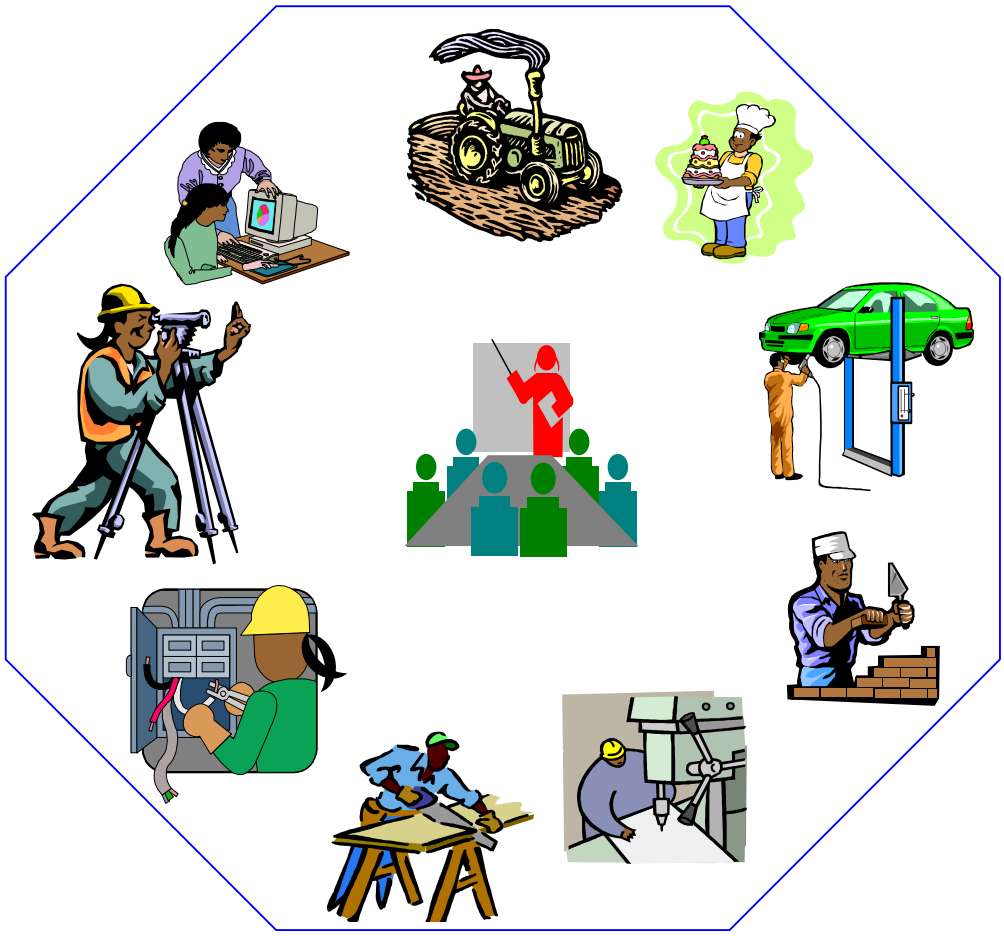
Federal Democratic Republic of Ethiopia

OCCUPATIONAL STANDARD

RUBBER TREE LATEX HARVESTING & PROCESSING SUPERVISION

NTQF Level IV



Ministry of Education
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Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopian Occupational Standards (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit Title describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title and NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and Performance criteria
- Variables and Range
- Evidence guide

Together all the parts of a Unit Title guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the occupation with all the key components of a Unit Title:

- chart with an overview of all Units of Competence for the respective level including the Unit Codes and the Unit Titles
- contents of each Unit Title(competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

UNIT OF COMPETENCE CHART

Occupational Standard: Tree Latex Harvesting & Processing Supervision		
Occupational Code: IND LPS		
NTQF Level IV		
IND LPS4 01 0616 Develop a Management Plan for a Designated Area	IND LPS4 02 0616 Develop a Soil Map for Soil Characteristics	IND LPS4 03 0616 Plan and Supervise Land Preparation
IND LPS4 04 0616 Manage Organic Soil Improvement	IND LPS4 05 0616 Supervise Rubber Tree Establishment	IND LPS4 06 0616 Develop a Soil Health and Plant Nutrition Program
IND LPS4 07 0616 Plan and Implement Chemical Use Program	IND LPS4 08 0616 Design Sustainable Natural Resources Utilization Scheme/Plan	IND LPS4 09 0616 Prepare Job Estimation and Costing
IND LPS4 10 0616 Monitor and Evaluate Implementation of Land Use Plan	IND LPS4 11 0616 Manage Natural Area Restoration Programs	IND LPS4 12 0616 Manage Natural Resources Infrastructure Development and Maintenance
IND LPS4 13 0616 Evaluate Fire Potential and Prevention	IND LPS4 14 0616 Analyze and Interpret Production Data	IND LPS4 15 0616 Supervise Rubber Tree Product and Latex Harvesting
IND LPS4 16 0616 Supervise Rubber Tree Maintenance	IND LPS4 17 0616 Develop Waste Management Strategies	IND LPS4 18 0616 Control Weeds, Pest and Diseases in Rubber Tree
IND LPS4 19 0616 Plan and Organize Work	IND LPS4 20 0616 Migrate to New Technology	IND LPS4 21 0616 Establish Quality Standards
IND LPS4 22 0616 Develop Individuals and Team	IND LPS4 23 0616 Utilize Specialized Communication Skills	IND LPS4 24 0616 Manage Micro, Small and Medium Enterprises (MSMEs)
IND LPS4 25 0616 Apply Problem Solving Techniques and Tools		

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Develop a Management Plan for a Designated Area**
Unit Code	**IND LPS4 01 0616**
Unit Descriptor	This competency standard covers the process of developing a management plan for a designated rubber tree plantation, harvesting and processing area. It requires the ability to define the need for a management plan, undertake preliminary planning activities, prepare a site description, analyze site information, identify management strategies and prepare the management plan. Developing a management plan for a rubber tree plantation area requires knowledge of management planning principles and issues, basic civil design, environmental assessment, survey and analysis techniques, native fauna and flora, pest plant and animals, re-vegetation, techniques, wildlife habitats, and soil, plant and water testing processes and procedures.

Element	Performance criteria
1. Define the need for a management plan	1.1 ***Management plan objectives*** are identified for the designated area. 1.2 Brief is agreed in consultation with client. 1.3 Planning team including specialists and consultants is identified.
2. Undertake preliminary planning activities	2.1 Major stakeholders are identified. 2.2 Availability of specialists to assist in management planning work is ascertained and contracts are prepared where required. 2.3 Timelines for development of the management plan and reporting arrangements to ***client*** are established. 2.4 ***Resources*** required for the development of management strategies are identified.
3. Prepare a site description	3.1 ***Landscape values*** of the area are identified and mapped 3.2 Physical ***features and characteristics*** of the area are identified and mapped. 3.3 ***Land uses***, including current, cultural, and ***historical modifications***, are researched and their effects on the natural resource area are determined and recorded. 3.4 ***Physical condition of site*** is assessed and documented 3.5 ***Biological characteristics*** of the site are documented.
4. Analyze site information and description	4.1 Information is evaluated in terms of core principles and objectives.

	4.2 Documents produced including plans, technical reports and maps. 4.3 Priorities and key ***conservation issues*** are determined. 4.4 Longitudinal projections of continuing impacts are prepared. 4.5 ***Land capability*** is assessed. 4.6 Opportunities and constraints to meeting planning objectives and goals are identified and documented. 4.7 ***Presentation*** to stakeholders/clients is undertaken and feedback incorporated into planning documentation.
5. Identify management strategies	5.1 ***Management strategies*** are identified that address defined objectives. 5.2 Management strategies are designed to alleviate existing impacts or to target management actions. *5.3* Management strategies are costed and compared to existing budgets and ***available resources****.* 5.4 Staging of work is planned to prioritize outcomes and management resource allocation. 5.5 Consultation with stakeholders/clients is undertaken and feedback incorporated into planning documentation.
6. Prepare the management	6.1 Site information and management strategies are documented into a draft ***management plan*** for consultation. 6.2 Consultation with stakeholders and clients is undertaken according to enterprise guidelines. 6.3 Changes are made to the draft plan, and a final plan is prepared and presented to client

Variable	**Range**
Management plan objectives	May include: • Management plans define the core principles, objectives and responsibilities of the managing agent, cover the allocation of enterprise resources, and set parameters for resource access and use. • objectives to provide habitat for wildlife and native predators (such as insect eating birds, parasitic wasps), maintain biodiversity, moderate local weather conditions (e.g., wind speed, rainfall run-off, water table recharge, provide shade), selective removal of tree limbs for firewood and timber, selective harvest of seed for re-vegetation or human consumption, genetic resource for plant propagation and medicinal components, contribution to sustainable land use, aesthetic contribution to

	enterprise(such as a home-stay farm, for tourism). • Rubber tree plantation, harvesting and processing area
Client	May include: • A government agency or associated body • private landholder, or community group.
Resources	May include: • topographical, vegetation, and aerial maps, • Government, university and library based consultation, literature and internet resources, local written and oral histories of migrant and catchment area information and catchment management associations, local experts such as flora and fauna preservation, cultivation and identification community groups.
Landscape values	May include: • Visual amenity, biodiversity, recreation and tourism, conservation, water and air quality, and cultural values.
Features and characteristics	May include: • These may include boundaries, fences, gates, slope gradient, contours, water courses, current land use, buildings and structures, eroded areas, saline areas, soil toxicity, waterlogged areas, water table recharge and discharge sites, water-repellent soils, predominant wind directions, annual rainfall, surface stones and rocks, soil types and specific historic or cultural features.
Land uses	May include: • Agricultural • Horticultural • Silvicultural • Recreational • Industrial • Commercial and cultural.
Historical modifications	May include: • Clearance • grazing • Dry land and irrigated cropping • Fire management for grass stimulation, and natural events, such as wildfire, flooding and drought.
The physical condition of site	May include: • Impacts from weeds • Pests • Erosion • soil disturbance • run-off • water quality • People • vehicle intrusions • soil compaction and adjacent land use.

Biological characteristics	May include: • Native and introduced plants and animals • Habitats • vegetation structure and rare and endangered species.
Conservation issues	May include: • priorities for protection, conservation and restoration works for key native flora and fauna species, disease and pest flora and fauna control, nutritional issues, and erosion, salinity and toxicity repair works and habitat rehabilitation and restoration of balance.
Land capability	May include: • Suitability of recreational use, engineering works, conservation values, wildlife potential, soil profiles, visual amenity, agricultural and horticultural production.
Presentation	May include: • Video and photographic footage • documented historical • Biological • physical and cultural descriptions • graphed and charted statistics • References and illustrations.
Management strategies	May include: • objectives to protect the natural resource area from grazing and pest animals • control pest plants and diseases • control human impact • manage fire events (e.g., controlled use of hot and cold fires, wildfire prevention) • establish vegetation links to nearby habitat islands, remove and redirect infrastructure such as roads, troughs and fences, conserve and enhance biodiversity and • habitat balance, and monitor native habitats over time
Available resources	May include: • Resource availability issues may include private finance, government funding assistance • natural resource regulations and legislation • consideration for neighboring enterprises • community in-kind support • existing indigenous flora and fauna • Labor and existing administration facilities and infrastructure.
Management plan	May include: • A plan that includes financial resources • human resources management plan and production management plan

Evidence Guide

Critical Aspects of Competence	A person must be able to demonstrate ability to: • Prepare forest management plan with a team • Prepare financial management plan • Prepare human resources management plan • Prepare production management plan
Underpinning Knowledge	Demonstrate knowledge of: • Management planning principles and issues. • Environmental assessment, survey and analysis techniques and practical application to a range of habitats and landscapes. • Native fauna and flora identification physiology, habitat requirements, and seasonal and nutritional influences on life cycle. • Pest plant and animal and disease identification, physiology, control techniques, and equipment, pesticides and habitat requirements. • Techniques and strategies for use in the management, rehabilitation and enterprise use of a range of native habitats, species and landscapes. • Indigenous flora regeneration and re-vegetation techniques, equipment and methods of application in relation to a range of landscape characteristics. • Management and rehabilitation techniques for the wildlife and habitat relevant to the natural resource area. • Wildlife habitats associated with the natural resource area and local geographic region. • Soil, plant and water testing processes and procedures, interpretation and application of results.
Underpinning skills	Demonstrate skills to: • Define the need for a management plan. • Undertake preliminary planning activities. • Prepare a site description. • Analyze site information and description • Identify management strategies. • Prepare the management plan.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Develop a Soil Map for Soil Characteristics**
Unit Code	IND LPS4 02 0616
Unit Descriptor	This competency standard covers the process of determining soil characteristics and developing soil maps to illustrate the characteristics of a property in order to identify any areas of concern, and to assist in making decisions about rubber tree, irrigation and drainage. This is usually without supervision but with general guidance on progress. It requires knowledge of soil testing, the environmental impact of irrigating and the ability to use soil and water testing techniques . The outcomes of this process will inform decisions relating to whole farm planning.

Element	Performance Criteria
1. Collect information for soil mapping	1.1 Confirm ***soil*** samples were collected for off-site assessment by ***soil testing agencies*** using recommended procedures. 1.2 The information on the ***physical characteristics of the soil*** is collected. 1.3 The information on the ***chemical characteristics of the soil*** is collected. 1.4 The information about ***biological characteristics of the soil*** is collected. 1.5 The acceptable soil parameters for specified rubber tree plant are determined from published data and historical records. 1.6 Information about areas of cultural significance and habitats of biodiversity on the property are collected. 1.7 Research outcomes are collated in accordance with enterprise record keeping procedures.
2. Analyze soil information	2.1 The soil types of the sample area are classified according to standards for ***soil classification***. 2.2 Collected results are compared with established parameters for actual or proposed land use and production. 2.3 Soil characteristics are evaluated to determine whether they can be altered to meet land use needs. 2.4 The Readily Available Water (RAW) values for irrigation sites are determined in line with industry standards.
3. Plot topography and soil survey data on property map	3.1 Interpreted results are mapped in an established format according to enterprise guidelines. 3.2 Potential uses of the soil for purposes of land classing.

	3.3 Land capability, areas of cultural significance and habitats of biodiversity are identified. 3.4 Property boundaries and property features are defined. 3.5 Paddocks or irrigation areas are identified. 3.6 Contour or spot level information is plotted. 3.7 Soil sampling sites are plotted on map. 3.8 Soil profile and irrigation characteristics for each sampling site and/or irrigation area are described and indexed to the map. 3.9 The Readily Available Water (RAW) values for irrigation sites are indexed to the map. 3.10 ***Areas of specific concern*** are plotted on ***the map*** and descriptions are indexed to the type of maps.

Variable	**Range**
Soils	May include: • Field sites and specialist growing media.
Soil testing agencies	May include: • Government, commercial or private consultants.
Physical characteristics of the soil	May include: • Color • Texture • Structure depth of root zone, and depth of water table.
Chemical characteristics of the soil	May include: • PH • Salinity and carbonate content and nutrient (both macro and micro) availability.
Biological characteristics of a soil	May include: • Characteristics such as decaying plant material • humus • Content • Micro-biotic content (fungi, bacteria and protozoa), and macrobiotic content (worms, insects and nematodes).
Classification of Soils	May include: • Classified according to Unified Soil Classification System.
Areas of specific concern	May include: • saline patches • leaking channels • acid soils • weed infestation • lack of shelter from prevailing winds • awkward paddock size or design • high water table • access

	• Problems • herbicide resistance • animal/plant disease problems • water and wind erosion.
Type of maps	May include: • Contour maps and aerial photomaps • May include the use of overlays to indicate various categories of data.
Soil sampling equipment	May include: • Hand auger, back hoe, equipment for pH testing such as soil test kits or electronic pH testing device, hand held salinity/EC meter, tape measure, sample bags, plastic overlays, aerial photographs, and charts and tables of soil characteristics.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • perform a soil survey, analyse survey results, • determine soil characteristics, and • Plot topography and soil survey data on a property map.
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • methods and techniques of soil sampling • relevant enterprise OHS and environmental requirements including the use of personal protective equipment • environmental impacts of irrigation, using water from any • ground or underground source • soil types and profiles • physical and chemical properties of soils • nutrient availability in soils • soil analyses results • biodiversity habitats • cultural sites • soil quality factors • soil water retention testing techniques • water table and salinity • Readily Available Water (RAW).
Underpinning Skills	Demonstrate Skills to: • collect and analyze data • read and apply testing agency procedures • label information for off-site testing • interpret soil analyses results • identify adverse environmental impacts of irrigation activities and appropriate remedial action • interpret published data and historical records to identify • acceptable soil parameters • plot information on a map • use soil and water testing techniques

	• follow relevant enterprise OHS and environmental procedures. • Communicating ideas and information • Collect, analyze and organize information • Plan and organize activities • Use mathematical ideas and techniques. • Calculate RAW values, topographical data, and analyze comparative statistical data. • Solve problems Identifying and analyzing areas of concern on a property. • Use technology Using electronic testing equipment.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Plan and Supervise Land Preparation**
Unit Code	IND LPS4 03 0616
Unit Descriptor	This competency standard covers the process of preparing equipment, cultivating the site, applying any pre-planting treatments, and caring for the vehicles and equipment on completing the activity. It includes the completion of documentation and logbooks for the operation. Preparing land for rubber tree cultivation is likely to be carried out under limited supervision from others with checking only related to overall progress. Preparing land for rubber tree cultivation is usually done within established routines, methods and procedures. Some discretion and judgment is required in the selection of equipment and materials, organization of work and services. The outcomes should be achieved within specified timelines.

