

Federal Democratic Republic of Ethiopia  
OCCUPATIONAL STANDARD



**BAMBOO HARVESTING AND  
POST HARVEST WORKS**



**NTQF Level I**



*Ministry of Education  
April 2011*

## 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 Ethiopia Occupational Standard (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 of Competence describes a distinct work activity. It is documented in a standard format that comprises:

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

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

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

- the chart with an overview of all Units of Competence for the respective occupation including the Unit Codes and the Unit Titles
- the contents of each Unit of Competence (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

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## UNIT OF COMPETENCE CHART

Occupational Standard: Bamboo Harvesting and Post Harvest Works

Occupational Code: IND BHP

### *NTQF Level I*

[IND BHP1 01 0411](#)  
Harvest Bamboo  
Culms

[IND BHP1 02 0411](#)  
Air Dry and Store  
Bamboo

[IND BHP1 03 0411](#)  
Maintain Simple Hand  
Tools and Equipment

[IND BHP1 04 0411](#)  
Use Hand Tools

[IND BHP1 05 0411](#)  
Perform  
Measurements and  
Calculations

[IND BHP1 06 0411](#)  
Collect and Store  
Bamboo Processing  
Waste Materials

[IND BHP1 07 0411](#)  
Apply Quality  
Standards

[IND BHP1 08 0411](#)  
Work with Others

[IND BHP1 09 0411](#)  
Receive and Respond  
to Workplace  
Communication

[IND BHP1 10 0411](#)  
Demonstrate Work  
Values

[IND BHP1 11 0411](#)  
Develop  
Understanding of  
Entrepreneurship

[IND BHP1 12 1012](#)  
Apply 5S Procedures

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Harvest Bamboo Culms
Unit Code	<a href="#">IND BHP1 01 0411</a>
Unit Descriptor	This unit deals with the skills and knowledge required to harvest bamboo from the field. It includes the ability to collect, cut and clean bamboo from the field.

Elements	Performance Criteria
1. Prepare for work	1.1 Work requirements are correctly identified from instructions 1.2 Quality assurance requirements are recognized and adhered to in accordance with enterprise operation 1.3 <b>Safety requirements</b> are followed in accordance with safety plans and policies 1.4 <b>Tools and equipment</b> selected to carry out tasks are checked for serviceability and any faults are rectified or reported prior to commencement 1.5 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied
2. Collect bamboo from field	2.1 Select tools for cutting bamboo from field 2.2 Harvesting method is identified. 2.3 Marked bamboo ready for harvesting is identified 2.4 Cut bamboo in accordance to harvesting procedures and techniques
3. Crop and clean bamboo	3.1 Select tools for cropping and cleaning bamboo 3.2 Remove branches without causing damage to the culm 3.3 Knot and nodes are cleaned 3.4 Harvested poles are stacked and readied for drying/storing
4. Complete work	4.1 Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained following workplace procedures 4.2 Cut-off, branches and leaves are sorted and collected following workplace procedures. 4.3 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices

<b>Variables</b>	<b>Range</b>
Safety requirements	<ul style="list-style-type: none"> <li>• OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures</li> <li>• Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organization insurance requirements</li> </ul>
Tools, Equipment and materials	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Matchete</li> <li>• Bolo/knife</li> <li>• Hack Saw</li> <li>• Bow Saw</li> <li>• Oil Stone</li> <li>• Rope</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• prepared for harvesting work</li> <li>• harvest bamboo</li> <li>• crop and clean bamboo</li> <li>• observed OHS procedures and measures</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of</p> <ul style="list-style-type: none"> <li>• workplace and equipment safety requirements</li> <li>• quality requirements and safe work methods</li> <li>• tools and equipment types, characteristics, uses and maintenance</li> <li>• Harvesting and cutting techniques</li> <li>• materials handling, storage and environmentally friendly waste management</li> <li>• Properties of bamboo</li> <li>• identification of hand and/or power tools, materials, equipment, processes and procedures</li> </ul>
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> <li>• Lay-outing</li> <li>• Use hand tools</li> <li>• Identify mature bamboo</li> <li>• Perform housekeeping</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• workplace or fully equipped assessment location with necessary tools and equipment as well as consumable materials</li> </ul>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation/Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Competency may be assessed in the work place or in a simulated work place setting</p>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Air Dry and Store Bamboo
Unit Code	<a href="#">IND BHP1 02 0411</a>
Unit Descriptor	This unit describes the competences required to dry and store bamboo culms or poles. It includes preparing the drying yards and sorting cut bamboos canes or poles (cropped culms).

