site, chain-of-custody certification is needed.

Chain-of-custody certification is a production and materials management process that provides an assurance that the timber in delivered products complies with the claims made about their source. With CoC in place, the consumer can trace the chain-of-custody of the material from a forest managed under a certified forest management system through the production chain to the timber delivered on the project. This can be from logs fully from certified forests; or from a mix of certified and uncertified sources.

Forest and chain-of custody certification is a market-driven process. It is voluntary for the forest grower and timber producer, and the building designer, developer or owner. Guidelines or building accreditation schemes may recommend or require certification to gain points under these schemes. For example,

Table 2 shows the Green Building Council of Australia's (GBCA) requirements to receive points under their Green Star rating scheme.

Table 2: The Green Building Council Office rating for timber in projects

Points	Aim	Descriptions
Timber (1 point)	To recognise the use of reused timber, legally sourced timber, and timber sourced from forests whose conservation values are not degraded.	One point where at least 95% (by cost) of all timber used in the building and construction works: <ul style="list-style-type: none"> • is certified by a forest certification scheme that meets the GBCA’s ‘Essential’ criteria for forest certification (e.g. all schemes accredited by FSC International or PEFC); or • is from a reused source; or • a combination of both.

These are *not legislative requirements* but they can be a requirement of a contract or a building specification. If certification is required in a contract, it can be legally enforceable. This is the same as any other timber attribute, such as its structural or appearance grade.



Figure 15: International forest certification schemes.

Forestry and chain-of-custody certification in action

There is a range of internationally recognised forest certification schemes and they operate in different ways. All embrace sustainable forest management but there are differences between them that range from the definition of key terms to the approach that underpins the certification process. As shown in Figure 15, the two dominant international certification schemes are the Programme for the Endorsement of Forest Certification (PEFC) and the Forest Stewardship Council International (FSC).

As shown in Figure 16, two schemes operate in Australia: Australian Forestry Standard Certification (AFS) and the Forest Stewardship Council (FSC). PEFC has endorsed AFC while FSC international sponsored establishment of FSC Australia.

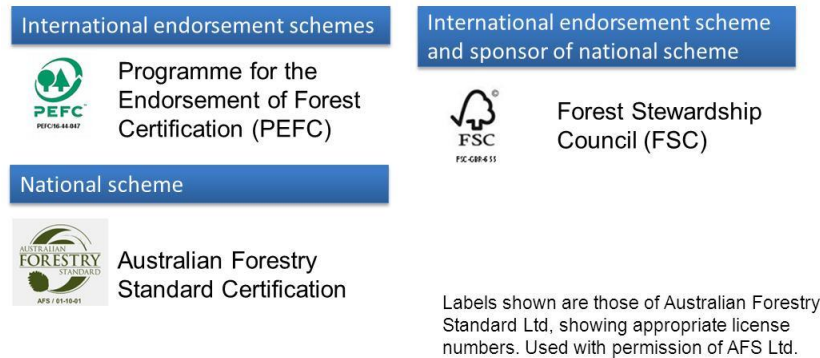


Figure 16: Relationship of resource package components

Timber imported into Australia may be certified to PEFC, FSC or some other schemes.

Models for structuring chain-of-custody

Chain-of-custody certification is technically required by all organisations in the chain that:

- Have control over wood products including their flow along the value chain.
- Can define their input and output stages of the product flow.

In practice, chain-of-custody certification is required by all organisations that:

- Transforms the material from one certified unit to another. An example of this includes using boards from a certified pack to make trusses.
- Break or redistribute a certified unit of the material such as log or dry pack.
- Have FSC forest management certification and are also involved in harvesting and log transportation to customers. In these cases, FSC chain-of-custody certification is needed to cover log handling from the harvest site to the customer. This is not the case for AFS certification, which extends the cover of its forest management certification to include harvesting and delivery to the mill door.

A chain-of-custody certification system may not be required in enterprises that handle the timber but do not break up the unit with chain-of-custody certification. For example, a stockist who only buys and sells full packs of certified timber may not need chain-of-custody certification.

Structuring chain-of-custody in production

Chain-of-custody certification of wood flow can be structured in a several ways within an organisation and between organisations. Options for organising external production on several enterprise or contractor sites include:

- Independent chain-of-custody arrangements
- Centrally coordinated chain-of-custody procedures.

Figure 17 shows an example of independent chain-of-custody arrangements. In this example, each site has its own wood-handling procedures and maintains its own chain-of-custody system. This can provide versatility in production but can also be administratively cumbersome.