Element	Performance Criteria
1. Prepare for cultivation	1.1 Requirements for the work to be undertaken are interpreted from the ***planting plan*** and confirmed with the manager. 1.2 The method and order of cultivation is identified and interpreted from the planting plan. 1.3 ***OHS*** hazards are identified; risks assessed and suitable controls are implemented. 1.4 Suitable ***personal protective equipment*** is selected, used and maintained. 1.5 The ***environmental implications*** of cultivating the **site** are identified, likely outcomes assessed and, if necessary, responsible action is taken.
2. Prepare the cultivating equipment	2.1 The ***vehicles and equipment*** required for site cultivation are selected according to the planting plan and organization guidelines. 2.2 The vehicles and equipment are serviced, adjusted for the conditions and worn parts are replaced to ensure reliability during cultivation. 2.3 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately. 2.4 All maintenance and servicing is documented according to the requirements of the organization's ***record keeping system***.
3. Cultivate soil	3.1 ***Previous crop or land clearance debris*** is removed, incorporated or burnt according to the organization's guidelines.

	3.2 The cultivation plan is followed and completed for each addock. 3.3 OHS hazards are identified; risks assessed and suitable controls are implemented. 3.4 Suitable personal protective equipment is selected, used and maintained. 3.5 Vehicles and equipment are ***operated in a safe*****,** effective and efficient manner and at speeds to suit the conditions. 3.6 The quality of cultivation is maximized by continually checking and adjusting the vehicles and equipment as necessary. 3.7 All time, resource and quality requirements of the planting plan are met.
4. Prepare site for planting	4.1 The planting layout and ***soil profiles*** are completed as required by the planting plan. 4.2 ***Weed and pest control measures*** are taken as required by the planting plan. 4.3 Fertilizers, ameliorants, and/or other pre-planting ***treatments*** are applied as required by the planting plan. 4.4 The ***environmental implications*** of site preparation are identified, likely outcomes assessed and, if necessary, responsible action is taken.
5. Complete land operations	5.1 Equipment is cleaned in accordance with manufacturer's specifications, organizational procedures and regulations. 5.2 Vehicles and equipment are cleaned and stored to minimize damage according to manufacturers specifications, organizational procedures and regulations. 5.3 All containers, leftover fluids, waste and debris from the cleaning and maintenance work are disposed of safely and appropriately. 5.4 All required ***records and documentation*** are completed accurately and promptly according to organizational requirements.

Variable	**Range**
Planting plan	May include any rubber tree grown by the organization for production rubber sheet from latex.
OHS	May include: • Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimize exposure to noise and organic and other dusts, and to external elements, including solar radiation.

	• Systems and procedures for preparing sites for planting, as well as working with and around electricity, should also be in place. Safe systems should be in place for stubble and grass burning, and for storing, handling and transporting hazardous substances. • Fixtures should be in place in all storage sheds, including • Appropriate access ladders, hand rails and ladder cages. • Personal protective equipment should be selected, used and maintained. • Environmental conditions should be controlled e.g., keeping • Moisture levels as low as possible will reduce the likelihood of fire. • Procedures should be in place and used for working with • Moving vehicles and equipment. • Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organizational procedures.
Personal protective equipment	May include: • Boots • hat/hard hat • Overalls • Gloves • Protective eyewear • Hearing protection • Respirator or face mask and sun protection (sun hat, sun screen).
Environmental implications	May include: • Detrimental environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils, containers, and chemical residues), dust, and hazardous substances (fuel). • Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.
Site	May include: • It might be the site of a previous year's crop or have been used for grazing or laid fallow for a period prior to cultivation. • Land cleared of virgin forest low lying land verging on mangroves sloping high land • Existing cleared land and may have soil or surface water.
Vehicles and equipment	May include: • Vehicles might include tractors, trucks and four-wheel drive • Vehicles, heavy duty machines • Equipment might be mounted or trailing ploughs,

	cultivators, scarifiers, fertilizer spreaders, spraying equipment, crop/stick puller, cultivators, buster, disc, lister, • Ripper, mulcher, tandem or offset discs, or rakes.
Record keeping systems	May include either paper-based or digital, and information will be recorded into logbooks or other records.
Previous crop or land clearance debris	May include: • The planting plan might require that such debris is removed (or sprayed), incorporated (smashing, cultivating, mulching, • Slashing), burnt or used for grazing for a period.
Operating Safely	May include: • The speeds used should be appropriate for the equipment, • Ground and the rubber tree conditions, and all pre- and post-start up checks should be undertaken.
Soil profile	May include: • Where laser leveling is required, assistance may be required • For contractors in surveying and pegging. Also soil testing and analysis may be required.
Weed and pest control measures	May include: • Weeds may be controlled by using an integrated pest management program including the application of herbicides and biological control agents, grazing, slashing, burning or hay cutting. Weeds may be controlled at various times, in the preceding year, pre-sowing, post-sowing, pre-emergent, at various stages of rubber tree and weed growth, as recommended. • Insect pests may be controlled by using an integrated pest management program including cultural means - cultivation, etc., insecticides, biological control agents, or removal of food supply using weed control techniques.
Treatments	May include use of insecticides, fertilizers and physical agents should meet legislative, manufacturers and organization requirements.
Environmental implications	May include: • Detrimental effects such as erosion, loss of moisture, • Debilitating germination rates, and polluting water bodies.
Records and documentation	May include: • All chemical usage should be recorded as well as any necessary recording of paddock size, and vehicle and • Equipment use. Additionally, any assessment of pests and weeds, OHS hazards, or other observations should be recorded appropriately.

Evidence Guide	
Critical Aspects of Competence	A candidate must be able to demonstrate the ability to: • prepare land for rubber tree plantation • describe and demonstrate different methods of cultivating

	a range of soil types • apply OHS guidelines, procedures, and principles including manual handling • interpret production/planting plans, produce standards, quality specifications, work procedure documents • measure materials and site plan specifications • operate, adjust and calibrate cultivation equipment safely • complete pre- and post-operational checks on tools,
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • methods of cultivating a range of soil types • environmental issues of cultivating soil for planting, such as drainage and irrigation systems, soil amelioration and waste disposal procedures • a range of pre-planting treatments, their purpose and method of application • OHS guidelines, procedures, and principles including manual handling.
Underpinning Skills	Demonstrate skills to: • interpret production/planting plans, produce standards, quality specifications, work procedure documents • measure materials and site plan specifications • operate, adjust and calibrate cultivation equipment safely • complete pre- and post-operational checks on tools, vehicles and equipment • perform routine safety, service and maintenance procedures on tools, harvester and equipment • read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets • interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents. • collect, analyze and organize information, organisation guidelines, production and planting plans • use mathematical ideas and techniques to calculate the spatial and logistical requirements of the planting site, to calibrate machinery or calculate amounts of planting material needed for the size of a field or paddock.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Manage Organic Soil Improvement**
Unit Code	IND LPS4 04 0616
Unit Descriptor	This unit of competency specifies the outcomes required to improve and manage soils for rubber tree plantation. The unit involves taking samples of soil and plant tissue and analyzing results. It also requires improving soil fertility in response to sample testing by modifying cultivation practices. Competency in this unit requires knowledge of the processes of soil formation and interactions between the soil, plants and animals. This unit of competency applies to people working on a farm that is managed according to the principles of organic agriculture.

Element	Performance Criteria
1. Monitor indicators of soil fertility.	1.1 Work is undertaken in an environmentally appropriate manner and according to workplace information, ***principles of organic agriculture***, occupational health and safety requirements and enterprise guidelines. 1.2 Soil testing is conducted at reference sites according to enterprise procedures and organic industry standards. 1.3 Soil acidity or alkalinity (pH), ***mineral balances*** and organic matter levels are assessed and recorded. 1.4 Soil texture, structure, salinity and sodicity are assessed and recorded. 1.5 Results are analyzed to identify trends and areas for improvement.
2. Assess soil-related factors for selected plants.	2.1 Nutritional requirements of selected plant species are identified. 2.2 Soil analyses to be conducted and suitable testing facilities are selected. 2.3 Soil and plant tissue sample collection is conducted according to enterprise procedures and requirements of testing facility. 2.4 Results of soil and tissue testing are analyzed in relation to requirements of the farming system. 2.5 Soil condition is assessed for drainage, compaction, aeration and water infiltration in relation to requirements for desired plant growth for selected species. 2.6 Soil biological activity is assessed by identifying and evaluating presence of organisms. 2.7 Soil health is assessed by identifying and evaluating plant species present.

3. Select and implement allowable techniques and inputs to optimize soil fertility.	3.1 Range of ***allowable inputs*** is identified according to requirements of the National Standard for Organic and Biodynamic Produce. 3.2 Suitable ***nutrient cycling techniques*** are identified and evaluated. 3.3 Appropriate inputs are calculated, based on soil/plant analyses, crop removal and plant/animal observations. 3.4 Cover crop and pasture systems are selected and managed. 3.5 ***Mulching*** and ***composting systems*** are developed, applied and monitored. 3.6 ***Rotations*** to optimize soil fertility are designed and implemented. 3.7 ***Cultural practices*** to enhance soil fertility are selected and implemented.

Variable	**Range**
Principles of organic agriculture	May include: • demonstrating integrity in organics • integrating the farm • learning from nature and human culture • managing soil to increase health of whole system • reading the landscape • Understanding farm ecology.
Mineral balances	May include: • Should be applied according to ratios identified by the Albrecht testing method.
Allowable inputs	May include: • farm diary or logbook records • plant and animal pest and disease control • soil conditioning • Soil fertilizing
Nutrient cycling techniques	May include: • biodynamic preparations • compost teas • composting • inoculants • livestock grazing • mulching and Slashing.
Mulching	May include: • cooling soil or preventing frost damage • moisture retention • treating sunburn or transplant shock • Weed suppression.

Composting systems	May include: • heat • inputs • maturity • time
Rotations	May include: • use of different plants or animals cropped or grazed in a cyclical sequence.
Cultural practices	May include physical practices such as: • cultivation and harrowing • deep ripping • grazing • hand pulling • pruning • slashing • Other non-chemical techniques.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • apply principles of organic agriculture • analyze soil test results for a range of indicators of soil fertility • apply organic soil improvements, such as compost • assessing biodiversity and plant health through observation of plant community • observe animal health and relating it to plant and soil nutrient status • operate equipment safely • record and interpret results of soil tests • Sampling soil and plant tissues.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • apply principles of organic agriculture • apply knowledge of interrelationships between soil fertility, animals, plants, pests and diseases • devise and implement a soil improvement plan to correct imbalances and maintain soil fertility • analyze soil test results for a range of indicators of soil fertility • work with natural processes and allowable inputs to • Improve and maintain soil fertility.
Underpinning Skills	Demonstrates skills to: • applying organic soil improvements, such as compost • assessing biodiversity and plant health through observation of plant community • observing animal health and relating it to plant and soil nutrient status • operating equipment safely

	• recording and interpreting results of soil tests • Sampling soil and plant tissues.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Supervise Rubber Tree Establishment**
Unit Code	IND LPS4 05 0616
Unit Descriptor	This competency standard covers the work involved in supervising the establishment of rubber tree plantation. It includes sourcing information for input to the plan, as well as preparing the plan itself, communicating it to the people who will plant the tree, and monitoring the planting operations as they happen. It requires the need to monitor and adjust the plan in response to changing situations, and to subsequently evaluate, and report on, the outcomes of the planting operation. The supervision of rubber tree plantation establishment is likely to be undertaken with only general guidance sought from others. This unit involves the application of extensive knowledge with depth in some areas including the actions that might be taken to minimize or eliminate detrimental environmental impacts.

Element	Performance Criteria
1. Source information for input to planting plan	1.1 ***Documents*** within the organization that detail the requirements of the plantation plan are identified and obtained. 1.2 Information regarding activities that will be occurring at a similar time to planting is gathered through discussion with colleagues and management, and by reading the plantation / management plan. 1.3 The specific target area, or paddock, for planting is identified from the plantation / management plan. 1.4 Information regarding the trash levels and seedbed conditions is gathered by viewing the site and through discussion with colleagues.
2. Prepare planting plan	2.1 The ***rubber tree*** and ***methods of planting*** to be used are determined from the organizations plantation / management plan and ***availability***. 2.2 The ***resources*** required for the planting operations are assessed and calculated from the area to be planted, the method of planting to be used, and the available timelines. 2.3 The target dates are set for planting, including the sequencing for planting each paddock, in line with the overall production/management planning for the organization. 2.4 The ***chemical applications*** that are required prior to and post planting are selected and organized to occur at an appropriate time.

	2.5 The plan is prepared to ensure that any potential ***detrimental environmental impacts*** are minimized or eliminated, including the proper disposal of containers, drums and other waste. 2.6 ***Occupational health & safety (OHS) hazards*** are identified, assessed, and the planting plan provides for responsible actions by the operators and management. 2.7 Any ***approvals*** that are required for the planting operations are identified, sought and obtained. 2.8 Measurable indicators, specifications and targets are determined, based on the plantation / management plan and the method, resources, and seed to be used.
3. Determine scheduling and key responsibilities	3.1 ***Scheduling*** for planting is determined taking the range of geographic and resourcing factors into consideration, as well as operations that will be occurring at the same time as the planting. 3.2 Key responsibilities for specific preparatory processes that are required ***before planting*** are determined. 3.3 Key responsibilities for specific implementation processes are determined. 3.4 Recordkeeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations. 3.5 The plan, including scheduling and key responsibilities, is clearly documented. 3.6 The plan includes the type, format, frequency and detail of any reporting required by both managers and operators.
4. Monitor and adjust the planting plan	4.1 Monitoring points outlined in the implementation plan are adhered to. 4.2 Checks are made to ensure that the ***occupational health & safety requirements*** are being observed and followed. 4.3 Checks are made to ensure that the site ***environmental requirements*** are being observed and followed. 4.4 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress Checks are made to ensure that the documentation. 4.5 Required by the organization, or other regulating bodies, is completed clearly and accurately during the progress of the planting process. 4.6 Where any corrective action or amendment to the planting plan is required, the action is initiated and taken.

Variable	Range
Documents	May include: • The documents that outline the organizations plantation • Planning for the specified period the policies and procedures in relation to chemical handling and occupational health & safety • As well as the way in which potential environmental impacts should be approached.
Rubber tree	May include any rubber tree grown by the organization for production of rubber sheet from latex
Methods of planting	May include: • The reasons for selecting particular planting methods might be to minimize any erosion risks • to suit planting and production conditions • to control weeds and pests • To suit the specific machinery that is available to be used.
Availability	May include: • This would depend on the existing seedling that might be managed on-site • the particular supplier that would be used • The seasonal requirements for particular seedling types.
Resources	May include: • The resources required will be stated in terms of personnel • Temporary • Permanent • contracted workers • machinery and equipment, • Consumables and leasing arrangements.
Chemical applications	May include: • Chemicals might be applied to enhance germination • to fertilize the soil • To either prevent or kill weeds and pests.
Detrimental environmental impacts	May include: • Suitable planning and appropriate decisions will avoid • Minimize impacts such as wind erosion • removal of topsoil • the development of acid sulfate soils • Increased water run-off speeds.
OHS hazards	May include the operation of other machinery and vehicles, excessive noise, organic and other dusts, hazards associated with storing and handling seed and the hazards associated with storing handling, and transporting hazardous substances.
Approvals	May include: • The approvals may be those that are required by the Environment Protection Act • environmental agencies regulations • duty of care

	• isolation procedures, occupational health & safety legislation • site regulations and procedures • Ethiopian Standards • manufacturer's specifications and recommendations statutory requirements • Traditional land owners requirements. Such approvals may be obtained from the various authorities that implement the associated regulations • Agencies that operate on their behalf.
Scheduling	May include: • Timing for planting is planned to suit seasonal influences, • Weather and weather forecasts, as well as the local geography and the organizations resourcing situation.
Before planting	May include: • Before beginning to plant • equipment must be serviced to a • Reliable and operational standard • The seedling must be prepared and made available, and any pre-planting chemicals that are required must be applied.
Occupational health & safety requirements	May include: • Actions that will reduce the occupational health & safety risk • Are the selection, use and maintenance of personal protective equipment, the appropriate and responsible servicing of equipment and vehicles, the use of safe manual handling systems, and protection from both noise and dusts?
Environmental requirements	May include: • Work practices such as the incorporation of organic matter into the soil • The appropriate and responsible disposal of waste materials and trash and the methods selected for planting.

Evidence Guide	
Critical Aspects of Competence	Candidates must confirm one's ability to: • Apply relevant legislation and regulations relating to occupational health & safety • Identify the seasonal conditions which affect rubber tree plantation establishment • Plan and organize planting activities • Calculate resource requirements from the long-term plan • Prepare written plans and procedures for implementation by others • Recognize poor growth and lack of vigour caused by nutrient deficiency and incorrect planting depth • Observe, identify and react appropriately to environmental implications and occupational health & safety hazards.