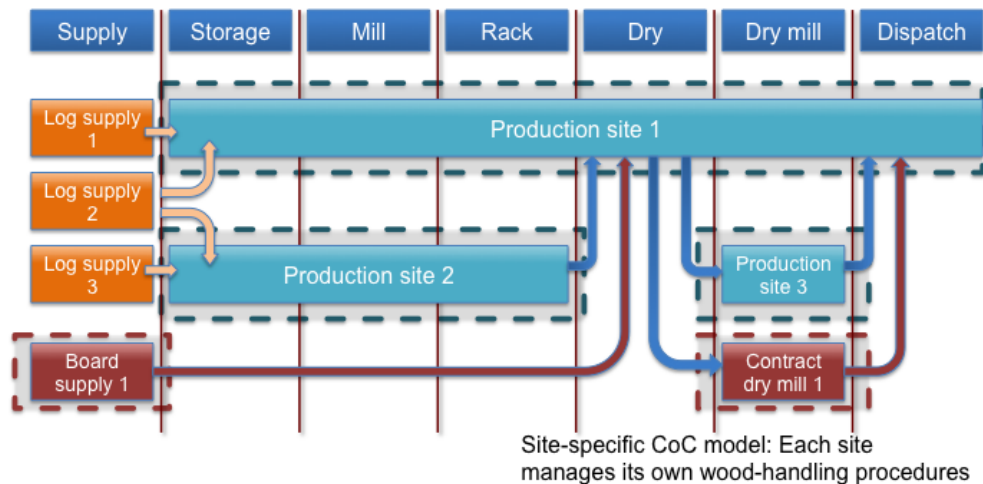


Figure 17: Independent CoC process in a production system

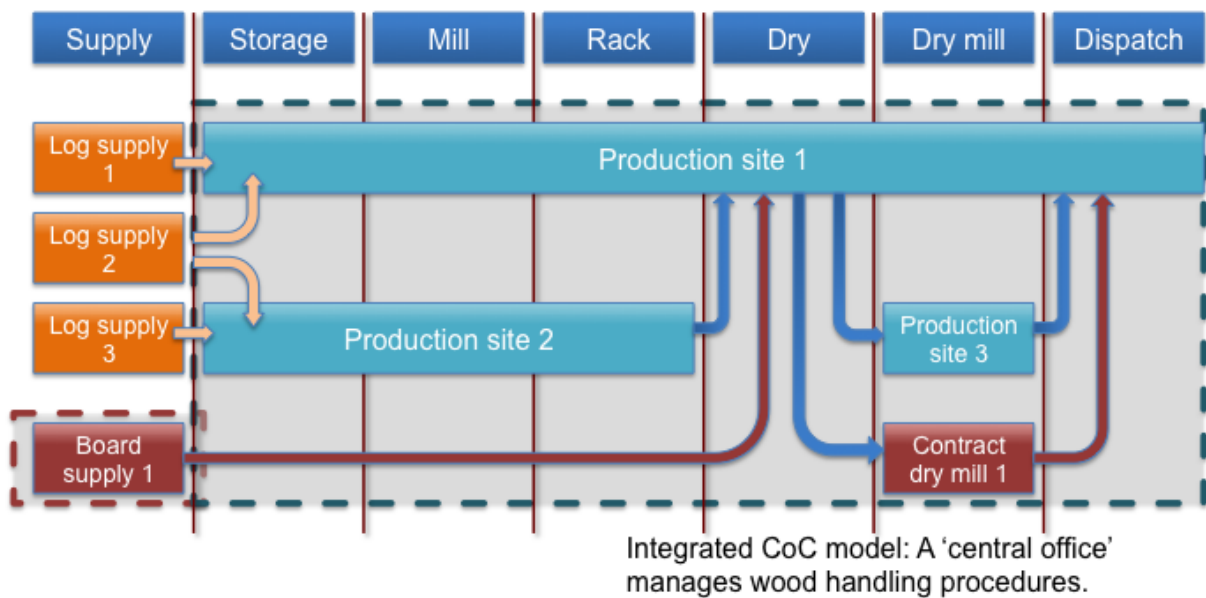


Figure 18: Central office chain-of-custody process in a production system.

As shown in Figure 18, centrally coordinated chain-of-custody procedures are organised around a 'central office' that coordinates and controls the movement of wood across several sites. With this model, procedures at each production site have to ensure the integrity of wood supply into the system. If uncertified material is handled in any of the operations, procedures have to ensure certified timber is not mixed with it.

For example, the operators of Contract dry mill 1 have to ensure that the timber they receive from other centrally managed sites is kept separate from potential uncertified timber belonging to other customers

Wood flow options

As shown in Figure 19, an enterprise without chain-of-custody certification can accept wood from both certified and uncertified sources. However, it can only sell uncertified products and is generally excluding from markets that require forest certification of timber products.

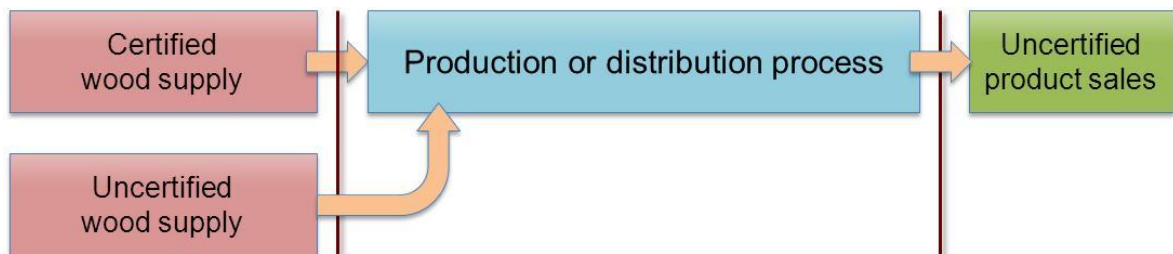


Figure 19: Operation without CoC.