	• Communicate ideas and information by clearly explaining to staff, and / or contractors, the purpose, requirements, and processes
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • The equipment that is required for a range of methods, land preparation, pest and weed control prior to planting • Equipment servicing requirements • Integrated pest and weed management techniques • Environmental controls and codes of practice applicable to the enterprise • Relevant legislation and regulations relating to occupational health & safety, contractor engagement, chemical use and application, and vehicle and plant use • Environmental controls and codes of practice applicable to the business and to the planting operations • Sound management practices and processes to minimize noise, odors, and debris from planting operations.
Underpinning Skills	Demonstrate skills to: • Identify the seasonal conditions which affect rubber tree plantation establishment • Plan and organize planting activities by scheduling for the people, materials, and equipment to be in the right place at the right time. • Calculate resource requirements from the long-term plan • Prepare written plans and procedures for implementation by others • Explain, and deliver instructions about, the plans and scheduling of the planting operations to both staff and contractors • Recognize poor growth and lack of vigor caused by nutrient deficiency and incorrect planting depth • Observe, identify and react appropriately to environmental implications and occupational health & safety hazards. • Communicate ideas and information by clearly explaining to staff, and / or contractors, the purpose, requirements, and processes to be used during the operation. • Collect, analyze and organize information for planting as input to the implementation plan. • Work with others and in teams • Use mathematical ideas and techniques in calculating the resource requirements for the control operations from the plan. • Solve problems in recognizing where and when amendment is required to the plans. • Use technology in operating any necessary equipment prior to, and during, the control operations - communication technology, calculating equipment, measuring equipment, word processing

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Develop a Soil Health and Plant Nutrition Program**
Unit Code	IND LPS4 06 0616
Unit Descriptor	This unit of competency specifies the outcomes required to assess soil and develop a soil health and plant nutrition program in the agricultural industry. Planning requires consideration of site factors, plant species requirements, soil and plant tissue analysis, soil ameliorants and nutrient application procedures, and monitoring Occupational Health and Safety (OHS) hazards and environmental impacts. The unit involves the application of a broad knowledge base to identify and apply solutions to a range of problems. It involves the application of knowledge including rubber tree biology; rubber tree nutrition requirements; and soil, water and other growing media properties.

Element	Performance Criteria
1. Determine relevant Site characteristics.	1.1 Goals and target site for assessment and development of program are defined following a review of enterprise production plan and in consultation with landholder. 1.2 Relevant climat data, environnemental contexte information and site data are accessed and reviewed. 1.3 Appropriate ***soil, plant and water tests*** are determined according to plant species, climatic conditions, prevailing ***growth media***, industry best practice and enterprise guidelines. 1.4 Soil, plant and water testing program is developed that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes. 1.5 Testing tasks are implemented and monitored, liaison procedures with outside testing agencies are supervised, and remedial action is undertaken where necessary. 1.6 Data and readings are compiled and presented in a form that can be easily understood. 1.7 Seasonal variations and requirements are determined from published data on species, historical records, own experience, industry best practice and enterprise Guidelines. 1.8 Characteristics, condition and nutritional status of soils and ***plant species*** under production are determined by analyzing collected data and comparing to accept standards.

2. Define the requirements for rubber tree production.	2.1 Different nutritional requirements of the plant during growing cycle and a ***range of conditions*** are identified according to published data on species, historical records, own experience and enterprise guidelines. 2.2 Program is developed to achieve appropriate soil conditions and nutrient availability for plant production according to enterprise production plan. 2.3 ***Soil amendments***, management practices and fertilizer requirements needed for production are determined. 2.4 ***Resources, tools, equipment and machinery*** required for program are identified and coasted, and availability is confirmed with suppliers, contractors and appropriate personnel. 2.5 Cost-effective approach to soil management, soil amendment, and provision of plant nutrients is determined. 2.6 ***OHS hazards*** associated with program are identified, risks are assessed and ***controls*** are developed and documented. 2.7 ***Environmental implications*** of program are identified and documented in plant nutrition program.
3. Document the soil health and plant nutrition program and specifications	3.1 Detailed plan, objectives, specifications and associated costs are established based on program requirements and are presented to land manager. 3.2 Detailed on-site procedures and schedules required for program are developed and documented.
4. Monitor production and evaluate the program.	4.1 Program implementation and results are monitored by testing soil, plants and/or produce according to industry practice to ensure requirements of enterprise production Plans are achieved. 4.2 Program is reviewed and refined to ensure it is responsive to changing conditions. 4.3 Non-compliance with documented objectives and specifications is identified and remedial actions are implemented to alleviate or overcome identified shortcomings in program. 4.4 ***Remedial action*** to improve rubber tree nutrition is taken, documented and reported to land manager according to enterprise plan. 4.5 Agreed changes are incorporated into a detailed plan.

Variable	Range
Soil, plant and water tests	May include: • analysis of chemical characteristics such as: ➢ acidity or alkalinity (pH) ➢ caution exchange capacity ➢ nutrient and carbonate content ➢ salinity • on-site testing and off-site analysis of growth media to determine physical characteristics such as: ➢ colour ➢ depth of root zone ➢ depth of water table ➢ plant available water ➢ soil organic matter ➢ structure ➢ texture ➢ testing nutrient status of plants through: ➢ establishing likely effects on soil chemical and physical • characteristics: ➢ plant tissue testing • Testing water for suitability for plant growth.
Growth media	May include: • new areas to be planted • soil sites of existing planted areas • Other growing media.
Plant species	May include: • RRIM 101,102 • GT1 • PB86 • PB8656
Range of conditions	May include: • rubber tree load • rubber tree quality requirements • planting and fertilizer history • grazing intensity • growth media characteristics • irrigation methods and scheduling • seasonal influences • soil management practices • spraying program • Weather.
Soil amendments	May include: • animal manures • composts

	• cover crops • gypsum • lime • materials to modify soil pH • mulches • soil amendments to improve chemical, physical and/or • biological properties of soil to meet requirements of rubber tree • Production.
Resources, tools, equipment and machinery	May include: • aerial photographs, charts and tables of soil • characteristics and plant soil parameters • application equipment and machinery such as: ➢ air blowers ➢ backpack spray equipment ➢ irrigation systems set up for fertigation ➢ pumps and pump fittings ➢ rippers and spray equipment ➢ tractors and trailed or three-point linkage spreaders • backhoe • charts and illustrations of symptoms of plant nutrient • deficiencies and toxicities • hand-held salinity or electrical conductivity meter • hand or powered auger • nutrient application methods, including placement • methods such as: ➢ banding ➢ broadcasting ➢ ripping ➢ spraying and fertigation on or below soil surface • pH test kit or electronic pH testing device • plastic overlays • sample bags • Tape measure.
OHS hazards	May include: • air • chemicals and hazardous substances • disturbance or interruption of services • dust • incorrect manual handling • machinery and machinery parts • moving vehicles • noise • sharp hand tools and equipment

	• slippery and uneven surfaces • soil and water-borne micro-organisms • Solar radiation.
Controls	May include: • appropriate use of personal protective equipment, • including sun protection • appropriate use of safety equipment, including signage • and protective barriers • assessing and reporting risks • basic first aid available on site • cleaning, maintaining and storing tools, equipment and • machinery • correct manual handling • identifying hazards • maintaining personal hygiene • reporting problems to supervisors • safe handling, use and storage of chemicals and • hazardous substances • Safe operation of tools, equipment and machinery.
Environmental implications	May include: • beneficial impacts, including minimization of nutrient • run-off and toxic side effects in soil and surrounding • environment achieved by: • improved application techniques and rates • improved assessment and targeting of nutrient • requirements • reduction of toxic side effects of applied nutrients in • crop plants • negative impacts, including over-spraying or run-off into • external environment resulting in nutrient overload or • excess water affecting things such as: • loading atmosphere with greenhouse gas • mining native soil fertility • native plants • natural waterways • Stalinization • water erosion • water logging • water tables and ecosystems • methods which may aid in reversal of environmental • degradation include: • allowing natural recovery and regeneration of native • ecosystems

	• Responsible fertilization and watering practices.
Remedial action	May include: • adjustments to soil amendments • changes to fertilizer application and soil management practices • irrigation scheduling • nutrient application rates and methods • Use of foliar sprays.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • access and analyze information on regional and site factors • select suitable management practices, soil amendments and fertilizers • determine analytical and appropriate application techniques • prepare resources and equipment for application of nutritional materials • Prepare implementation plans, specifications and associated documents.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • characteristics of soil and other growth media types, uses and additives to enhance available nutrition for rubber trees • main simple and compound fertilizer products available to enterprise, including analysis, solubility, salt index, application rates and costs • methods of nutrient uptake by plants and favorable conditions for effective uptake to occur • nutrients and water required by plants grown within enterprise and affects of nutrient deficiency and toxicity on individual plant species and varieties, including visual symptoms • OHS hazards associated with implementing a plant nutrition program and controls necessary to remove or minimize associated risks • organic matter, pest and disease, and nutrient interactions in soil and nutrient cycling • practical relevance of the concepts to specific plants and soils used in the enterprise • practical understanding of environmental issues associated with selecting nutritional materials, implementing a plant nutrition program needing to comply

	with legislation and ensuring minimal impact on environment • processes and techniques for preparing, costing and documenting a plant nutrition program • relationship between soil and growth media characteristics and availability of nutrients, including macro and micro elements, to plants • site evaluation techniques, including methods of sampling and analyzing soils and other growth media • Soil amendments commonly required to treat soil problems experienced by enterprise.
Underpinning Skills	Demonstrates skills to: • documenting plans, specifications and work procedures • calculating cost and spatial and logistical requirements of • components of plant nutrition program • communicating and negotiating orally and in writing with staff, managers, contractors, consultants and customers • complying with legislative requirements and codes of practice • conducting literature and consultative research, and collecting and analyzing findings on plant nutritional requirements, nutrients available from soils and other growth media, and environmental implications of program • recording all relevant information according to enterprise and industry standards • Writing reports for staff, managers, contractors and customers.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Plan and Implement Chemical Use Program**
Unit Code	IND LPS4 07 0616
Unit Descriptor	This competency standard covers the process of planning and implementing a program for the use of chemicals in a workplace. It involves using chemicals as well as supervising others in the use of chemicals concerned, and the ability to modify application requirements as needed. It involves decision making in regards to the risk control measures to be applied when using chemicals in different situations, monitoring safety procedures, and ensuring that others are trained sufficiently in the use of the chemical concerned. It involves the selection and management of chemical application systems.

Element	Performance Criteria
1. Identify the requirements of chemical use	1.1 ***Chemical*** use requirements relevant to the workplace are accessed and interpreted. 1.2 ***Legislation and safety procedures*** surrounding the use of chemicals are accessed and interpreted. 1.3 ***Personal protective equipment*** is used and provided to others for transport, storage and application of chemicals. 1.4 Industry standards for chemical use are identified. 1.5 Appropriate insurance policy cover is confirmed or arranged.
2. Monitor the implementation of safety requirements	2.1 Implementation of safety practices and rules by others is monitored. 2.2 Safety incidents are investigated and reported in accordance with ***directions and standards*** and legislative requirements. 2.3 Safety ***hazards*** in the transport, storage and application of the chemicals are identified. 2.4 ***Risk control measures*** to minimize risk involved in chemical use. 2.5 Measures for controlling residue in the environment and produce are implemented.
3 Plan and implement a Maintenance program for chemical use equipment	3.1 Plan for maintenance of application and personal protective equipment is established according to manufacturer's instructions. 3.2 Implementation of maintenance plan is supervised.

	3.3 Faulty or damaged equipment is identified and repaired or replaced.
4 Determine the suitability of a chemical for use in a control program	4.1 Integrated Pest Management (IPM) or Animal Health Strategy (AHS) is planned. 4.2 Chemicals included in the IPM or AHS are selected according to situation. 4.3 Alternatives to chemical treatments are considered and applied according to IPM or AHS.
5. Ensure the correct selection and application of the chemical	5.1 Chemicals suitable for ***situation*** are identified, and procedures for preparation, application and risk control are read and interpreted. 5.2 ***Application equipment*** is selected in accordance with procedures. 5.3 Ensure calibration of equipment is implemented according to directions and standards. 5.4 Pre-operative checks and maintenance procedures are implemented. 5.5 ***Meteorological conditions*** are assessed as appropriate to application prior to and during chemical application. 5.6 Chemical application is conducted safely in accordance with hazards associated with the chemicals concerned. 5.7 Chemical spills or accidents are dealt with according to procedures.
6 Ensure personnel are adequately trained in chemical use	6.1 Training is provided to personnel who are handling or using chemicals. 6.2 External training and assessment opportunities are organized for staff involved in using chemicals.
7 Implement recording systems for chemical storage and use	7.1 Records comply with legislation and regulations surrounding chemical use. 7.2 Risk assessment and control strategies are recorded in accordance with requirements. 7.3 Clean up procedures are implemented following chemical applications.

Variable	**Range**
Chemicals	May include: • Insecticides • Fungicides

	• Herbicides • Bactericides • Algaecides • Biological • Nematacides • Rodenticides • Fumigants • Antimicrobial agents • Anthelmintics & hormone growth promotants.
Legislation and safety procedures	May include: • May approved Pesticide Acts • OHS Acts regarding hazardous substances and application equipment • Dangerous Goods Act • Poisons Act or Protection of the Environment Acts for chemical use.
Personal protective equipment	May include: • Boots • Overalls • chemical resistant gloves • Aprons • face shields & • Respirators and hats.
Directions and standards	May include: • The instructions on the chemical label • in an operator's manual • on a Material Safety Data Sheets (MSDS) • in an industry standard • from an OHS manual or other regulation • A hazardous substances regulation.
Hazards	May include: • Hazards will be listed on labels and the MSDS for the • Chemical concerned and may include flammability, toxicity • health hazards • damage to non-target organisms • environmental damage • Target sprays drift or residues in foods.
Risk control measures	• Risk control measures that may be implemented include those relating to spillage • Fire • contact of chemical with skin or eyes • accidental ingestion • Incorrect concentrations in mixtures

	• faulty or inappropriate storage containers • current insurance policies • likelihood of run-off post application • incorrectly calibrated equipment • spray drift • incorrect disposal of waste chemicals or faulty equipment.
Situation	May include: • Weeds, insects, pathogens, and vertebrate animals.
Application equipment	May include: • hand held knapsacks or pneumatics • drench guns • spot on or power operated equipment like boom sprays, pressure wand or air blast sprayer • Jetting race hand jetting and shower/plunge dips.
Meteorological conditions	May include: • Rain • Wind • Temperature • relative humidity • Inversion or stable air conditions.

Evidence Guide	
Critical Aspects of Competence	Candidate must able to: • select, apply and clean up the application of a specific chemical, • supervise others working with the chemical, • ensure that all prescribed safety directions are followed, • Monitor the implementation of the systems and procedures developed for chemical concerned.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • Hazards involved in the use of the specific chemical concerned and related risk control measures. • Signs of pest damage and signs of beneficial organisms. • Life cycle of pests and target stages. • Pest resistance to chemicals. • Types of chemical and modes of action. • Maximum residue limits. • OHS legislative requirements and Codes of Practice relevant to chemical use and hazardous substances. • Application equipment features. • Calibration. • Record keeping systems. • Relevant control of use Acts.

	• Use, maintenance and storage of personal protective equipment. • Correct wearing/fit of personal protective equipment. • First aid and emergency procedures. • Insurances required for chemical use, transportation and storage. • Calibration and calculation of equipment and chemicals
Underpinning Skills	Demonstrate skills to: • Access, accurately read and interpret conditions and labels information for chemicals. • Direct others to perform tasks. • Identifying hazardous situations. • Communicate procedures, policies and safety information to others in the workplace. • Collect, analyze and organize Information on labels, MSDS and legislation need to be interpreted and analyzed. • Plan and organize activities to be planned in conjunction with chemical use. • Use mathematical ideas and techniques in calibration and calculation of equipment and chemicals. • Identify hazards and potential problems that may arise during chemical use and developing suitable solutions and risk control measures.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Design Sustainable Natural Resources Utilization Scheme/Plan**
Unit Code	IND LPS4 08 0616
Unit Descriptor	This unit of competence covers designing Sustainable Natural Resources Utilization Scheme/Plan. It includes designing sustainable utilization plan of wildlife resource, forest resource, land and water resource without causing damage to the natural environment.

Element	Performance criteria
1. Planning community based natural resources utilization	1.1 Long and short term community based strategic plan is prepared in accordance with time frame of the natural resources utilization strategic plan. 1.2 Local community benefits are identified and incorporated in the plan based on the ***source of information***. 1.3 Cultural taboos and traditional practices are identified and promotion mechanisms are included in the plan. 1.4 Mechanisms for sustainable utilization of natural resources are outlined based on international conventions, and national rules and regulations including ***Occupational Health and Safety (OHS)***. 1.5 Monitoring and Evaluation mechanisms are designed in the plan. 1.6 Appropriate mechanisms for Infrastructures development are identified to enhance the promotion and establishment of natural resources utilization in collaboration with other relevant stakeholders.
2. Establish means of promotion and advertisement	2.1 Experience sharing mechanisms are established between countries/regions, among communities, farmers etc to promote sustainable natural resources utilization. 2.2 Natural resources potential areas are identified and advertised through appropriate ***tools and equipment*** ,media and organizations' website.
3. Undertake a site analysis	3.1 The site is visited and inspected at the first stage of the design work. 3.2 ***Physical elements and features*** *of* the site, its physical and biological condition and the presence of ***threats*** are quantified and mapped onto the base plan.