An enterprise with CoC certification and a potential for certified and uncertified wood supply has several options. It can:

- Only accept certified wood into its operation
- Accept both certified and uncertified wood and either:
 - Keep each separate and process them in batches.
 - Account for the different sources of wood separately.

An enterprise that receives certified and non-certified inputs of wood can't claim chain-of-custody certification for both material types. The certified and non-certified inputs have to be handled or accounted for separately.

An enterprise with chain-of-custody certification can operate so that it excludes uncertified material and only accepts wood from certified sources. This is the simplest form of batch control. The enterprise can then sell all of its products as certified material. This is shown in Figure 20.

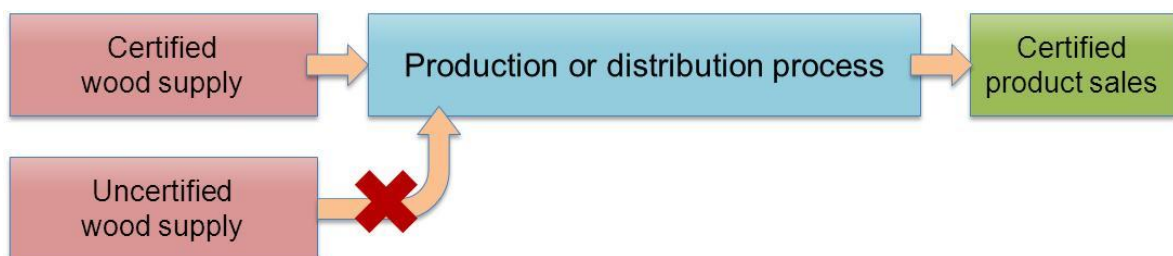


Figure 20: Operation with chain-of-custody through physical separation - exclusion

An enterprise with chain-of-custody certification and a potential supply of certified and uncertified wood can use a physical separation or marking of the raw material wood flow system. As shown in Figure 21, certified and non-certified material is kept physically or organisationally separate, and then processed in batches. Product separation is maintained through dispatch and sales. This allows

companies to market material fully from certified forests while still taking advantage of uncertified wood supply.

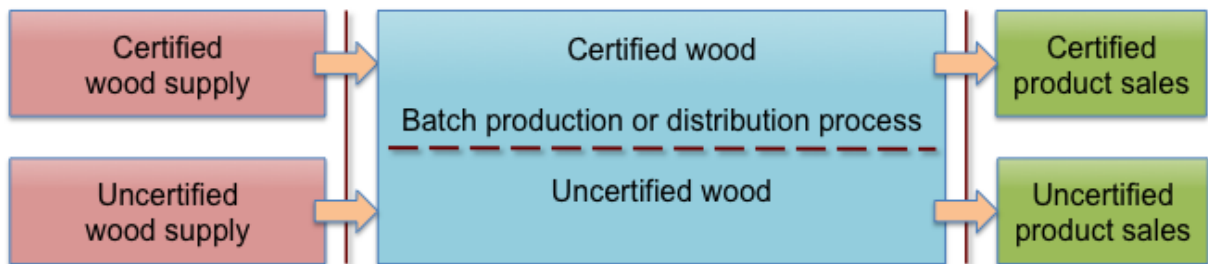


Figure 21: Operation with CoC through physical separation - batching.

An enterprise with chain-of-custody certification and a potential supply of certified and uncertified wood can also use an *inventory control and accounting of raw material flow* system to accept and process material from both sources.

Suite to situations where the certified and non-certified inputs can't be readily separated or batch processed, this system requires the enterprise to account for the proportion of inputs from certified forests and only claim the same proportion of outputs as certified.

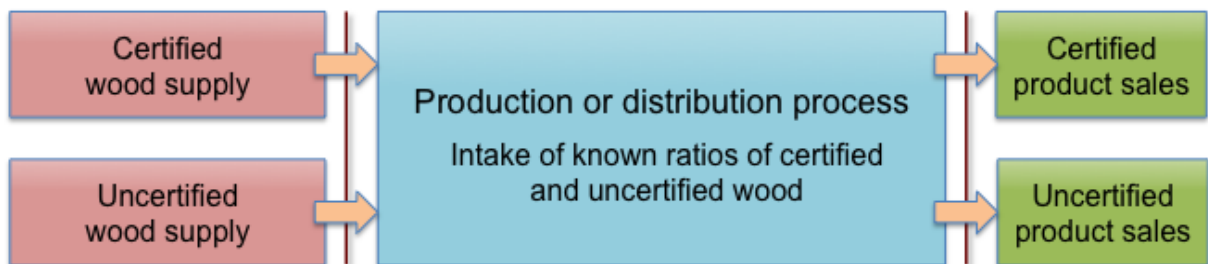


Figure 22: Operation with chain-of-custody through inventory control and accounting.