	3.3 Soil, topography, aspect, habitat resources, existing fauna and flora and climatic factors are recorded on the base plan and in the site report. 3.4 Legal requirements and constraints for natural resources utilization are assessed. 3.5 The potential for natural resources conservation is assessed and the limiting factors are identified and recorded. 3.6 Options for ***passive and active interventions*** are determined. 3.7 ***Other relevant information*** is assessed and recorded.
4. Develop a concept design	4.1 Concept design is prepared to illustrate location and layout of the proposed natural resources area according to the design brief. 4.2 Consultation with the stake holders is undertaken to establish agreement on options and approaches for development in accord with the proposed ecological aims and goals. 4.3 A professional graphic format is used to present the concept design with supporting written information and justification or reasons for the proposed actions.
5. Produce a final plan	5.1 A detailed plan is prepared and drafted according to the design brief, concept design and organizations' guidelines. 5.2 Information on the plan is clearly communicated with the work in a sequential manner. 5.3 Plan, ***notes and specifications*** are included on the plan to give an interpretation of the plan, to establish the quality and standard of the works, and the responsibilities of the contractor during implementation. 5.4 Appropriate construction and engineering principles are applied to the natural resources area plan according to accepted organizations' standards and regulations. 5.5 ***Further design documentation*** is organized and/or prepared according to the plan brief and organization guidelines.

Variable	**Range**
Sources of Information	May include: • Organizational rules, regulation and guidelines

	• Internet, related books and related materials • Website of the organization • Technical manuals • sharing best practice • Virtual library • Workplace guidelines • Recorded documents/logo/history
OHS	May include: • Prepare well designed and selected waste disposal sites • Use qualified and experienced personnel • Care should be taken during community income sharing activities • Avoid environmental impact during hunting
Tools and equipments	May include: • First aid kit • Binoculars • Computer software • Mountain bicycle • Field books • Maps • Field bags • GPS • Tent • Sleeping Bag • Sponge mattress • Digital Camera
Physical elements and features	May include: • Physical elements and features may include site boundaries • Fences • Roadways • Tracks • Footpaths • buildings and other structures • water features • recreational facilities • public access • adjacent land uses • easements and rights of way • built structures • overhead/underground services and utilities • Existing vegetation and sites of cultural interest.
Threats	May include:

	• Weeds • feral animals • erosion and exposure of ground surfaces • compaction of soils • Debris or foreign matter.
Passive and active interventions	May include: • Passive interventions include changing management regimes • while active interventions may include habitat development • releasing regeneration niches • applying regeneration triggers such as tillage • fire or smoke products • Wetting and drying cycles • Installing biological foci and my corrhizal inoculation.
Other relevant information	May include: • opportunities and constraints on the area • human intrusions (such as vehicles, bikes, utility access and pedestrians) • historical and cultural factors • laws and regulations impacting on restoration work • site for material storage and compound area, proximity to services and utilities • OHS issues, stakeholder/community involvements, and environmental impacts of proposed restoration works.
Notes and specifications	May include: • The direction of North • the scale • legend of existing structures and features • technical specifications for structural components • client details • who developed the plan • lists of plant and animal species • threatened species • Maintenance issues and compliance regulations.
Further design documentation	May include: • Contracts • construction details • Specifications • quotations and bills of quantities such as contracts unit costs • sub-contractor estimates • quantity calculations

	• Brief specification of materials, contingency items, prime cost items, development and/or consolidation works.

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • Plan for Natural resources management • Plan, implement and utilize natural resources • Plan to apply boundary demarcation techniques for natural resource areas • Plan to promote community based natural resources conservation • Plan to conflict resolution • Identify and promote natural resources areas • Develop strategic plan • Planning to improve community livelihoods • Establish means of natural resources promotion and advertisement • Apply planning Rules, regulations and procedures of legal related to natural resources management
Underpinning Knowledge	• Planning for Natural resources management • Plan, implement and utilize natural resources • Planning to apply boundary demarcation techniques for natural resource areas • Planning to promote community based natural resources conservation • Planning to conflict resolution • Identify and promote natural resources areas • Develop strategic plan • Planning to improve community livelihoods • Establish means of natural resources promotion and advertisement • Planning Rules, regulations and procedures of legal related to natural resources management
Under pinning Skills	Demonstrate skills to: • Plan and implement boundary demarcation techniques for natural resources areas • Plan and implement NR management technologies • Skill in conflict resolution • Customer satisfaction and tolerating individual differences • Data recording methods of the organization • Using soft ware programs for data recording and storing. • Collect natural resource data from required sources. • Compiling and presenting natural resources data in the required format.

	• Planning, implementing and sequencing activities to meet required time frame. • Apply natural resources census methodologies and collect data according to requirements. • Using personal computers to record and store data.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Prepare Job Estimation and Costing**
Unit Code	IND LPS4 09 0616
Unit Descriptor	This unit specifies the outcomes required to estimate materials, labor and time requirements and establish costs. It supports the attainment of skills and knowledge required for competent workplace performance in natural resources management activities. It applies to a factory environment and involves application of skills and knowledge at skilled man level. These skills and knowledge are to be used within the scope of the person's job and authority.

Element	Performance Criteria
1. Gather information	1.1 Applicable ***Occupational Health and Safety (OHS)***, ***legislative*** and ***organizational requirements*** relevant to ***estimating and costing*** are identified and complied with. 1.2 Details of organizational requirements are obtained through discussion from information supplied. 1.3 ***Required information*** is assessed and communicated to ***appropriate personnel*** in accordance with customer requirements. 1.4 Delivery point and methods of ***transportation*** are determined. 1.5 Details are recorded in accordance with organizational practice. 1.6 ***Communication*** with others is established and maintained in accordance with OHS requirements.
2. Estimate materials, time and labor	2.1 Types and quantities of ***materials*** required are estimated. 2.2 ***Resource requirements*** are estimated. 2.3 Completed estimate for product manufacture is documented and checked to match customer requirements. 2.4 Estimate is communicated to customer in accordance with client requirements and adjustments made as required.
3. Calculate costs	3.1 Total materials, labor and ***overhead costs*** are calculated in accordance with organizational procedures. 3.2 Total job cost is calculated, including overheads and ***mark-up percentages***.

	3.3 Final cost to customer is calculated in accordance with organizational procedures.
4. Check and document details	4.1 Details of costs and charges are documented in accordance with organizational practice. 4.2 Costs, calculations or other details are checked in accordance with organizational practice. 4.3 supplier ***quotations*** are prepared in accordance with organizational procedures. 4.4 Details are documented for future reference in accordance with organizational practice.

Variable	**Range**
OHS requirements	May include: • the use of personal protective equipment and clothing • safety equipment • first aid equipment • firefighting equipment • hazard and risk control • elimination of hazardous materials and substances • manual handling including shifting, lifting and carrying
Legislative requirements	May include: • award and enterprise agreements • industrial relations • Ethiopian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care
Organizational requirements	May include: • legal • organizational and site guidelines • policies and procedures relating to own role and responsibility • quality assurance • procedural manuals • quality and continuous improvement processes and standards • OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and

	practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Estimating and costing	May include: • is to include labor, material and overhead
Required information	May include: • Current product range and availability • and making comparisons between products and services related to brand options • product features • warranties and price • knowledge of competitors' products • service range and pricing structure
Appropriate personnel	May include: • supervisor • manager • colleagues • Clients • Customers & suppliers
Transportation	May include: • Ships • Trains • Trucks • vans and couriers
Communication	May include: • verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm understanding • use of positive • confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice and body language
Materials	May include: • Latex • formic acid • Ammonia • Water • Diatomite powder & fire wood
Resource requirements	May include: • number of personnel to complete the job • time requirements • overtime considerations and overheads

Overhead costs	May include: • Superannuation • Sick leave entitlements • leave loading • Other staff entitlements and enterprise overheads
Mark up percentages	May include: • the desired or intended profit margin over and above all costs
Quotations	May include: • are to include formally presented costs for producing a product or providing a service to the customer

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • establish communication channels and protocols problem identification and resolution • comply with legislation, regulations, standards, codes of practice • use and maintain relevant tools, machinery and equipment • identify problems and equipment faults and demonstrate appropriate response procedures • use appropriate communication and interpersonal techniques with colleagues and others • accurately record and report workplace information, and maintain documentation efficiently and safely estimate
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • applicable national /regional legislative, regulatory or certification requirements and codes of practice relevant to the full range of processes for estimating and costing • organizational and site standards, requirements, policies and procedures for estimating and costing • principles of cultural diversity and access and equity • environmental protection requirements, including the safe disposal of waste material • established communication channels and protocols • problem identification and resolution • types of tools and equipment and procedures for their safe use, operation and maintenance • estimating and costing procedures • product knowledge and production procedures • staff salaries and overheads • profit margins • procedures for the recording, reporting and maintenance of workplace records and information

	• appropriate mathematical procedures for estimation and measurement
Underpinning Skills	Demonstrates skills to: • comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for estimating and costing • use and maintain relevant tools, machinery and equipment • identify problems and equipment faults and demonstrate appropriate response procedures • use appropriate communication and interpersonal techniques with colleagues and others • accurately record and report workplace information, and maintain documentation • efficiently and safely estimate and cost
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Monitor and Evaluate Implementation of Land Use Plan**
Unit Code	IND LPS4 10 0616
Unit Descriptor	This unit of competency covers the knowledge, skills and attitude required to set the time for monitoring and evaluation of implementation of land use plan. It includes managing of each planned activities, conduct participatory monitoring and evaluation and revise the land use plan.

Element	Performance Criteria
1.Set the period of monitoring and evaluation (M&E) for each planned activities	1.1. Regular ongoing/progress monitoring (daily, weekly, monthly and quarterly) period is set for planed activities based on work place regulation. 1.2. Performance evaluation plan is prepared based on duration of the program.
2.Conduct monitoring and evaluation	2.1 Checklists are prepared to collect information based on planned activities ***materials***. 2.2 Decision is made on sharing responsibilities to carryout monitoring and evaluation to ensure community participation. 2.3 ***Community & other stakeholders*** participation is ensured in monitoring and evaluation for planned activities. 2.4 Monitoring and evaluation is conducted based on the set period. 2.5 Collected information is organized to take corrective measures based on progress report. 2.6 Evaluation report is reviewed by involvement of relevant stakeholders to decide for future actions in accordance with standard.
3.Provide feed back	3.1 ***Land use problems*** that are identified through monitoring and evaluation and which demands assistance from outside are sorted out based on the criteria set by reviewers 3.2 Institutions that could be communicated for backstopping are identified based on types of technologies implemented. 3.3 Cases that need backstopping are provided to relevant higher bodies following work place procedure.

4.Revision	4.1 Goals are checked if they are still valid and redefined. 4.2 Modifications are initiated to revise the plan either through implementing agencies or by developing proposal and reference back to decision makers. 4.3 Redesigning program is performed based on periodic evaluation.

Variable	**Range**
Materials	May include: • Land use policy documents • Resource data • Land suitability map • Land capability map • Land use plan procedures and formats • Stationary materials • GIS software • GPS
Community& other stakeholders	May include: • Men • Women • Youth • marginalized groups • Local NGOs • Government agencies
Land use problem	May include: • Existing land use systems and their problems • Social • environmental and economic constraints
PRA	May include: • Participatory rural appraisal (transect walk, focal group discussion)

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • explain participatory monitoring • identify various aspects of evaluation • initiate modifications to revise the plan
Underpinning knowledge and Attitudes	Demonstrates knowledge of: • management principles • PRA techniques
Underpinning skills	Demonstrates skills to: • management functions skills

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Manage Natural Area Restoration Programs**
Unit Code	IND LPS4 11 0616
Unit Descriptor	This competency standard covers the process of managing natural area restoration programs. It requires the ability to inspect and assess site for the replacement of vegetation, plan natural area restoration program, monitor natural area restoration works, and review the natural area restoration program. Managing natural area restoration programs requires a knowledge of natural area restoration techniques, Identification of appropriate soil and water conservation activities, identification of plant and animal threats to treated areas, soils and nutrients, plant selection and culture, calculations for materials, preparation of plans and specifications and project management.

Element	Performance criteria
1. Inspect and assess site conditions	1.1 A vegetation assessment report is prepared. 1.2 ***Site conditions***, level of degradation and potential for natural area restoration are determined. 1.3 ***Threats*** to existing ecosystem, flora, fauna and property from natural area restoration works are assessed. 1.4 Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on natural area restoration works.
2. Plan natural area restoration program	2.1 Plans and specifications for natural area restoration works are prepared according to program/management aims and objectives. 2.2 ***Natural area restoration techniques*** are selected to meet management plans and enterprise requirements. 2.3 Staging strategy for works is outlined. 2.4 ***Protective structures*** are planned to ensure compliance with ***OHS a***nd relevant legislation. 2.5 Appropriately skilled personnel are selected. 2.6 Equipment and personnel are transported to natural area restoration sites without injury or damage according to enterprise procedures. 2.7 Appropriate ***permits/licenses*** and authorizations are obtained according to legislative and enterprise requirements.

	2.8 Equipment and materials required for natural area restoration work is sourced according to enterprise procedures.
3. Monitor natural area restoration works	3.1 ***Observations*** are made according to natural area restoration plans and to enterprise procedures. 3.2 Checks are made that the site is prepared according to specifications. 3.3 Plant materials, machinery and equipment are checked to ensure compliance with enterprise guidelines and natural area restoration plan. 3.4 Natural ***areas*** restoration works are affected according to enterprise guidelines. 3.5 Work is monitored to ensure remedial action is undertaken as required. 3.6 Occupational health and safety management conforms to ***legislative requirements*** and enterprise policies and procedures.
4. Review natural area restoration program	4.1 Site is monitored to ensure compliance with ***maintenance*** program plans and specifications or enterprise guidelines. 4.2 Site is assessed to determine whether natural area restoration works are addressing factors and issues consistent with management plans. 4.3 Changes to natural area restoration techniques are reported to enterprise procedures for adoption in future works.

Variable	**Range**
Site conditions may include:	• Plant and animal community health • soil types • moisture content • pH levels salinity • Texture • Compaction • Aspect • Pollutants • Toxicity • Climate • Buildings, Road works and shade.
Threats	May include: • Interactions with human activity

	• Fire and Seasonal flooding.
Natural area restoration techniques	May include: • Handling of SWC activities • assisted natural regeneration • hand planting • mechanical planting • Direct seeding and mechanical sowing.
Protective structures	May include: • Signs • fences • Barriers • Clothes • stakes and mulches
OHS	May include codes of practice, enterprise policies and procedures and certification/licensing of personnel.
Permits/licenses	May include: • Permits/licenses may cover fire • vehicle operation (including heavy vehicles) • access to specific places • Working near threatened species, and for herbicide application.
Observations	May include: • Recording of incidents or events • recording of counts • Recording of locations by reference to physical features or through GPS • use of monitoring equipment and manual recording of results • Checks of automatic recording equipment and telemetry links.
Areas	May include local plans and park and reserve management plans.
Legislative requirements	May include: • Local Government • National and International • ownership Title • National and International Heritage agreements.
Methods of maintenance	May include: • Maintenance of SWC structures • Watering • Mulching • Fertilizing • Protection, Staking and Weeding.

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • Identify and describe Plant species and community recognition • Identify Natural regeneration potential and limits. • Describe ecological restoration theory and techniques. • Identify factors affecting the timing and method of plant establishment. • Identify of plant and animal threats to treated areas. • perform calculations for materials • Describe Legislative requirements in detail. • Prepare plans and specifications. • Inspect and assess site for restoration
Underpinning Knowledge	Demonstrate knowledge of: • Plant species and community recognition. • Natural regeneration potential and limits. • Ecological restoration theory and techniques. • Factors affecting the timing and method of plant establishment. • Identification of plant and animal threats to treated areas. • Principles and methods relating to the prevention and control of pests and diseases. • Safety requirements when handling and using hazardous goods. • Soils and nutrients, plant selection and culture. • Calculations for materials. • Legislative requirements. • Preparation of plans and specifications. • Occupational Health and Safety.
Underpinning skills	Demonstrate Skills to: • Inspect and assess site for restoration. • Plan natural area restoration program. • Monitor natural area restoration works. • Review natural area restoration program.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Manage Natural Resources Infrastructure Development and Maintenance**
Unit Code	IND LPS4 12 0616
Unit Descriptor	This competency standard covers the process of planning for and managing the infrastructure required for production in the organization. It includes the need to act in an environmentally aware manner. It requires the need to analyze and extract information from a broad range of sources, and to comply with a variety of legislative and regulatory requirements. Planning and managing infrastructure requirements are likely to be undertaken alone or under broad guidance. Responsibility for the planning and management of the work of others is likely to be involved. Planning and managing infrastructure requirements requires extensive knowledge in some areas such as sustainable land use principles and practices, and a range of technical and other skills such as planning, calculating volumes areas and distances, and cost benefit analyses.

Element	Performance Criteria
1. Determine infrastructure requirements	1.1 Information regarding the ***characteristics of the products*** and their respective market requirements is accessed. 1.2 ***Characteristics of the land*** under production and conservation to be used are confirmed from colleagues and other planning processes. 1.3 ***Historical data,*** including recent data, from organizational records is identified and accessed for input to ***infrastructure*** planning processes. 1.4 Information regarding other organizational planning 1.5 ***Production processes*** and potential for ***improvements or innovations***, is collected and used to inform the infrastructure planning process. 1.6 Requirements of the organization are taken into consideration during analysis. 1.7 All available information is analyzed, and the infrastructure required to efficiently achieving the targeted production requirements are identified and compared with those existing and available in the organization.

	1.8 ***OHS hazards*** identified, risks assessed and suitable controls are incorporated into the planning process. 1.9 Replacements, purchases and sales of plant and vehicles are planned and budgeted for according to organizational policies and procedures. 1.9 Details regarding infrastructure requirements are used as input to other organizational planning processes.
2. Obtain, prepare or build infrastructure	2.1 ***Solutions*** to bridging the gaps between required and existing infrastructure are identified. 2.2 Preferred solution to filling gaps in required infrastructure is determined from a cost benefit analysis. 2.3 Negotiations are undertaken to ***obtain infrastructure*** at the best rate for the organization. 2.4 ***Preparation work*** required for existing infrastructure is organized and undertaken as necessary. 2.5 Works required are ***planned requirement*** and commissioned according to organization requirements. 2.6 All alterations to infrastructure or new developments give due consideration to ***environmental and waste management*** requirements.
3 Manage infrastructure	3.1 ***Infrastructure maintenance programs*** are determined including scheduling and responsibilities. 3.2 Replacements, purchases and sales of plant and vehicles are undertaken according to plans made, and are in line with organization policies and guidelines. 3.3 Any ***reallocations of land*** required are undertaken with the planning and consultation required by the organization, and within all relevant ***guidelines and regulations***. 3.4 Situations that ***require unplanned maintenance*** are managed within organization guidelines and policy. 3.5 Checks are made to ensure that program specifications are adhered to and amendments are made where necessary. 3.6 Checks are made to ensure that all OHS requirements are adhered to, including the appropriate use of personal protective equipment. 3.7 Checks are made to ensure that potential detrimental environmental impacts are minimized or eliminated.

4 Record and manage information	4.1 ***Data,*** observations and documentation recorded during the production cycle are analyzed against the plan according to organization guidelines. 4.2 Recommendations for future plans are prepared based on the analysis of the data. 4.3 A ***report i***s prepared that documents the plans implementation according to the organizations requirements and guidelines. 4.4 Records and documentation are created, maintained and kept as described in the infrastructure plan, the OHS requirements, and machinery and equipment management programs. 4.5 Records and documentation are completed clearly and accurately throughout production in the organization. 4.6 The ***record keeping system*** that is used ensures that required information is available, accessible, meaningful and useful.

Variable	**Range**
Characteristic of the products	May include: • If it is an annual or perennial product • experimental product • Yield • financial return • frequency of rotation • Harvesting requirements • Prevalence of pests and disease and pest and disease control. • To the latex, stock and/or products under production or refinement/ manufacture in the organization.
Characteristics of the land	May include: • Accessibility • topography • Moisture content • pH levels • nutrient levels • Salinity • Erosion • Drainage • Land use history • Germination rates and pest and disease prevalence.

Historical data	May include: • Rubber tree/stock history • disease and pest history • previous yield data • pesticide use • financial returns • weather patterns • market information • existence and suitability of previous infrastructure
Infrastructure	May include: • In addition to equipment, machinery and vehicles • the organizations infrastructure may include buildings • Sheds • Shelters • stock yards • stock handling structures • Fences • water supply systems • Roads • Tracks • soil conservation works • Irrigation and drainage channels • silage pits and/or grain and fodder storage • Dams • Monitoring systems and information technology systems.
Production processes	May include: • Requirements may relate to the preferred approach/policy in regard to animal welfare • environmental management • waste management • OHS Legislation and regulation may also impact on, or restrict production.
Improvements or innovations	May include: • To equipment • Machinery • Materials • Practices • and systems including those relating to environmental • OHS • Animal welfare practices and/or related equipment might be researched and implemented.
OHS hazards	May include: • Systems should be in place to ensure the safe operation

	and maintenance of machinery and equipment. • Precautions should also be in place to minimize exposure to noise, and organic and other dusts. • Systems and procedures for handling and storing product, as well as working with and around electricity should also be in place. • Fixtures should be in place in all silos and storage sheds, including appropriate access ladders, handrails and ladder cages. • Personal protective equipment should be selected, used and maintained. • Environmental conditions should be controlled. For example, keeping moisture levels as low as possible will reduce the likelihood of fire and silo collapse. • Procedures should be in place and used for working with and operating machinery and equipment, including exposed moving parts, noise, transporting and storing hazardous substances (such as pesticides), working within confined spaces, moving vehicles and working at height. • Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organizational procedures.
Solutions	May include: • Reassigning • Refitting or modifying existing infrastructure.
Obtaining infrastructure	May include: • Through transactions • which may include purchase • Lease • Hire • Rental • Barter or loan
Preparation work	May include: • Obtaining relevant permits and permissions, • Stripping • Emptying or disassembling them.
Planning requirement	May include: • Appropriate permits and permissions are in place and appropriate people are consulted.
Environmental and waste management	May include: • Construction activity, as well as the improvement itself • Might put the local environment at risk of off-site contamination such as the fouling of surface or ground

	water bodies with solid material, and/or nutrients, including acid discharges from acid sulfate soils. Any change to the natural lie of the land may affect run-off and drainage to increase erosion or the acidity of the soil, and the way in which effluent is managed to pollute surface and underground catchments. Removal of vegetation and ground cover may affect wind or water erosion and/or an increase in salinity.
Infrastructure maintenance programs	May include: • Scheduling issues, affect on production, availability of staff, • costs, seasonal variances, weather patterns, and other • Operations occurring in the organization.
Reallocations of land	May include: • For road or path building • sitting buildings • dam construction • Run-off and drainage works.
Guidelines and regulations	May include: • The required permissions and permits are obtained; environmental guidelines • Animal welfare regulations and OHS regulations are adhered to.
Unplanned maintenance required	May include: • To rectify machinery or plant breakdown • damage caused by storm • Stock or vandals.
Data	May include: • Information pertaining to costs • production levels • labor and overhead inputs • Environmental data and OHS data.
Report	May include: • Issues and details such as • any difficulties or issues faced • the methods used for treatment • impacts on environmental and OHS • Recommendations for future plans, results, costs, and any available data analysis.
Record keeping systems	May include: • the storage devices • the procedures • operators who enter and update the data • guidelines and policy for the maintenance and migration of data

Land improvement	May include the need for improvement may be caused by rising water tables, wind eroded areas, saline areas, weed infestations, unstable soils, poorly drained areas, or shelter requirements

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • Describe environmental controls and codes of practice available • Apply relevant legislation and regulations relating to soil and water degradation issues • Interpret monitored information on production processes • Interpret, analyze and extract information from a range sources such as professional literature, legal documents, discussions, and workshops • Identify, build and use network and support groups • Prepare written plans and procedures for implementation by others
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • property planning, financial management and enterprise budgeting systems and procedures • environmental controls and codes of practice available to the organization • relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use • sound management practices and processes to minimize noise odors and debris from production processes • sustainable land use principles and practices applicable in the region • relevant legislation and regulations relating to soil and water degradation issues, animal health and welfare, and chemical use
Underpinning Skills	Demonstrates skills to: • interpret monitored information on production processes • interpret, analyze and extract information from a range sources such as professional literature, legal documents, discussions, and workshops • identify, build and use network and support groups • recognize potential opportunities to use or install more environmentally efficient systems or equipment • assess, then adopt, profitable innovations • prepare written plans and procedures for implementation by others

	• observe, identify and react appropriately to environmental implications and occupational OHS hazards
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Evaluate Fire Potential and Prevention**
Unit Code	IND LPS4 13 0616
Unit Descriptor	This unit specifies the outcomes required to continually monitor and assess the potential of fire during normal work activities. This competency also included using fire as a natural resource management mechanism (e.g. prescribed/control burning). The unit includes evaluating basic fire prevention measures. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Element	Performance Criteria
1. Prepare for fires	1.1 Applicable ***Occupational Health and Safety (OHS)***, ***legislative*** and ***organizational*** and certification requirements relevant to evaluating fire potential and ***prevention*** are identified and complied with. 1.2 Types and ***potential*** for ***fires*** hazard and positive effects are constantly evaluated through risk assessment and documented. 1.3 ***Equipment*** is selected appropriate to potential work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations. 1.4 ***Evaluation*** processes are planned in accordance with site procedures. 1.5 ***Communication*** with others is established and maintained in accordance with OHS requirements.
2. Assess fire potential	2.1 ***Weather*** conditions are monitored and reports inspected for changing conditions such as storms and high winds. 2.2 Equipment conditions are monitored for overheating and electrical sparking and acted upon immediately. 2.3 Hazardous and flammable substances are monitored to assess the potential of spillage and combustion. 2.4 Potential of fire is reported to appropriate personnel.
3. Evaluate fire prevention	3.1 ***Fire risks and hazards*** are ***controlled*** and monitored in accordance with workplace procedures. 3.2 Equipment is regularly checked to ensure it is serviceable for emergencies. 3.3 ***Hazardous or flammable substances*** are handled in accordance with OHS and environmental management regulations..

	3.4 ***Signs of fire potential*** are recognized and alarm raised to alert ***appropriate personnel****.* 3.5 Fire potential and prevention procedures are ***recorded and reported*** in accordance with workplace procedure/

Variable	**Range**
OHS Requirements	May include: • the use of personal protective equipment and clothing • safety equipment • first aid equipment • firefighting equipment • hazard and risk control • elimination of hazardous materials and substances • manual handling including shifting, lifting and carrying • machine isolation and guarding • hot work permits to be issued by authorized personnel • protective shields for welding and grinding activities • written/displayed evacuation procedures • appropriate fitness for the task
Legislative requirements	May include: • award and enterprise agreements • industrial relations • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care • heritage and traditional land owner issues
Organizational requirements	May include: • legal • organizational and site guidelines policies and procedures relating to own role and responsibility • quality assurance • procedural manuals quality and continuous improvement processes and standards • OHS, emergency and evacuation procedures and trials • ethical standards • recording and reporting

	• access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), established Emergency Evacuation Committee
Prevention	May include: • undergrowth • ensuring equipment is far enough away • from combustible materials • housekeeping to ensure work • area is clear of waste • provision of suitable fire • fighting equipment • evacuation trials • solar radiation, dust, noise, air- and soil-borne micro
Potential	May include: • assessing environmental conditions and operating procedures for any possible aspects which may cause fire such as local communities use of smoke to harvest honey
Fires	May include: • wildfires • electrical storm induced fires • Arson • accidental fires • electrical fires and mechanical fires
Equipment	May include any plant and equipment used in harvesting or forest growing activities
Evaluation	May include: • evaluation of chemical based fires environmental, weather • equipment conditions
Communication	May include: • verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm understanding • use of positive • confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice and body language • may relate to evacuation, visitors or members of the public on site

Weather	• conditions such as high winds, electrical storms, lightning strikes and excessive heat and low humidity
Fire risks and hazards	May include: • weather conditions which induce fire, welding or grinding sparks, dry undergrowth, the potential of equipment created fire, combustible materials such as dry or dead scrub, tall grasses, rubbish, oily rags, waste material proximity to equipment, and flammable liquids
Controlling	May include: • controlling vegetation (such as grass, heath, scrub and forest undergrowth) to minimize risk, cutting of firebreaks (including clearing areas which are slashed or ploughed and clear of any combustible material, wide enough to prevent fires jumping the break), housekeeping to ensure flammable, combustible or waste materials are in safe proximity to machinery
Hazardous and flammable substances	May include: • engine oils • fuels and treatment substances
Signs of fire potential	May include lightning strikes, high winds, smoke, flames, storms, equipment overheating, flammable liquid spills and electrical ignition
Appropriate personnel	May include: • fire wardens • fire response personnel, • supervisors, suppliers, clients, colleagues and managers, • Emergency Evacuation Committee, fire prevention committee
Records and reports	May include: • environmental care and fire prevention procedures such as risk, hazards, incidents or equipment malfunctions • may be manual, using a computer-based system or another appropriate organizational communication system

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate ability to: • explain legislative and regulatory requirements and codes of practice, including OHS, environmental and organizational policies and procedures, relevant to evaluating fire potential and prevention • Comply with applicable licensing or certification requirements

	• Communicate effectively and work safely with others in the work area • Efficiently evaluate fire potential and prevention in accordance with environmental legislation and workplace procedures
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • applicable legislative, regulatory or certification requirements and codes of practice relevant to the full range of processes for evaluating fire potential and prevention • organizational and site standards, requirements, policies and procedures for evaluating fire potential and prevention • principles of cultural diversity and access and equity • environmental protection requirements, including the safe disposal of waste material • established communication channels and protocols • problem identification and resolution • types of tools and equipment and procedures for their use, operation and maintenance • fire types and potential methods of ignition • environmental risks and hazard prevention • fire awareness and prevention techniques • recognized tools such as threat and risk analysis • procedures for recording, reporting and maintaining workplace records and information • appropriate mathematical procedures for estimation and measurement estimation
Underpinning Skills	Demonstrate skills to: • comply with legislation, regulations, standards, codes of practice and established safe • practices and procedures for evaluating fire potential and prevention • use and maintain relevant tools, machinery and equipment • identify problems and equipment faults and demonstrate appropriate response • procedures • use appropriate communication and interpersonal techniques with colleagues and others • accurately record and report workplace information, and maintain documentation • efficiently and safely evaluate fire potential and prevention

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Analyze and Interpret Production Data**
Unit Code	IND LPS4 14 0616
Unit Descriptor	This competency standard covers the process of analyzing and interpreting data for rubber tree latex harvesting and processing. It requires the ability to collect and organize production data, analyze, interpret and present data. Analyzing and interpreting data for production requires knowledge of the relevant legislation, industry and enterprise codes of practice, enterprise record keeping and recording practices, methods to collect and analyze production data, business equipment and principles of report writing and data presentation.

Element	Performance Criteria
1. Collect and organize production data	1.1 Information is collected and organized in a format suitable for analysis and interpretation in accordance with ***enterprise requirements***. 1.2 Information held by the production unit is assessed for accuracy and relevance in line with enterprise requirements. 1.3 Methods of collecting data are reliable and make efficient use of resources in accordance with organizational requirements. 1.4 ***Business equipment*** is used to access, organize and monitor data in accordance with organizational requirements. 1.5 Information is updated, modified, maintained and stored in accordance with organizational requirements.
2. Analyze and interpret data	2.1 Objectives of analysis are clearly defined and consistent with enterprise requirements. 2.2 Methods of data analysis are reliable and suitable to research purposes. 2.3 Assumptions used in analyses are clear, justified and consistent with enterprise objectives. 2.4 Conclusions are supported by evidence and contribute to the achievement of business objectives.
3. Present data	2.2 ***Data*** are prepared in an appropriate format, style and structure using suitable business technology. 3.2 Structure and format of reports are clear and conform to enterprise requirements.

	3.3 Findings are reported and distributed in accordance with enterprise requirements. 3.4 Feedback and comments on suitability and sufficiency of findings is obtained in accordance with enterprise requirements.

Variable	Range
Enterprise Requirements	May include: • Quality assurance and/or procedures manuals • bio-security • requirements • procedures for updating records • OHS policies • procedures and programs • production plans • Systems and processes and defined resource parameters.
Business equipment	May include: • Photocopier, computer (including handheld electronic loggers), email, internet, software programs, answering machine, fax machine, telephone and radio communication systems.
Data	May include: • Feedback on results, review of previous data and production • Figures, peer review, data sampling and statistical analysis.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • Collect And Organize Production Data • Analyze And Interpret Data • Present data. • Describe methods to collect and analyze production data • Describe data management systems and methods
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • the relevant legislation, industry and enterprise codes of practice and quality assurance procedures that impact on intensive production • enterprise record keeping and recording practices • enterprise policies and procedures relating to collection, analysis and maintenance of production data • methods to collect and analyze production data

	• data management systems and methods • business equipment • Principles of report writing and data presentation.
Underpinning Skills	Demonstrate skills to: • collect and organize production data • analyze and interpret data • Present data.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Supervise Rubber Tree Product and Latex Harvesting**
Unit Code	IND LPS4 15 0616
Unit Descriptor	This competency standard covers the work involved in supervising rubber tree product and latex harvesting operations. It requires the application of skills and knowledge to estimate latex yield, assess risk and negotiate appropriate insurance, and schedule labor and equipment resources. It also requires an awareness of workplace safety, environmental protection and licensing requirements associated with harvesting operations. The work is likely to be carried out under broad supervision within enterprise guidelines.

Element	Performance Criteria
1. Prepare for harvesting	1.1 ***Rubber tree*** maturity and quality is ***assessed*** in readiness for harvesting. 1.2 Pre-harvest treatments for the control and eradication of pests are determined and carried out according to ***OHS requirements***. 1.3 Requirements for licenses or permits are identified and complied with. 1.4 ***Insurance requirements*** are assessed and risk management strategies planned and implemented as required.
2. Determine harvest strategy	2.1 Optimum timing to carry out harvest is estimated and calculated according to rubber tree maturity assessment. 2.2 Resource requirements are assessed giving consideration to the size of the rubber tree and estimated timing of harvest. 2.3 Labor and ***equipment*** required to carry out harvesting operations is confirmed and arranged within budgetary constraints. 2.4 Requirements for ***fire prevention*** and control are identified and arranged according to OHS requirements.
3. Co-ordinate the harvest strategy	3.1 Effective communication strategies are implemented to ensure smooth workflow operations and personnel safety. 3.2 Harvesting operations are implemented and adjusted as required according to weather, equipment and staff requirements.

	3.3 Equipment operation is coordinated for maximum efficiency and monitored for performance effectiveness. 3.4 Existing and potential ***hazards*** are identified and controlled according to OHS and ***enterprise requirements.***
4. Complete harvest operations	4.1 ***Storage resources*** are located for efficient operations and strategies for drying rubber sheet are identified, if necessary according to marketing initiatives. 4.2 Quality of rubber sheet is segregated to marketing grades and monitored for moisture content according to classification standards. 4.3 Harvesting operations and outcomes are evaluated against harvest strategy.. 4.4 Relevant information is documented for continual analysis and effective planning management.