Under AFS certification, two *inventory control and accounting of raw material flow* systems include:

- The *percentage input/output system*.
- The *rolling average percentage system*.

The *percentage input/output system* allows an organisation with a known percentage of certified material entering the processing stream to consider as certified products the same percentage of production from that stream. For example, if 60% of the total input into a paper mill is known to be from certified sources, certification claims can be made for 60% of the output.

The *rolling average percentage system* allows an organisation to calculate the certification percentage for a specific batch using the quantity of raw material procured in a specified previous time period. This allows companies to accommodate varying supply level for certified and uncertified material. For example, if a particle board mill received chip supply from several sources and these vary through the year, they can sell certified product from the mill in line with their rolling average

percentage of certified product. The maximum time for the rolling average calculation must be shorter than 12 months.



Figure 23: Timber cladding



Figure 24: Timber structure

Quiz

Answers should be clear, concise, and generally no longer than 150 words.

Q.1. What does sustainable development demand of different types of materials used, and why?

Q.2. What are two possible consequences of poor or unsustainable forest management practises?

Q.3. Why would a customer prefer CoC-certified product?

Q.4. What is *Chain-of-Custody certification* and how does it differ to *Forest certification*?

Q.5. What are the two main international forestry and CoC certification endorsement schemes currently operating in Australia?

Q.6. How does the *Australian Forestry Standard* relate to these international schemes?

Q.6.

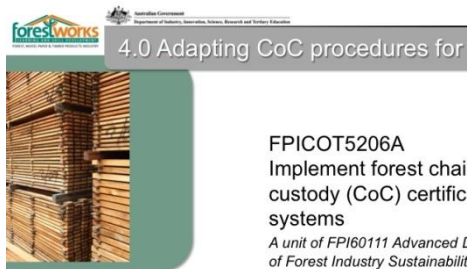
Q.7. Describe two possible models for structuring CoC into your wood flow system.

4. Adapting chain-of-custody procedures for sites

Topic summary

- Chain-of-custody requires a coherent system of procedures that satisfy the requirements of the relevant chain-of-custody standards.
- Procedures are needed for the control of documents, organisation of staff, and the control of operational requirements.
- Procedures for chain-of-custody have to be integrated into existing site procedures.

Flexible delivery component



Video file

Length: 30.18 minutes

Relevant resource interviews



Katy Edwards

Forest Resources Team Leader &



Alex Bradley

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Norske Skog, Tasmania



Trevor Innes

Gunns Timber Products, Bell Bay Softwood Mill.

Resource documents

Centre for Sustainable Architecture with Wood (CSAW), School of Architecture and Design, University of Tasmania, Cailum Pty Ltd, 2008, Chain of Custody for the Timber Industry, Chain of Custody System Manual, Tasmanian Timber Promotion Board.

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Topic discussion

This topic discusses an enterprise's chain-of-custody policy and procedural requirements. While the discussion focuses on the particular requirements of AS4707, it also covers the types of procedures required by other schemes. This topic includes:

1. Procedure structure
2. Procedures for control of documents
3. Procedures for the organisation of staff.
4. Procedures for operational requirements

Procedure structure

Chain-of-custody certification is a procedurally-based activity similar to other quality assurance processes. When chain-of-custody certification is introduced, existing site procedures and systems have to be altered to comply with the additional requirements of the relevant chain-of-custody standard. The revised procedures are generally then assembled in a chain-of-custody systems manual.



Figure 25: Softwood line boards



Figure 26: Hardwood in stock

Chain-of-custody procedures can be structured in various ways to suit the enterprises and site's existing operational and quality systems. In this training, chain-of-custody procedures are discussed in line with common business organisational structures, namely:

1. Control of documents
2. Organisation of staff
3. Operational requirements

Each of the broad procedures needed in each of these areas is listed below.

While an enterprise may need to address the intent of each chain-of-custody procedures to demonstrate compliance with the relevant standard, chain-of-custody procedures can be and often are integrated into its broader management system. Existing procedures do not need to be repeated in the chain-of-custody system. For example, the requirements for the procedure on record keeping may already be part of the enterprise's data procedures. This is where it should stay. However, if an enterprise has few quality processes in place, it may need to establish all of the procedures listed below to demonstrate standards compliance.

Control of documents

The control of chain-of-custody documents has procedures for:

1. Register of documents
2. Records
3. Internal audit
4. Continuous improvement (corrective and preventative actions)
5. Continuous improvement (complaints and comments)
6. Continuous improvement (management review)
7. Register of legislative compliance

1. Register of documents

The objective of this procedure is to ensure that a complete and up to date set of documents that together comprise the chain-of-custody system is kept and is available for audit inspection.

2. Records

The objective of this procedure is to ensure that all necessary records for implementation, monitoring and audit of the chain-of-custody system are stored and maintained in such a manner to ensure ease of retrieval and protection against damage, deterioration, tampering or loss.