Variable	**Range**
Rubber Tree	May include any rubber tree grown by the organization for production of rubber sheet from latex.
Assessment	May include: • Field measurements for rubber tree yield are primarily objective and may include sampling, transects, past records, and visual assessment.
OHS requirements	May include safe systems and procedures for: • the operation and maintenance of machinery and equipment including hydraulics • guarding of exposed moving parts • ensuring loads are secure and within working specifications • the identification and avoidance of obstacles during harvesting operations • working within confined spaces • hazard and risk control • mounting and dismounting • handling including lifting and carrying • manual handling • the application of emergency/defensive driving techniques • handling, application and storage of hazardous substances • outdoor work including protection from solar radiation, noise, organic and other dusts • the protection of people in the workplace • the appropriate use and maintenance of personal protective equipment.

Insurance requirements	May include: • Crop insurance is likely to cover events such as fire, hail and transport damage.
Equipment	May include: • Trucks • Trailers • Tractors • field bins and contracted resources
Fire Prevention	May include: • fire vehicles • fixtures such as dams, tanks, • pumps and water mains, communication devices, personal • Protective equipment and constructions such as firebreaks.
Hazards	May include: • dust, working in confined and enclosed • spaces, working in the vicinity of pesticide residues, working • with, and close to, vehicles and plant and applying pre-harvest • Chemical treatments.
Enterprise requirements	May include: • SOP, industry standards, production schedules, MSDS, work • notes and plans, product labels, manufacturers specifications, • operator's manuals, enterprise policies and procedures • (Including waste disposal, recycling and re-use guidelines), and manager's oral or written instructions.
Storage resources	May include: • Storage resources may include temporary storage, field bins, • silos, horizontal storage and direct delivery to bulk handling • Authority.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • Manage the harvest requires evidence of the ability to develop and schedule a harvesting plan to meet rubber tree maturity. • It requires the ability to plan resources, negotiate resource and labor contracts, value latex yield, plan fire prevention and control, arrange storage and delivery requirements, segregate rubber sheet for quality and monitor for moisture content.

Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • functions and limitations of harvesting equipment • rubber tree, latex, rubber sheet measurement techniques and parameters • market information and sources • location and relative skills and abilities of available contractors • weather conditions which may affect the harvest • relevant legislation and regulations relating to OHS, • contractor engagement, chemical use and application, and vehicle and plant use • Environmental controls and codes of practice applicable to harvesting operations.
Underpinning Skills	Demonstrate skills to: • organize and schedule the maintenance of plant and equipment • establish strategies, procedures and controls for latex harvesting • prepare written plans and procedures for implementation by others • estimate and calculate volumes, quantities and maintain budgetary controls • interpret, analyze and extract information from a range of sources and discussions • negotiate and arrange contracts and agreements • explain and deliver instructions with regard to the harvest operations to both staff and contractors • Implement safe workplace and positive environmental practices.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Supervise Rubber Tree Maintenance**
Unit Code	IND LPS4 16 0616
Unit Descriptor	This competency standard covers the functions required to promote and maintain the health of rubber tree plantation and latex processing. It requires the application of skills and knowledge to manage the rubber tree plantation and latex processing in an environment with optimal nutrient availability, and with minimum damage from pests, weeds and disease. The work is likely to be carried out under broad supervision within enterprise guidelines.

Element	Performance Criteria
1. Determine condition rubber tree plantation and latex processing.	1.1 Measurement and assessment of soil moisture is undertaken to calculate soil water percentage. 1.2 ***Water requirements*** are calculated according to soil analysis data, standing ***rubber tree***, and forecast weather conditions. 1.3 ***Nutrient requirements*** for rubber tree are assessed and deficiencies identified. 1.4 Factors affecting ***rubber tree capacity*** are identified. 1.5 Sustainable land management is implemented according to ***enterprise requirements*** and environmental standards.
2. Determine pest control	2.1 Evidence of ***pests*** and ***disease*** is assessed and effective ***control measures*** appropriate to type and species of infestations are determined. 2.2 Areas of ***weeds*** infestation, which may be reduced or eradicated, are located and species identified. 2.3 Control methods are selected to control pests and weeds without building up a resistance to chemicals. 2.4 Control methods are scheduled at the optimum time with minimal damage to the rubber tree. 2.5 Severity of infestations and records of treatments are maintained to provide essential data for future management programs.
3. Manage rubber tree health	3.1 Rubber tree is ***planned*** and monitored to maintain water and nutritional requirements for optimal production. 3.2 Weed and pest levels are monitored and the control program modified as required.

	3.3 Benefits from fertilization methods are assessed and documented for analysis in future management programs. 3.4 Planting programs are monitored for efficiency and effectiveness, and documented for future best practice. 3.5 Relevant data is documented for continual analysis and effective rubber tree management.

Variable	Range
Water requirements	May include: • stage rubber tree • rainfall records • Water availability • soil types • Soil physical structure and fertilizer applications.
Rubber tree	May include: • Any Rubber tree grown by the organization for production rubber sheet from latex.
Nutrient requirements	May include: • Nitrogen, phosphorus, potassium, sulphur, calcium, magnesium, boron, molybdenum, copper and chlorine. • Nutrient requirements may be assessed by tissue or soil testing. • Stimulants to be inject and polish for increasing latex yield
Rubber tree capacity	May include: • Climate, irrigation availability, soil types, • Rubber tree pests, topography, soil and plant nutrient status, • Paddock history, and drainage.
Enterprise requirements	May include: • SOP • industry standards • Total Quality Management standards • product labels • manufacturers specifications • MSDS • Operators manuals • Enterprise policies and procedures (including waste disposal Recycling and re-use), and reporting requirements. It may also include consideration of the following factors: • the introduction of transgenic varieties to minimize chemical use

	• the industry commitment to minimize pesticide use • containing herbicides to the herbicide site • selecting herbicides with minimal environmental impact
Pests	May include: • Insects • Weeds • Pathogens • Vertebrates • Nematodes and mollusks. • Vertebrate pests include rabbits • rats and mice • Macro pods and birds. • Invertebrate pests include trips • Mites, nematodes, locusts and caterpillars. • All pest and weed control is carried out according to principles • Of integrated pest management.
Diseases	May include forliar pathogens such as rusts Odimun leaf disease,corrnyspora,tapping panal disease, pink disease, soil borne pathogens, Rhizoctonia, Pythium, Fusarium, and Phytophthora.
Control Measures	May include: • Herbicides and insecticides. • Vertebrate pest control methods may include physical barriers, baiting methods, shooting, and fumigation of burrows. Invertebrate pest control methods may include insecticides, biological agents.
Weeds	May include annual, perennial, broad leaf, narrow leaf and grasses.
Planning	includes monitoring to maintain water and nutritional requirements for optimal production.

Evidence Guide	
Critical Aspects of Competence	Assessment must confirm one's ability to: • Accurately assess rubber tree needs, • Implement pest and weed control measures, • Apply growth control compounds, • Monitor and assess rubber tree maturity. • Ascertain water requirements from survey advice and weather forecasts, • Accurately measure soil moisture and interpret data, • Apply specialist sprays, and ascertain time of harvest with consultant advice.

Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • rubber tree growth stages and keys • fertilizer types and application times, methods and rates • chemical use • factors leading to development of chemical resistance • integrated pest management • life-cycles of pest, diseases and weeds • OHS legislative requirements • relevant codes of practice with regard to the use and control of hazardous substances • Relevant codes of practice with regard to environmental protection.
Underpinning Skills	Demonstrate skills to: • refer to records of paddock nutrient requirements • dispatch samples to laboratories • operate and interpret on-the-spot tests • recognize damage caused by weeds, pests or diseases • recognize poor growth and lack of vigour caused by nutrient deficiency • record monitoring results manually or on the computer • plan and implement control programs to rectify nutrient deficiencies, disease outbreaks, pest and weed infestations • accurately measure soil moisture and estimate irrigation needs • communicate with industry, suppliers and other personnel • read and interpret MSDS, production plans and analysis results • Estimate and measure pest control treatments.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Develop Waste Management Strategies**
Unit Code	IND LPS4 17 0616
Unit Descriptor	This unit of competency describes the development of waste management strategies for clients to meet their individual needs. It requires the ability to analyze practices and develop strategies by working effectively with clients. These work functions would be carried out under minimal supervision within organizational guidelines.

Element	Performance Criteria
1. Determine possible options	1.1 Review results and findings of waste assessment to determine strategy focus areas and options in accordance with ***client requirements***, OHS regulations and work procedures. 1.2 Identify all options to meet the client's waste management needs. 1.3 Consult and involve client in the development of appropriate ***waste management options***.
2. Develop strategies	2.1 Assess ***feasibility of waste management options*** in consultation with clients to ensure appropriate, realistic and achievable options are identified. 2.2 Prioritize waste management options in consultation with clients to ensure most important waste management issues are given greater emphasis. 2.3 Develop realistic and achievable waste management strategies which satisfy client and legislative requirements. 2.4 Detail the client's implementation requirements such as process changes, education, training, resource requirements and schedule. 2.5 Review the implementation of strategies in accordance with client requirements, OHS regulations and work procedures.
3. Document strategy	3.1 Document ***waste management strategy*** clearly and accurately based on information available, with all relevant aspects outlined including OHS procedures. 3.2 Include indemnity to limit liability in accordance with accepted industry practice, company requirements and relevant legislation.

4. Present strategy	4.1 ***Present strategy*** in a professional manner in accordance with client requirements. 4.2 Explain benefits and rationale of the strategy. 4.3 Allow time for client questions and discussion.

Variable	**Range**
Client	May include: • All forms of business enterprises in this context including government agencies • Local governments/councils, private and public companies and residents/ratepayers.
Client requirements	May include: • briefing papers, letters from client, quality • assurance documents, tender/contract documents and verbal or written instructions
Waste management options	May include: • advertising • changed disposal methods • education • employee participation • minimization • preventative maintenance • process audit • process changes • product and material changes • product scheduling and planning • reclamation • recycling • re-use • Waste segregation.
Feasibility of waste Management options	• commitment • compliance with relevant legislation • cost-benefit analysis • costs • lead time • process constraints • resource requirements (including equipment, personnel) • Resources available.
Waste management strategy	May include: • access to site • locations of waste containers • map of plant/site

	• OHS procedures • processing methods • production dates and schedules • production inputs and outputs • site size • specific site requirements • storage and disposal methods • waste handling • waste hazards • waste outputs • waste recovery routes • Waste streams.
Strategy presentation	May include: • formal presentation to appropriate personnel with aids • such as Microsoft PowerPoint or overheads • informal discussion to appropriate personnel • Issuing appropriate handouts.
Equipment requirements	May include: • absorbent material • bunding equipment • camera • collection containers • lifting gear • measurement equipment • personal protective equipment • reference manuals • safety barriers and warning signs • sample bench • Scales.

Evidence Guide	
Critical Aspects of Competence	Candidate must be able to: • Identify waste management options and interpret audit findings. • Conduct feasibility analysis. • Develop strategies. • Present waste management strategies.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • Features required for waste management strategies. • Impact of recommendations on client processes. • Waste management options available. • Nature and significance of waste minimization hierarchy lifecycle assessment.

	• Waste analytical methods. • Waste types, streams and characteristics. • Company requirements. • Occupational health and safety requirements. • Relevant industry standards. • Relevant legislation. • Relevant environmental regulations. • OHS hierarchy of control. • safe and efficient work practices • methodical organization of work
Underpinning Skills	Demonstrate skills to/of: • sound oral communication skills including questioning, listening, liaison, consultation and facilitation • sound written communication skills for documentation • sound presentation skills • sound reading skills for the interpretation of data, information, plans and documents • research skills • computer skills • prioritize • Apply appropriate decision-making techniques.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**IND LPS4 18 0616**
Unit Code	**Control Weeds, Pest and Diseases in Rubber Tree**
Unit Descriptor	This competence standard covers the process of planning for the control of weed, pests and/or disease, including first assessing the extent of the infestations impact on the crop. It includes implementing the control operations according to pre-determined strategies, and using contract or staff personnel. It requires the need to monitor and adjust the plan in response to changing situations, and to subsequently evaluate, and report on the outcomes of the weed, pest and/or disease control measures taken. Controlling weeds, pests and/or diseases is likely to be undertaken without supervision, with only general guidance sought from managers. This unit involves the application of extensive knowledge, including measurement techniques for assessing the impact of weeds, pests and/or diseases on rubber tree and alternative methods for treating infestations.

Element	Performance Criteria
1. Prepare for implementation	1.1 ***Documents*** within the organization that detail the requirements of the integrated pest management program are identified and obtained. 1.2 The frequency of assessment, the size of any sample area, the available budgets for operations, and the target species for assessment are identified from the Organizations weed, pest and/or disease control plans. 1.3 The method(s) of assessment/measurement and of control for each target species is identified from the organizations weed, pest and/or disease control plans. 1.4 The resources required for the assessment and control operations are assessed and calculated from the area to be assessed, the available timelines, the available resources, and the ***methods of control*** required. 1.5 Measurable indicators, specifications and targets are determined, based on the target species and the potential impacts on production. 1.6 A plan to implement the integrated pest management program is developed, and clearly describes its scheduling, resources, responsibilities, target species, specific location(s) and performance targets for both the assessment and the control phases.

	1.7 Discussions are held with operational personnel and immediate management to discuss the implementation plan. 1.8 Any ***approvals*** that are required for the control operations are identified, sought and obtained. 1.9 The implementation plan is clearly articulated and documented, as required, by the organizations policies and procedures.
2. Assess weed, pest and/or disease infestations	2.1 People, materials and equipment required for the assessment are coordinated and scheduled according to the prepared plan. 2.2 The procedures and tools to be used, the kind of ***records*** that are to be taken, and any potential hazards that might be faced are clearly communicated to operational personnel. 2.3 ***Observations*** are made and data collected according to the requirements of the implementation plan. 2.4 The size and scope of any infestations, and the potential impact on rubber tree are assessed and calculated. 2.5 Treatments for the infestation are selected from the options detailed in the integrated pest management plan.
3. Implement weed, pest and disease control strategies	3.1 People, materials and equipment required for the implementation of the selected ***control strategies*** are coordinated and scheduled according to the prepared plan. 3.2 All control operations are undertaken in a manner which ensures that potential negative environmental impacts are minimized or eliminated, including the proper disposal of containers and drums. 3.3 OHS hazards are identified, assessed, and responsible action taken throughout the control operations. 3.4 The procedures and tools to be used, the kind of records that are to be taken, and any potential hazards that might be faced are clearly communicated to operational personnel, and confirmation of the clear communication is sought. 3.5 Any documentation that is required to be kept by either the organization or OHS guidelines is completed clearly and accurately.

	3.6 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress. 3.7 Advice is given to operational staff and any contractors during the control operations when requested, or when the need is identified.
4. Monitor weed, pest and/or disease control operations	4.1 Monitoring points outlined in the implementation plan are adhered to. 4.2 Checks are made to ensure that the OHS requirements are being observed and followed. 4.3 Checks are made to ensure that the site environmental requirements are being observed and followed. 4.4 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress. 4.5 Checks are made to ensure that the documentation required by the organization, or other regulating bodies, is completed clearly and accurately during the progress of the control operations. 4.6 Where any corrective action or amendment to the implementation plan is required, the action is initiated and taken.
5. Complete weed, pest and disease control operations	5.1 All waste materials and substances are removed from site and stored or disposed of responsibly. 5.2 Documentation is collated and stored according to the requirements of the organization. 5.3 Recommendations for future control operations are prepared based on the conduct of the operation, the data collected, and the discussions had during the operation. 5.4 Where it is required, a report on the conduct of the assessment and control operations is made including the data

Variable	**Range**
Documents	May include: • The documents that outline the organization's policy in regard to weed, pest and/or disease infestations and their control, • those that outline the policies and procedures in relation to chemical handling and OHS, as well as the way in which potential environmental impacts should be approached.

Methods used in Controlling weeds and Vertebrate and invertebrate pests	May include: • Amongst the invertebrate pest control methods that may be used are insecticides and biological agents. Vertebrate pest control methods may include physical barriers, baiting methods, shooting, fumigation of burrows, trapping, netting, and biological control. In the instance of weed infestations, the selection of herbicides might involve the collection of information, evaluation of alternatives, purchasing arrangements, safe storage, degree of risk to user and environment, proper application and disposal of residues, manufacturers recommendations, legislative, and end user requirements.
Approvals	May include those that are required by the Environment Protection Act, environmental agencies regulations, duty of care, isolation procedures, OHS legislation, site regulations and procedures, manufacturers specifications and recommendations, statutory requirements, or traditional land owners requirements. Such approvals may be obtained from the various authorities that implement the associated regulations, or agencies that operate on their behalf.
Records stored	May include: • Records may be created and stored either manually or • Electronically. They may also be in the form of samples of weeds or pests, photographs or sketches.
Observations	May include such things as visible symptoms, color of the rubber tree, and the extent of the infestation.
Control strategies	May include: • Control strategies include the use of herbicides. Herbicides used may be pre- or post-emergence and may be root/foliar absorbed. They may be used selectively or non-selectively, or combinations of these. Physical or alternative control measures such as rotations (for example, wheat, other grains, lupins, pulses, pasture and fallow), hay making and grazing may be used. They may also include changing the rotations.
Weed and pest might be targeted in the long-term control strategy	May include: • Pests such as insects, weeds and pathogens; weeds may be those which are annual, perennial, broad leaf, narrow leaf, or grasses. Invertebrate pests may be thrips, mites, locusts or caterpillars, whereas vertebrate pests might include rabbits, rats, wild game, mice, macropods and birds.
Diseases	May include fungal, viral and bacterial.

The potential negative environmental impacts	May include: • Any inappropriate disposal of containers or chemicals can contaminate soils, crops and water bodies.
Impacts considered when determining long-term strategies	May include: • The impacts may be those that cause financial, environmental, labour, OHS, and opportunity costs to the organization.
Factors affecting scheduling of treatments	May include: • Timing of treatments is planned to suit seasonal influences, • Irrigation timing, weather and weather forecasts, as well as the local geography and the organizations resourcing situation.
OHS issues impact on managing weed, pest and/or disease control	May include: • They include safe systems and procedures for storage, handling and transportation of hazardous substances, chemicals selected taking into account toxicity levels and environmental effects; systems and procedures for the safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts; safe manual handling systems and procedures; safe systems and procedures for outdoor work, including protection from solar radiation; selection, use and maintenance of relevant • Personal protective clothing and equipment; and fire risks.
Key aspects of the assessment and control operation would be	May include: • In compiling a report on the implementation of the weed, pest and/or disease control plan, maps or plans produced or amended through the process would be included, along with the data recorded, any difficulties or issues faced, any recommendations for future operations, the results, and the Costs of the operation.

Evidence Guide	
Critical Aspects of Competence	A candidate must be able to demonstrate the ability to: • Apply weed, pest and/or disease treatments are effectively, safely, and with clear precautions taken to ensure that negative environmental impacts are minimized.
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • pest and weed species, including their life cycles and reproduction/multiplication capability • integrated pest and weed management techniques

	• the effects on crops of weeds, pests and/or diseases, including competitive effects on crop yield; threshold levels; and the effects of alternative methods of control • environmental controls and codes of practice applicable to the enterprise • relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use • environmental controls and codes of practice applicable to the business and to the weed, pest and/or disease control operations • sound management practices and processes to minimize noise, odours, and debris from weed, pest and/or disease control operations.
Underpinning Skills	Demonstrate skills to: • interpret monitored information on pest and weed numbers, density and control • plan and schedule weed, pest and/or disease control including amending plans during the operations • calculate resource requirements from the long-term plan • prepare written plans and procedures for implementation by others • explain, and deliver instructions about, the plans and scheduling of the weed, pest and/or disease control operations to both staff and contractors • recognize poor growth and lack of vigor caused by nutrient deficiency • observe, identify and react appropriately to environmental implications and OHS hazards • Prepare a written report on the conduct and results of the operation.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Plan and Organize Work**
Unit Code	**IND LPS4 19 0616**
Unit Descriptor	This unit covers the knowledge, skills and attitude required in planning and organizing work activities in a production application. It may be applied to a small independent operation or to a section of a large organization.

Elements	Performance Criteria
1. Set objectives	1.1 ***Objectives*** are planned consistent with and linked to work activities in accordance with organizational aims. 1.2 Objectives are stated as measurable targets with clear time frames. 1.3 Support and commitment of team members are reflected in the objectives. 1.4 Realistic and attainable objectives are identified.
2. Plan and schedule work activities	2.1 Tasks/work activities to be completed are identified and prioritized as directed. 2.2 Tasks/work activities are broken down into steps in accordance with set time frames and achievable components. 2.3 Task/work activities are assigned to appropriate team or individuals in accordance with agreed functions. 2.4 ***Resources*** are allocated as per requirements of the activity. 2.5 ***Schedule of work activities*** is coordinated with personnel concerned.
3. Implement work plans	3.1 ***Work methods and practices*** are identified in consultation with personnel concerned. 3.2 ***Work plans*** are implemented in accordance with set time frames, resources and ***standards.***
4. Monitor work activities	4.1 Work activities are monitored and compared with set objectives. 4.2 Work performance is monitored. 4.3 Deviations from work activities are reported and recommendations are coordinated with appropriate personnel and in accordance with set standards. 4.4 Reporting requirements are complied with in accordance with recommended format.

	4.5 Timeliness of report is observed. 4.6 Files are established and maintained in accordance with standard operating procedures.
5. Review and evaluate work plans and activities	5.1 Work plans, strategies and implementation are reviewed based on accurate, relevant and current information. 5.2 Review is done based on comprehensive consultation with appropriate personnel on outcomes of work plans and reliable feedback. 5.3 Results of review are provided to concerned parties and formed as the basis for adjustments/simplifications to be made to policies, processes and activities. 5.4 Performance appraisal is conducted in accordance with organization rules and regulations. 5.5 Performance appraisal report is prepared and documented regularly as per organization requirements. 5.6 Recommendations are prepared and presented to ***appropriate personnel/authorities***. 5.7 ***Feedback mechanisms*** are implemented in line with organization policies.

Variable	**Range**
Objectives	May include but not limited to: • Specific • General
Resources	May include but not limited to: • Personnel • Equipment and technology • Services • Supplies and materials • Sources for accessing specialist advice • Budget
Schedule of work activities	May include but not limited to: • Daily • Work-based • Contractual Regular
Work methods and practices	May include but not limited to: • Legislated regulations and codes of practice • Industry regulations and codes of practice • Occupational health and safety practices

Work plans	May include but not limited to: • Daily work plans • Project plans • Program plans • Resource plans • Skills development plans • Management strategies and objectives
Standards	May include but not limited to: • Performance targets • Performance management and evaluation systems • Occupational standards • Employment contracts • Client contracts • Discipline procedures • Workplace assessment guidelines • Internal quality assurance • Internal and external accountability and auditing requirements • Training Regulation Standards and Safety Standards
Appropriate personnel/ authorities	May include but not limited to: • Appropriate personnel include: • Management • Line Staff
Feedback mechanisms	May include but not limited to: • Verbal feedback • Informal feedback • Formal feedback • Questionnaire • Survey and Group discussion

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: • set objectives • plan and schedule work activities • implement work plans • monitor work activities • review and evaluate work plans and activities
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • organization's strategic plan, policies rules and regulations, laws and objectives for work unit activities and priorities • organizations policies, strategic plans, guidelines related to the role of the work unit • team work and consultation strategies

Underpinning Skills	Demonstrates skill to: • plan • lead • organize • coordinate • communicate • inter-and intra-person/motivation skills • present
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Migrate to New Technology**
Unit Code	**IND LPS4 20 0616**
Unit Descriptor	This unit defines the competence required to apply skills and knowledge in using new or upgraded technology. The rationale behind this unit emphasizes the importance of constantly reviewing work processes, skills and techniques in order to ensure that the quality of the entire business process is maintained at the highest level possible through the appropriate application of new technology. To this end, the person is typically engaged in on-going review and research in order to discover and apply new technology or techniques to improve aspects of the organization's activities.

Elements	Performance Criteria
1. Apply existing knowledge and techniques to technology and transfer	1.1 Situations are identified where existing knowledge can be used as the basis for developing new skills. 1.2 New or upgraded technology skills are acquired and used to enhance learning. 1.3 New or upgraded equipment are identified, classified and used where appropriate, for the benefit of the organization.
2. Apply functions of technology to assist in solving organizational problems	2.1 Testing of new or upgraded equipment is conducted according to the specification manual. 2.2 Features of new or upgraded equipment are applied within the organization 2.3 Features and functions of new or upgraded equipment are used for solving organizational problems 2.4 Sources of information relating to new or upgraded equipment are accessed and used
3. Evaluate new or upgraded technology performance	3.1 New or upgraded equipment is evaluated for performance, usability and against OHS standards**.** 3.2 ***Environmental considerations*** are determined from new or upgraded equipment. 3.3 ***Feedback*** is sought from users where appropriate.

Variables	Range
Environmental Considerations	May include but is not limited torecycling, safe disposal of packaging (e.g. cardboard, polystyrene, paper, plastic) and correct disposal of waste materials by an authorized body

Feedback	May include but is not limited to: • surveys, • questionnaires, • interviews and meetings

Evidence Guide	
Critical Aspects of Competence	Competence must confirm the ability to transfer the application of existing skills and knowledge to new technology
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • Broad awareness of current technology trends and directions in the industry (e.g. systems/procedures, services, new developments, new protocols) • Vendor product directions • Ability to locate appropriate sources of information regarding metal manufacturing and new technologies • Current industry products/services, procedures and techniques with knowledge of general features • Information gathering techniques
Underpinning Skills	Demonstrate skills of: • Research skills for identifying broad features of new technologies • Ability to assist in the decision making process • Literacy skills in regard to interpretation of technical manuals • Ability to solve known problems in a variety of situations and locations • Evaluate and apply new technology to assist in solving organizational problems • General analytical skills in relation to known problems
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Establish Quality Standards**
Unit Code	**IND LPS4 21 0616**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to establish quality specifications for work outcomes and work performance. It includes monitoring and participation in maintaining and improving quality, identifying critical control points in the production of quality output and assisting in planning and implementing of quality assurance procedures.

Elements	Performance Criteria
1. Establish quality specifications for product	1.1 Market specifications are ***sourced*** and ***legislated requirements*** identified. 1.2 Quality specifications are developed and agreed upon. 1.3 Quality specifications are documented and introduced to organization staff / personnel in accordance with the organization policy. 1.4 Quality specifications are updated when necessary.
2. Identify hazards and critical control points	2.1. Critical control points impacting on quality are identified. 2.2. Degree of risk for each hazard is determined. 2.3. Necessary documentation is accomplished in accordance with organization quality procedures
3. Assist in planning of quality assurance procedures	3.1 Procedures for each identified control point are developed to ensure optimum quality. 3.2 Hazards and risks are minimized through application of appropriate controls. 3.3 Processes are developed to monitor the effectiveness of quality assurance procedures.
4. Implement quality assurance procedures	4.1 Responsibilities for carrying out procedures are allocated to staff and contractors. 4.2 Instructions are prepared in accordance with the enterprise's quality assurance program. 4.3 Staff and contractors are given induction training on the quality assurance policy. 4.4 Staff and contractors are given in-service training relevant to their allocated ***safety procedures***.
5. Monitor quality of work outcome	5.1 Quality requirements are identified.

	5.2 Inputs are inspected to confirm capability to meet quality requirements. 5.3 Work is conducted to produce required outcomes. 5.4 Work processes are monitored to confirm quality of output and/or service. 5.5 Processes are adjusted to maintain outputs within specification.
6. Participate in maintaining and improving quality at work	6.1 Work area, materials, processes and product are routinely monitored to ensure compliance with quality requirements. 6.2 Non-conformance in inputs, process, product and/or service is identified and reported according to workplace reporting requirements. 6.3 Corrective action is taken within level of responsibility, to maintain quality standards. 6.4 Quality issues are raised with designated personnel.
7. Report problems that affect quality	7.1 Potential or existing quality problems are recognized. 7.2 Instances of variation in quality are identified from specifications or work instructions. 7.3 Variation and potential problems are reported to supervisor/manager according to enterprise guidelines.

Variable	Range
Sourced	May include but is not limited to: • End-users • Customers or stakeholders
Legislated requirements	May include but is not limited to: • Verification of product quality as part of consumer legislation or specific legislation related to product content or composition.
Safety procedures.	May include but is not limited to: • Use of tools and equipment for fabrication/production/ manufacturing works • Workplace environment and handling of material safety, • Following occupational health and safety procedures designated for the task • Respect the policies, regulations, legislations, rule and procedures for manufacturing/production/fabrication works

Evidence Guide	
Critical Aspect of Competence	Demonstrates skills and knowledge to: • Monitor quality of work • Establish quality specifications for product • Participate in maintaining and improving quality at work • Identify hazards and critical control points in the production of quality product • Assist in planning of quality assurance procedures • Report problems that affect quality • Implement quality assurance procedures
Underpinning Knowledge	Demonstrates knowledge of: • work and product quality specifications • quality policies and procedures • improving quality at work • hazards and critical points of operation • obtaining and using information • applying federal and regional legislation within day-today work activities • accessing and using management systems to keep and maintain accurate records • requirements for correct preparation and operation • technical writing
Underpinning Skills	Demonstrates skills to: • monitor quality of work • establish quality specifications for product • participate in maintaining and improving quality at work • identify hazards and critical control points in the production of quality product • assist in planning of quality assurance procedures • report problems that affect quality • implement quality assurance procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Develop Individuals and Team**
Unit Code	**IND LPS4 22 0616**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to determine individual and team development needs and facilitate the development of the workgroup.

Elements	Performance Criteria
1. Provide team leadership	1.1 ***Learning and development needs*** are systematically identified and implemented in line with ***organizational requirements***. 1.2 Learning plan to meet individual and group training and developmental needs is collaboratively developed and implemented. 1.3 Individuals are encouraged to self-evaluate performance and identify areas for improvement. 1.4 ***Feedback on performance*** of team members is collected from relevant sources and compared with established team learning process.
2. Foster individual and organizational growth	2.1 Learning and development program goals and objectives are identified to match the specific knowledge and skills requirements of Competence standards. 2.2 ***Learning delivery methods*** are made appropriate to the learning goals, the learning style of participants and availability of equipment and resources. 2.3 Workplace learning opportunities and coaching/ mentoring assistance are provided to facilitate individual and team achievement of competencies. 2.4 Resources and timelines required for learning activities are identified and approved in accordance with organizational requirements.
3. Monitor and evaluate workplace learning	3.1 Feedback from individuals or teams is used to identify and implement improvements in future learning arrangements. 3.2 Outcomes and performance of individuals/teams are assessed and recorded to determine the effectiveness of development programs and the extent of additional support. 3.3 Modifications to learning plans are negotiated to improve the efficiency and effectiveness of learning.

	3.4 Records and reports of competence are maintained within organizational requirement.
4. Develop team commitment and cooperation	4.1 Open communication processes to obtain and share information is used by team. 4.2 Decisions are reached by the team in accordance with its agreed roles and responsibilities. 4.3 Mutual concern and camaraderie are developed in the team.
5. Facilitate accomplishment of organizational goals	5.1 Team members are actively participated in team activities and communication processes. 5.2 Individual and joint responsibility is developed by team's members for their actions. 5.3 Collaborative efforts are sustained to attain organizational goals.

Variable	**Range**
Learning and development needs	May include but is not limited to: • Coaching, monitoring and/or supervision • Formal/informal learning program • Internal/external training provision • Work experience/exchange/opportunities • Personal study • Career planning/development • Performance evaluation • Workplace skills assessment • Recognition of prior learning
Organizational requirements	May include but is not limited to: • Quality assurance and/or procedures manuals • Goals, objectives, plans, systems and processes • Legal and organizational policy/guidelines and requirements • Safety policies, procedures and programs • Confidentiality and security requirements • Business and performance plans • Ethical standards • Quality and continuous improvement processes and standards
Feedback on performance	May include but is not limited to: • Formal/informal performance evaluation • Obtaining feedback from supervisors and colleagues • Obtaining feedback from clients

	• Personal and reflective behavior strategies • Routine and organizational methods for monitoring service delivery
Learning delivery methods	May include but is not limited to: • On the job coaching or monitoring • Problem solving • Presentation/demonstration • Formal course participation • Work experience and involvement in professional networks • Conference and seminar attendance

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: • identify and implement learning opportunities for others • give and receive feedback constructively • facilitate participation of individuals in the work of the team • negotiate plans to improve the effectiveness of learning • prepare learning plans to match skill needs • access and designate learning opportunities
Underpinning Knowledge and Attitude	Demonstrates knowledge of: • coaching and monitoring principles • how to work effectively with team members who have diverse work styles, aspirations, cultures and perspective • how to facilitate team development and improvement • methods and techniques to obtain and interpreting feedback • methods for identifying and prioritizing personal development opportunities and options • career paths and competence standards in the industry
Underpinning Skills	Demonstrates skills to: • read and understand a variety of texts, preparing general information and documents according to target audience; spell with accuracy; use grammar and punctuation effective relationships and conflict management • communicate including receiving feedback and reporting, maintaining effective relationships and conflict management • plan and organize required resources and equipment to meet learning needs • coach and mentor skills to provide support to colleagues • report to organize information; assess information for relevance and accuracy; identify and elaborate on learning outcomes • facilitate and conduct small group training sessions

	• relate to people from a range of social, cultural, physical and mental backgrounds
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Utilize Specialized Communication Skills**
Unit Code	**IND LPS4 23 0616**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use specialized communication skills to meet specific needs of internal and external clients, conduct interviews, facilitate group discussions, and contribute to the development of communication strategies.

Elements	Performance Criteria
1. Meet common and specific communication needs of clients and colleagues	1.1 Specific communication needs of clients and colleagues are identified and met. 1.2 Different approaches are used to meet communication needs of clients and colleagues. 1.3 Conflict is addressed promptly and in a timely way and in a manner which does not compromise the standing of the organization.
2. Contribute to the development of communication strategies	2.1 ***Strategies*** for internal and external dissemination of information are developed, promoted, implemented and reviewed as required. 2.2 Channels of communication are established and reviewed regularly. 2.3 Coaching in effective communication is provided 2.4 Work related network and relationship are maintained as necessary. 2.5 Negotiation and conflict resolution strategies are used where required. 2.6 Communication with clients and colleagues is appropriate to individual needs and organizational objectives.
3. Represent the organization	3.1 When participating in internal or external fora, presentation is relevant, appropriately researched and presented in a manner to promote the organization. 3.2 Presentation is made clear and sequential and delivered within a predetermined time. 3.3 Appropriate media is utilized to enhance presentation. 3.4 Differences in views are respected. 3.5 Written communication is made consistent with organizational standards. 3.6 Inquiries are responded in a manner consistent with organizational standard.