3. Internal audit

The objective of this procedure is to ensure that the chain-of-custody system is being effectively implemented, in accordance with procedures specified and the requirements of the standard, internal audits are required at a regular interval.

4. Continuous improvement (corrective and preventative actions)

The objective of this procedure is to ensure that the appropriate corrective or remedial action is taken to deal with deficiencies identified in the organisation's chain-of-custody system.



Figure 27: Forest reserve



Figure 28: Pine plantation

5. Continuous improvement (complaints and comments)

The objective of this procedure is to ensure that complaints and comments received on the implementation of the chain-of-custody system are acknowledged, recorded and investigated, and that if non-conformities or opportunities for improvement are identified, that appropriate corrective or preventative action is taken.

6. Continuous improvement (management review)

The objective of this procedure is to ensure that there is a mechanism in place for senior management to periodically review the continuing suitability, adequacy and effectiveness of the chain-of-custody system.

7. Register of legislative compliance

The objective of this procedure is to ensure legal and regulatory compliance by the company to the laws and/or regulations covering environmental impacts of the manufacturing facility.

Organisation of staff

The organisation of staff for chain-of-custody requires procedures for:

1. Responsibilities
2. Staff competencies and recruitment
3. Training
4. Occupational health and safety
5. Enterprise bargaining

1. Responsibilities

The objective of this procedure is to ensure that staff responsibilities have been assigned for each component of the chain-of-custody system and that each person assigned a responsibility is also aware of the assignment of other responsibilities within the system.

2. Staff competencies and recruitment

The objective of this procedure is to ensure that staff involved in the implementation of the chain-of-custody system is competent and adequately resourced and that members of the local and regional workforce are given opportunities at the manufacturing facility.

3. Training

The objective of this procedure is to ensure that all those with roles or responsibilities in the implementation and control of the chain-of-custody system are adequately trained.

4. Occupational health and safety

The objective of this procedure is to ensure that the facility meets or exceeds all applicable laws and/or regulations covering health and safety of personnel.

5. Enterprise bargaining

The objective of this procedure is to ensure that collective bargaining is recognised in the workplace.

Operational requirements

For chain-of-custody compliance, operational requirements require procedures for:

1. Verification of origin: (certified sources)
2. Verification of origin: (non-certified sources)
3. Goods received
4. Storage of goods received
5. Processing
6. Material flow accounting
7. Storage of final products
8. Final inspection
9. Labeling
10. Invoicing and delivery documentation
11. CoC certificate use



12.

Figure 29: Dry eucalypt forest



Figure 30: Site assessment

1. Verification of origin: (certified sources)

The objective of this procedure is to ensure that material purchased from certified sources is accompanied by sufficient documentation to enable reliable and effective verification of origin.

2. Verification of origin: (non-certified sources)

The objective of this procedure is to ensure that no wood or forest products known to be from illegal operations or sources, under relevant domestic and/or international law, enters any stages within the organisation's link along the certification chain.

3. Goods received

The objective of this procedure is to ensure that forest and wood products received from suppliers match the description and certified status described in the accompanying documentation.

4. Storage of goods received

The objective of this procedure is to ensure that certified and non-certified inputs are stored appropriately until ready for processing.

5. Processing

The objective of this procedure is to ensure that the processing of inputs is carried out in such a way that allows certified and non-certified material to be separately identified and tracked through the process.

6. Material flow accounting

The objective of this procedure is to select and implement an appropriate material flow accounting option for the company's operations.



Figure 31: Moving a racking frame



Figure 32: Assessing rack stock

7. Storage of final products

The objective of this procedure is to ensure that certified and non-certified final products are stored separately to augment the physical separation process.

8. Final inspection

The objective of this procedure is to ensure that all material about to leave this link in the certification chain meets the requirements of the company's chain-of-custody system.

9. Labeling

The objective of this procedure is to ensure that the certification status of products sold is readily identifiable.

10. Invoicing and delivery documentation

The objective of this procedure is to ensure that documentation accompanying products sold contains sufficient information to maintain the chain-of-custody to the next link.

11. Chain-of-custody certificate use

The objective of this procedure is to ensure that the company's chain-of-custody certificate is not misused.

Quiz

Answers should be clear, concise, and generally no longer than 150 words.

Q.1. Do site procedures have to be modified to comply with the chain-of-custody system?

Q.2. Briefly describe two chain-of-custody procedures that relate to control of documents.

Q.3. Briefly describe two chain-of-custody procedures that relate to organisation of staff.

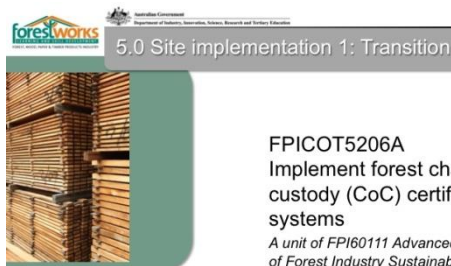
Q.4. Briefly describe three chain-of-custody procedures that relate to operational requirements.

5. Site Implementation 1: Transition to chain-of-custody

Topic summary

- Before beginning, review the site's chain-of-custody implementation plan. Ensure it contains details of required changes. If it doesn't, they will have to be prepared.
- Implementing chain-of-custody can be a demanding, time-consuming task. Errors are inevitable and clear problem identification and resolution processes are essential.
- Successful implementation of chain-of-custody depends on clear and structured staff induction. This should include general overviews to all staff and detailed training to operational work groups, group leaders and the management team.
- Implementing chain-of-custody on a site can significantly alter supplier and contractor relationships. This has to be managed.
- Implementing chain-of-custody on a site may require significant information and production systems modification.
- Material in stock represents a block of uncertified material. It needs to be kept separate and sold as uncertified product.
- Chain-of-custody certification is only achieved after successful systems audit.

Flexible delivery component



Video file

Length: 25.33 minutes

Relevant resource interviews



Katy Edwards

Forest Resources Team Leader &



Alex Bradley

Forest Certification Co-ordinator,
Norske Skog, Tasmania



Trevor Innes

Gunns Timber Products, Bell Bay Softwood Mill.



David Gover

Heyfield Hardwood Mill

Resource documents

Centre for Sustainable Architecture with Wood (CSAW), School of Architecture and Design, University of Tasmania, Cailum Pty Ltd, 2008, Chain of Custody for the Timber Industry, Chain of Custody System Manual, Tasmanian Timber Promotion Board.

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Topic discussion

This topic discusses the steps required for a site's transition from one without chain-of-custody to one with chain-of-custody processes embedded in day-to-day operations. It includes:

1. Progressing the Implementation plan
2. Staff transition
3. Supply chain relationships
4. System modification
5. Existing uncertified stock
6. Initial audits

Progressing implementation

Implementing a site's transition from one without chain-of-custody to one with chain-of-custody processes embedded in place is a challenging task. It requires clear planning of:

- Changes to the site's operational system.
- Staff induction and training.

Before beginning, the site's chain-of-custody implementation plan should be reviewed and, if necessary, revised. The implementation plan should contain:

- **The revised chain-of-custody system procedures.** This should identify:
 - New procedures that have to be implemented on the site
 - Amendments necessary to existing site procedures.
- **Mapping of workplace wood flow** against existing and revised:
 - wood supply and contractor arrangements.
 - operational procedures.
 - information systems.
- **Revised staff roles and responsibilities.**
- **An implementation timeline and budget.**
- **Information on external auditors.**

Implementing chain-of-custody at a site can be a demanding and time-consuming task. Factors that can influence the task include:

- **Experience on other sites in the enterprise.**
These can show what is likely to work on the site, and equally importantly, things that are not likely to work.
- **The approach taken to procedure development.**
Generally, the results from guided collective development of procedures are more robust and easy to implement than the results of a simple top-down process.

- **The implementation timeline.**
Transitions to workplace arrangement can take significant time.
- **The approach to existing stock.**
Existing stock is uncertified material and has to be kept separate from certified material as this comes on stream.
- **The complexity of internal information systems and external supplier relationships.**



Figure 33: Inspecting plywood



Figure 34: Hardwood veneer

Implementing chain-of-custody at a site is an organisational challenge, as existing processes have to be conducted in new ways. Things have to change, and change inevitably leads to errors and misunderstandings. These can happen at managerial or operational levels, or between the managerial and operational levels.

As these errors and misunderstandings are inevitable, it is essential to establish clear problem identification and resolution processes. Staff responsible for implementing or operating under chain-of-custody need mechanisms to provide regular feedback, and this feedback needs to be monitored and used to improve systems.

Implementing chain-of-custody at a site may also be an iterative process. It is very difficult to fully plan all aspects of operational change before the event. As a result, chain-of-custody implementation may:

- require repetitive adjustments to the intended chain-of-custody system and procedures.
- force unexpected modification to stock, process and management systems.

This will definitely occur during initial chain-of-custody implementation and is likely to continue to occur after chain-of-custody has been established on the site. Each of these changes is a refinement of the chain-of-custody system and procedures.

Staff transition

Successful implementation of chain-of-custody at a site depends on clear and structured staff induction. This should involve:

- General induction for all staff.
- Focused induction and training for key staff groups and those with particular responsibilities under the chain-of-custody system.

General induction

The implementation of chain-of-custody on a site will influence all staff directly or indirectly, and all staff should participate in general induction sessions. These sessions should include in overview:

- The company's chain-of-custody policy, its aims and objectives.
- An overview of chain-of-custody procedures.
- Necessary changes to existing procedures.
- Transitional stock arrangements.
- Monitoring and feedback processes during the transition period.
- Plans to involve staff in future procedure developments.



Figure 35: LVL elements



Figure 36: Pine framing

Focused induction

Key staff will have particular responsibilities in implementing CoC on a site. They include members of operational work groups, group leaders and the site management team. Focused induction should include detail training of:

- Operational work groups in the revised procedures.
- Internal auditors in their chain-of-custody systems verification role.
- Group leaders and data processors in revised information systems.
- The site management group in:
 - Monitored feedback and other communication channels.
 - System auditing and maintenance requirements.