4. Facilitate group discussion	4.1 Mechanisms which enhance ***effective group interaction*** are defined and implemented. 4.2 Strategies which encourage all group members to participate are used routinely. 4.3 Objectives and agenda are routinely set and followed for meetings and discussions. 4.4 Relevant information are provided to group to facilitate outcomes. 4.5 Evaluation of group communication strategies is undertaken to promote participation of all parties. 4.6 Specific communication needs of individuals are identified and addressed.
5. Conduct interview	5.1 A range of appropriate communication strategies are employed in ***interview situations***. 5.2 Different ***types of interview*** is conducted in accordance with the organizational procedures. 5.3 Records of interviews are made and maintained in accordance with organizational procedures. 5.4 Effective questioning, listening and nonverbal communication techniques are used to ensure that required message is communicated.

Variable	**Range**
Strategies	May include but is not limited to: • Recognizing own limitations • Utilizing techniques and aids • Providing written drafts • Verbal and non verbal communication
Effective group interaction	May include but is not limited to: • Identifying and evaluating what is occurring within an interaction in a non-judgmental way • Using active listening • Making decision about appropriate words, behavior • Putting together response which is culturally appropriate • Expressing an individual perspective • Expressing own philosophy, ideology and background and exploring impact with relevance to communication
Interview situations	May include but is not limited to: • Establish rapport • obtain facts and information • Facilitate resolution of issues • Develop action plans

	• Diffuse potentially difficult situation
Types of Interview	May include but is not limited to: • Related to staff issues • Routine • Confidential • Evidential • Non-disclosure • Disclosure

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: • Demonstrate effective communication skills with clients and work colleagues accessing service • Adopt relevant communication techniques and strategies to meet client particular needs and difficulties
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • communication process • dynamics of groups and different styles of group leadership • communication skills relevant to client groups
Underpinning Skills	Demonstrates skills to: • full range of communication techniques including: ➢ active listening ➢ feedback ➢ interpretation ➢ role boundaries setting ➢ negotiation ➢ establishing empathy ➢ communication strategies • communicate to fulfill job roles as specified by the organization
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Manage Micro, Small and Medium Enterprises (MSMEs)**
Unit Code	**IND LPS4 24 0616**
Unit Descriptor	This unit covers knowledge, skills and attitude required in running Micro, Small and Medium enterprises. The strategies involve developing, monitoring and managing work activities and financial information, developing effective work habits, and adjusting work schedules as needed.

Elements	Performance Criteria
1. Develop and communicate Strategic work plan	1.1 The importance of planning is sensitized before acting and about the importance of plans to reduce risks and to inhibit impulsive actions and discussed. 1.2 The basics of planning and beginning with goal setting are communicated. 1.3 The achievement of measurable and realistic short-term business objective is addressed. 1.4 How to develop realistic activities plans and schedule is discussed. 1.5 ***Major components of work plan*** are introduced and understood. 1.6 The importance of constant reviewing their plans is understood by monitoring the results.
2. Identify daily work requirements and Develop effective work habits	2.1 Basic concept about effect working culture is discussed and understood. 2.2 Different approaches to work culture are developed and understood. 2.3 Work requirements are identified for a given time period by taking into consideration of ***resources*** and constraints. 2.4 Work activities are prioritized based on business needs, requirements and deadlines. 2.5 If appropriate, work is allocated to relevant staff or contractors to optimize efficiency. 2.6 Work and personal priorities are identified and a balance is achieved between competing priorities using appropriate ***time management strategies***. 2.7 Input is sought from ***internal and external sources*** and used to develop and refine new ideas and approaches.

	2.8 Business or inquiries is/are responded to promptly and effectively. 2.9 Information is presented in a format appropriate to the industry and audience.
3. Manage Marketing of MSMEs	3.1 Information on market and business needs is analyzed and market opportunities identified. 3.2 Marketing mix and components are evaluated. 3.3 Marketing mix for specific target market is determined. 3.4 Marketing mix is monitored and continual adjusted against marketing performance.
4. Manage Human Resources	4.1 ***Human resource rules, regulations law and procedures*** are identified and determined. 4.2 The existing human resource is audited, and gaps are identified. 4.3 Recruitment and selection are conducted based on the organizational requirements. 4.4 Selected candidates are oriented and placed for the appropriate position. 4.5 Appraisal of employees' performance is conducted. 4.6 Appraisal result is used for training and development, promotion, compensation, disciplinary measures and other purposes as required. 4.7 ***Employee relations*** are maintained.
5. Manage production and Operation	5.1 Production /operation plan is developed and implemented. 5.2 Required inputs are purchased and adequate inventories maintained. 5.3 Production /operation process is checked and controlled. 5.4 Quality control is applied and maintained.
6. Maintain financial records and use for decision making	6.1 The objective and benefits of financial records are discussed and understood. 6.2 Asset, liabilities and capital are identified and recorded. 6.3 Balance sheet and different journals are discussed. 6.4 Business transactions are discussed, analyzed, classified and recorded.

	6.5 Daily financial records are maintained correctly in accordance with legal and accounting requirements. 6.6 Invoices and payments are prepared and distributed in timely manner and in accordance with legal requirements. 6.7 Outstanding accounts are collected or followed-up. 6.8 Revenue, expense and costs are identified and discussed. 6.9 Different ledgers and subsidiary ledgers are discussed and maintained. 6.10 Profit and loss report is prepared. 6.11 Financial interpretation is conducted with assistant from the appropriate person. 6.12 Financial manual is prepared.
7. Monitor, Manage and Evaluate work performance	7.1 People, resources and/or equipment are coordinated to provide optimum results. 7.2 Staff, clients and/or contractors are communicated within a clear and regular manner, to monitor work in relation to ***business goals*** or timelines. 7.3 ***Problem solving techniques*** are applied to work situations to overcome difficulties and achieve positive outcomes. 7.4 Opportunities for improvements are monitored according to business demands. 7.5 Work schedules are adjusted to incorporate necessary modifications to existing work and routines or changing needs and requirements. 7.6 Proposed changes are clearly communicated and recorded to aid in future planning and evaluation. 7.7 Relevant codes of practice are used to guide an ethical approach to workplace practices and decisions.

Variable	**Range**
Major components of work plan	May include but is not limited to: • Objective • Responsibilities • Resources (human, materials, finance, time, etc) • Activities

Resources	May include but is not limited to: • Human resource • Money • Time • Machines • Equipment • Space
Time management strategies	May include but is not limited to: • Prioritizing and anticipating • Short term and long term planning and scheduling • Creating a positive and organized work environment • Clear timelines and goal setting that is regularly reviewed and adjusted as necessary • Breaking large tasks into smaller tasks • Getting additional support if identified and necessary
Internal and external sources	May include but is not limited to: • Staff and colleagues • Management, supervisors, advisors or head office • Relevant professionals such as lawyers, accountants, management consultants • Professional associations
Human resource rules , regulations law and procedures	May include but is not limited to: • Recruitment and selection • Orientation and placement • Training and development • Performance appraisal and reward system • Disciplinary procedures • Movement and separation • Industrial relation
Employee relations	May include but is not limited to: • Relationship within employees • Relationship among employees and management and labor union • Relationship between labor union and government
Business goals	May include but is not limited to: • Sales targets • Budgetary targets • Team and individual goals • Production targets • Reporting deadlines
Problem solving techniques	May include but is not limited to: • Brainstorming • Fish bone

	• Focus group discussion • Problem tree

Evidence Guide	
Critical Aspects of Competence	A person must be able to demonstrate: • Ability to identify daily work requirements and allocate work appropriately • Ability to interpret financial documents in accordance with legal requirements • The ability to prepare strategic plan • The ability to develop effective work habit • The ability to manage marketing of MSEs • The ability to manage human resources of MSEs • the ability to manage production/operation of MSEs • The ability to maintain financial records of MSEs • The ability to manage, monitor and evaluate work performance of MSMEs
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: • Strategic plan • Working culture • Time management strategy • Marketing Mix • Relevant marketing, operation/production, human resource and financial management • Human resource functions • Production/operation functions • Monitoring and evaluation • Problem solving techniques • Federal and Local Government legislative requirements affecting business operations, especially in regard to Occupational Health and Safety (OHS), equal employment opportunity, industrial relations and anti-discrimination • Relevant industry code of practice • Planning techniques to establish realistic timelines and priorities • Identification of relevant performance measures • Quality assurance principles and methods
Underpinning Skills	Demonstrate skills to: • Technical or specialist skills relevant to the business operation • Interpret legal requirements, company policies and procedures and immediate, day-to-day demands • Strategic planning skills

	• Human relation skills • Communicate using questioning, clarifying, reporting, and giving and receiving constructive feedback • Numeracy skills for performance information, setting targets and interpreting financial documents and reports • Technical skills to interpret business document, reports and financial statements and projections • Relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities • Solve problem and develop contingency plans • Using computers and software packages to record and manage data and to produce reports • Evaluate using assessment work and outcomes • Observe for identifying appropriate people, resources and to monitor work
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Tree Latex Harvesting & Processing Supervision Level IV	
Unit Title	**Apply Problem Solving Techniques and Tools**
Unit Code	**IND LPS4 25 0616**
Unit Descriptor	This unit of competency covers the knowledge, skills and attitude required to apply scientific problem solving techniques and tools to enhance quality, productivity and other kaizen elements on continual basis.

Elements	Performance criteria
1. Identify and select theme/problem.	1.1 ***Safety requirements*** are followed in accordance with safety plans and procedures. 1.2 All possible problems related to the process /Kaizen elements are listed using ***statistical tools and techniques***. 1.3 All possible problems related to kaizen elements are identified and listed on Visual Management Board/Kaizen Board. 1.4 Problems are classified based on obviousness of cause and action. 1.5 Critical factors like the number of customers affected, Potentials for bottlenecks, and number of complaints etc… is selected. 1.6 Problems related to priorities of ***Kaizen Elements*** are given due emphasis and selected.
2. Grasp current status and set goal.	2.1 The extent of the problem is defined. 2.2 Appropriate and achievable goal is set.
3. Establish activity plan.	3.1 The problem is confirmed. 3.2 High priority problem is selected. 3.3 The extent of the problem is defined. 3.4 Activity plan is established as per ***5W1H***.
4. Analyze causes of a problem.	4.1 All possible causes of a problem are listed. 4.2 Cause relationships are analyzed using***4M1E***. 4.3 Causes of the problems are identified. 4.4 Root causes are selected. 4.5 The root cause which is most directly related to the problem is selected.

	4.6 All possible ways are listed using ***creative idea generation*** to eliminate the most critical root cause. 4.7 The suggested solutions are carefully tested and evaluated for potential complications. 4.8 Detailed summaries of the action plan are prepared to implement the suggested solution.
5. Examine countermeasures and their implementation.	5.1 Action plan is implemented by ***medium KPT*** members. 5.2 Implementation is monitored according to the agreed procedure and activities are checked with preset plan.
6. Assess effectiveness of the solution.	6.1 ***Tangible and intangible results*** are identified. 6.2 The results are verified over time. 6.3 Tangible results are compared with targets using ***various types of diagram***.
7. Standardize and sustain operation.	7.1 If the goal is achieved, the new procedures are standardized and made part of daily activities. 7.2 All employees are trained on the new ***Standard Operating Procedures (SOPs)***. 7.3 SOP is verified and followed by all employees. 7.4 The next problem is selected to be tackled by the team.

Variables	**Range**
Safety requirements	may include but not limited to: • OHS requirements include legislation, material safety, managements system, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislations, relevant health regulation, manual handling procedure and organization insurance requirements
Statistical tools and techniques	may include but not limited to: • 7 QC tools may include: ➢ Stratification ➢ Pareto Diagram ➢ Cause and Effect Diagram ➢ Check Sheet ➢ Control Chart/Graph ➢ Histogram ➢ Scatter Diagram • QC techniques may include:

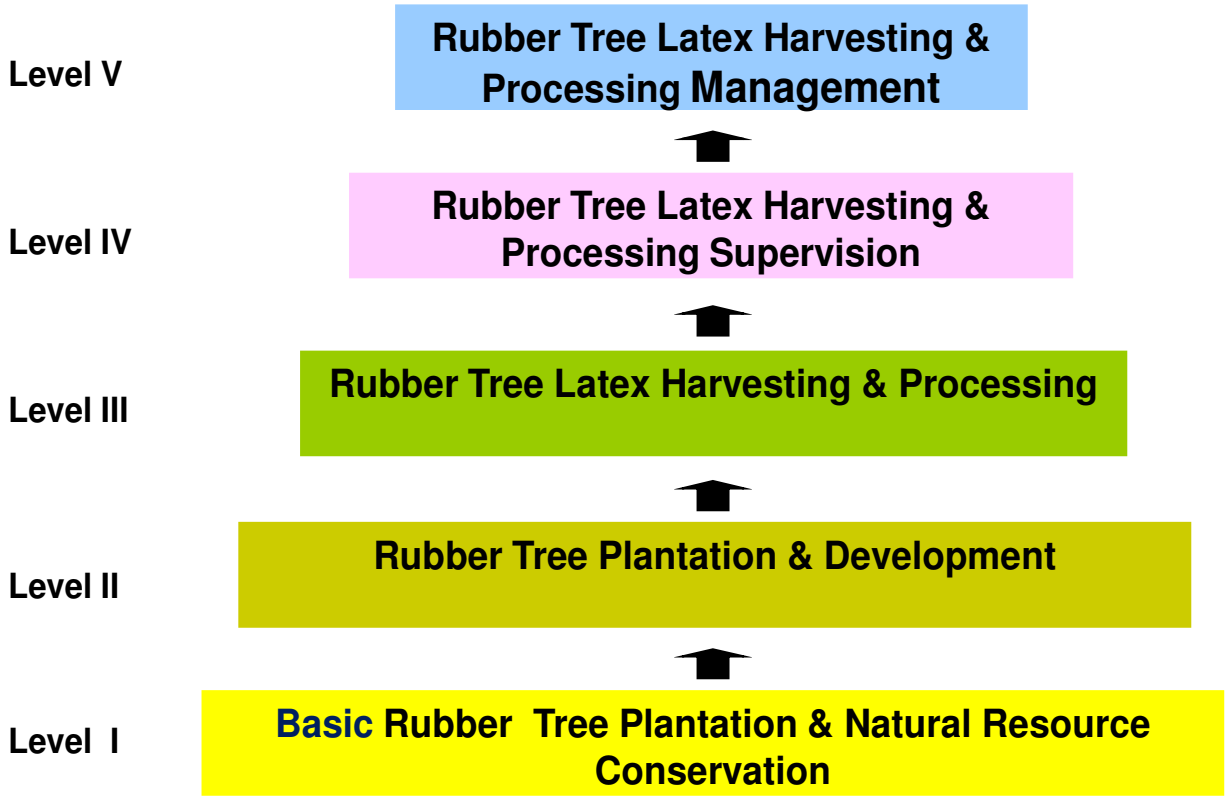
	➢ Brain storming ➢ Why analysis ➢ What if analysis ➢ 5W1H
Kaizen Elements	may include but not limited to: • Quality • Cost • Productivity • Delivery • Safety • Moral • Environment and Gender equality
5W1H	may include but not limited to: • Who: person in charge • Why: objective • What: item to be implemented • Where: location • When: time frame • How: method
4M1E	may include but not limited to: • Man • Machine • Method • Material and • Environment
Creative idea generation	may include but not limited to: • Brainstorming • Exploring and examining ideas in varied ways • Elaborating and extrapolating • Conceptualizing
Medium KPT	may include but not limited to: • 5S • 4M (machine, method, material and man) • 4P (Policy, procedures, People and Plant) • PDCA cycle • Basics of IE tools and techniques
Tangible and intangible results	may include but not limited to: • Tangible result may include: ➢ Quantifiable data • Intangible result may include: ➢ Qualitative data
Various types of diagram	may include but not limited to: • Line graph

	• Bar graph • Pie-chart • Scatter diagram • Affinity diagram
Standard Operating Procedures (SOPs)	may include but not limited to: • The customer demand • The most efficient work routine (steps) • The cycle times required to complete work elements • All process quality checks required to minimize defects/errors • The exact amount of work in process required

Evidence Guide	
Critical Aspects of Assessment	Demonstrates skills and knowledge competencies to: • Apply all relevant procedures and regulatory requirements to ensure quality and productivity of an organization. • Detect non-conforming products/services in the work area • Apply effective problem solving approaches/strategies. • Implement and monitor improved practices and procedures • Apply statistical quality control tools and techniques.
Underpinning Knowledge and Attitude	Demonstrates knowledge of: • QC story/PDCA cycle/ • QC story/ Problem solving steps • QCC techniques • 7 QC tools • Basic IE tools and techniques. • SOP • Quality requirements associated with the individual's job function and/or work area • Workplace procedures associated with the candidate's regular technical duties • Relevant health, safety and environment requirements • organizational structure of the enterprise • Lines of communication • Methods of making/recommending improvements. • Reporting procedures
Underpinning Skills	Demonstrates skills to: • Apply problem solving techniques and tools • Apply statistical analysis tools • Apply Visual Management Board/Kaizen Board. • Detect non-conforming products or services in the work area

	• Document and report information about quality, productivity and other kaizen elements. • Contribute effectively within a team to recognize and recommend improvements in quality, productivity and other kaizen elements. • Implement and monitor improved practices and procedures. • Organize and prioritize activities and items. • Read and interpret documents describing procedures • Record activities and results against templates and other prescribed formats.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Sector: INDUSTRY DEVELOPMENT
Sub-Sector: RUBBER TREE DEVELOPMENT



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This Occupational Standard was developed on June 2016 at Center of Excellence for Engineering (CEE), Addis Ababa, Ethiopia.

COMMENT TEMPLATE

The Federal TVET Agency values your feedback of the document.
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