Supply chain relationships

Chain-of-custody can influence relationships within:

- The enterprise, within and between various sites and divisions. For example, if one mill in an enterprise has chain-of-custody certification and another mill does not, their product can't be mixed without losing chain-of-custody.
- The supply chain between the company, its suppliers, associate producers (contractors) and customers. For example, if a log supplier cannot provide logs with forest management certification, a mill with chain-of-custody must either reject them or process them as a separately accounted batch.

Implementing chain-of-custody at a site can significantly alter supplier and external production contractor relationships, particularly wood supply arrangements. The site may now have to exclude material from traditional suppliers and source material from suppliers they haven't dealt with before.



Figure 37: Unloading softwood logs



Figure 38: Unloading hardwood logs

The chain-of-custody implementation plan should details these changes in its revised procedures.

However, the site management team will have to manage and monitor the changed operating and supply relationships with existing and new:

- **Customers.** This group will now require chain-of-custody documentation with deliveries.
- **External production contractors.** These have to maintain chain-of-custody through their operation, particularly the segregation of certified and uncertified material.
- **Wood and other suppliers.** This group must supply the information necessary to demonstrate that chain-of-custody has been maintained.

System modification

Successful implementation of chain-of-custody at a site may require significant modification to existing information and production systems, particularly:

- **Wood receipt and stock control systems.**
The information associated with purchase and receipt of logs and other products has to be checked on the invoices and delivery documentation, recorded, and retained. This includes details such as the date of purchase, the product description, and the supplier's chain-of-custody or forest management certificate code.
- **Sales and invoicing.**
The information associated with purchase and the final inspection of the material has to appear on invoices and delivery documentation and be retained. This includes Details such as the date of sale, the product description, and the enterprise's chain-of-custody certificate code.
- **Wood flow monitoring.**
This includes the information necessary to demonstrate the segregation and batch control and processing of certified and uncertified material, and for inventory control and accounting systems.

Existing uncertified stock

During chain-of-custody implementation, material in stock represents a block of uncertified material on the site.

When chain-of-custody processes are introduced, the site will begin to produce material with chain-of-custody in place and that can be sold as certified product. This may include all of its new production or some portion of it.

This certified material has to be kept physically or organisationally separate from uncertified material, and this include material produced on the site and in stock before chain-of-custody was introduced.

If the site is still receiving uncertified wood supplies and operating a batch or inventory control and accounting system, it will have procedures for handling for certified and uncertified stock in the same facility.

However, if a site is moving to a chain-of-custody only operation, transitional processes will have to be established to:

- maintain separation between certified and uncertified stock
- market the product as uncertified material.

Transition approaches varying with business types and implementation timeline. Some companies choose to clear uncertified stock from their premises completely before claiming chain-of-custody status in the market place. Others market to customers who don't require chain-of-custody.



Figure 39: Hardwood board in stock



Figure 40: Final pack preparation before dispatch.

Initial audits

Chain-of-custody certification is only achieved after an accredited external auditor audits the chain-of-custody system in operation and determines that it complies with the requirements of the chain-of-custody standard.

External auditors can take different views on their relationship to organisations and sites subject to audit. They can:

- Stand removed from the process and simply assesses an organisation's compliance or non-compliance.
- Recognize some participation in the process and potentially offer some guidance on means to assure compliance. They still have to assess an organisation's compliance or non-compliance.

Preparation of external audit usually requires:

- **Initial interaction with the auditors to identify potential problem areas.**
- **Trail internal and external audits.**
Internal audits are part of the ongoing chain-of-custody system and trial internal audits are useful in preparing staff for the rigours of an external audit. In an enterprise that has chain-of-custody in place on other sites; an experienced internal auditor from one of these sites can be invited to conduct trial audits on the site in transition to chain-of-custody.
- **Final audit attempts.**
The external auditors will audit the chain-of-custody system in operation to determine its compliance to the chain-of-custody standard. If compliance is demonstrated, the audit will be successful and chain-of-custody established on the site. If compliance is not demonstrated, the audit will be unsuccessful and the auditor will provide feedback on the reasons of non-compliance.

After each attempt these reasons need to be addressed.

Quiz

Answers should be clear, concise, and generally no longer than 150 words.

Q.1. Successful implementation of chain-of-custody at a site depends on clear and structured staff induction. Briefly outline the procedures that ALL staff at the site should be introduced to.

Q.2. What sort of changes might be expected in an enterprise's supply-chain relationship as a result of implementing a chain-of-custody system?

Q.3. Briefly describe a change to information systems and a change to production systems that may result from chain-of-custody implementation.

Q.4. Briefly describe the auditing procedures implemented when transitioning to chain-of-custody.

6. Site implementation 2: Operating with chain-of-custody

Topic summary

- Adequate resources are needed to operate the chain-of-custody system. This reflects a continuing commitment to sustainable business practices.
- Staff responsible for roles in the chain-of-custody system have to be competent. Ongoing training is required.
- The chain-of-custody system is subject to internal and external audits. Records of audits must be retained.
- Continuous improvement maintains the chain-of-custody system's relevance.
- Any breach of the chain-of-custody system is known as a 'non-compliance'.
- Corrective and preventative action includes detecting non-compliances, establishing their causes and altering the chain-of-custody system to prevent their reoccurrence.
- A record has to be kept of all complaints or comments about its chain-of-custody system.
- Senior management needs to periodically review the chain-of-custody system's continuing suitability, adequacy and effectiveness.

Flexible delivery component



Video file

Length: 29.08 minutes

Relevant resource interviews



Trevor Innes

Gunns Timber Products, Bell Bay Softwood Mill.



David Gover

Heyfield Hardwood Mill



Katy Edwards

Forest Resources Team Leader &

Alex Bradley

Forest Certification Co-ordinator,
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Topic discussion

This topic discusses the steps required to operate with and maintain chain-of-custody process on a site. It includes:

1. Operational aspects of chain-of-custody procedures
2. Continuous improvement
 1. Corrective and preventative action
 2. Complaints and comments
 3. Management review

Operational aspects of procedures

To remain effective, the site's chain-of-custody procedures have to operate and be maintained though:

1. Adequate resourcing.
2. On-going training.
3. Internal and external audits.
4. Continuous improvement.

Adequate resources

Adequate resourcing of the chain-of-custody system reflects the company's continuing commitment to ethical and sustainable business practices.

Resources are needed to operate and maintain:

- The day-to-day operational procedures. This includes wood receipt, batch monitoring, data entry, final inspections, and other processes.
- Staff skill and progression.
- The required reviews, audits and system improvement.



Figure 41: Pine truss chords



Figure 42: Timber roof module

On-going training

Staff responsible for roles in the chain-of-custody system have to be competent in that system.

Training is required for:

- Induction of new staff into the required practices.
- Staff progression through chain-of-custody roles. Internal auditors and other personnel

Audits

In operation, the chain-of-custody system is subject to internal and external audits.

Periodic internal checking and audits are required to ensure the system is maintained in accordance with:

- The procedures specified.
- The requirements of the standard.
- The results of previous audits by ensuring past remedial action has been effective.

Regular external audits are required to assess ongoing standard compliance. This includes:

- Inspection of the chain-of-custody system procedures in operation.
- Collection and analysis of objective evidence. This includes
 - Examination of documents
 - Observations of practice and conditions
 - Interviews with staff, contractors and other stakeholders.

Continuous improvement

Procedures can become obsolete through changes in company structure, product strategy, customer demand or broad supply-chain relationships.

The chain-of-custody system has to be maintained and improved to keep up with these changes.

Opportunities for systems improvement can be identified by:

- Investigating instances of non-compliance.
- Acting on comment and complaints.
- Formal management review.



Figure 43: Assembling roof trusses



Figure 44: Assembling floor trusses

Corrective and preventative action

Management or organisational systems are subject to occasional breaches that can vary in intensity and importance. A breach of the chain-of-custody system is known as a 'non-compliance'.

- Minor non-compliances are errors in practice that do not threaten the integrity of the chain-of-custody system. They generally indicate where errors or misunderstands can occur under the system or where market or process circumstances have changes. As such, they present opportunities for improvement in the system.
- Major non-compliances are significant errors that may threaten the integrity of the chain-of-custody system. They can indicate a significant failure in staff training and management processes.

The occurrence of non-compliances requires corrective and preventative action from site management. This can include:

- Detecting non-compliances and establishing their causes.
- Reporting non-compliance incidents in line with legislative and workplace requirements.
- Preparing a corrective or preventative action report. This should describe the non-compliance, identify its likely cause and note the changes necessary to the chain-of-custody system that could prevent a reoccurrence of the non-conformity.
- Implementing modified procedures and monitoring their effectiveness.

Complaints and comments

An enterprise or site has to keep a record of all complaints or comments made about its chain-of-custody system. These complaints and comments can be made externally from the site's neighbours, customers or others, or internally by its own staff.

Internal comments can include *monitored feedback* from the staff responsible for the chain-of-custody system. *Monitored feedback* serves several key functions. It can identify:

- Procedures that have become out-of-date and need formal re-evaluation.
- The need for additional training and support.

Management review

Senior management needs to periodically review the chain-of-custody system's continuing suitability, adequacy and effectiveness. These reviews should consider:

- Internal audit and non-compliance reports
- Monitored feedback
- Comments by external assessors
- Demands for more efficient production operations.

The review should develop improvement plans to rectify non-compliance or improve processes.

Quiz

Answers should be clear, concise, and generally no longer than 150 words.

Q.1. Briefly describe two areas of activity that a company must adequately resource after the initial chain-of-custody system implementation phase.

Q.2. What are *internal audits* of the chain-of-custody system and how do they differ from *external audits*?

Q.3. Why is *continuous improvement* an important part of the chain-of-custody system and how can opportunities for continuous improvement be identified?

Q.4. What is a non-conformity or non-compliance in a chain-of-custody system and how should they be addressed?

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Facilitator & Learner's guide for the unit of competency:

FPICOT5206A Implement forest chain-of-custody certification systems

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