Elements	Performance Criteria
1. Prepare stock yard	1.1 Stockyard is designed according to bamboo specifications 1.2 Stockyard is cleaned and tidied for culm stock piling 1.3 OHS and 5S principles are applied for quality standard in pole/cane stocking and storage 1.4 Floor of drying yard is prepared and arranged in accordance to culm drying specifications
2. Sort bamboo poles/canes	2.1 Bamboos culms are sorted according to seasoned harvest, and age 2.2 Bamboo culms are classified according to species, dimensions, defects, position, culm wall thickness, place of origin and usage 2.3 Bamboo culm are labeled according to its specifications and final use 2.4 Bamboo culms are <b>cleaned</b> and readied for drying
3. Store/stock bamboo poles/canes	3.1 Storage area is prepared and sprayed with insecticides to protect bamboo culms and in accordance with OHS procedures 3.2 Culms are fumigated to prevent forming of disease before storage 3.3 Culms are stored to its specified location in the storage area following proper stacking procedures 3.4 Inventory and other necessary documentation are accomplished in accordance with enterprise standard procedures

Variable	Range
Occupational Health and Safety (OHS)	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• OHS requirements include legislation, material safety management systems, hazardous substances and local safe operating procedures or equivalent</li> <li>• Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organization insurance requirements</li> </ul>
Clean	Bamboo may be washed with water and sand solution until clean
Materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• insecticide</li> <li>• gravel</li> <li>• sand</li> <li>• stones</li> <li>• poles</li> <li>• roofing material</li> <li>• labeling materials</li> <li>• cleaning materials</li> <li>• company forms/stationery</li> <li>• bamboo Culms</li> </ul>
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• weighing balance/scale</li> <li>• measuring materials</li> <li>• cutting tools</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> <li>• preparing stock yard</li> <li>• sorting bamboo cane/poles</li> <li>• drying and straightening of bamboo poles/canes</li> <li>• fumigation</li> <li>• store/stock bamboo poles/canes</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• Procedures of stockyard preparation</li> <li>• Procedures of bamboo cane/pole sorting</li> <li>• Procedures of bamboo cane/pole drying</li> <li>• Understanding and interpreting communications</li> </ul>
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> <li>• properly use of tools and equipment</li> <li>• respond to workplace communication</li> <li>• follow standard operating procedures in sorting, drying, fumigating and storing bamboo poles/canes</li> </ul>

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: <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting



Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Maintain Simple Hand Tools and Equipment
Unit Code	<a href="#">IND BHP1 03 0411</a>
Unit Descriptor	This unit covers the knowledge, skills, and attitude required on checking condition, performing preventive maintenance and storing of tools and equipment based on the required performance standard.

Elements	Performance Criteria
1. Check condition of tools and equipment	<p>1.1 <b>Materials, tools and equipment</b> are identified according to classification and job requirements</p> <p>1.2 Non-functional tools and equipment are segregated and labeled according to classification</p> <p>1.3 Safety of tools and equipment are observed in accordance with manufacturer's instructions</p> <p>1.4 Condition of <b>PPE</b> are checked in accordance with manufacturer's instructions</p>
2. Perform basic preventive maintenance	<p>2.1 Appropriate lubricants are identified according to types of equipment</p> <p>2.2 Tools and equipment are lubricated according to preventive maintenance schedule or manufacturer's specifications</p> <p>2.3 Measuring instruments are checked and calibrated in accordance with manufacturer's instructions</p> <p>2.4 Tools are cleaned and lubricated according to standard procedures</p> <p>2.5 Defective instruments, equipment and accessories are inspected and replaced according to manufacturer's specifications</p> <p>2.6 Tools are inspected, repaired and replaced after use</p> <p>2.7 Work place is cleaned and kept in safe state in line with OHS regulations</p>
3. Store tools and equipment	<p>3.1 Inventory of tools, instruments and equipment are conducted and recorded as per company practices</p> <p>3.2 Tools and equipment are stored safely in appropriate locations in accordance with manufacturer's specifications or company procedures</p>

<b>Variables</b>	<b>Range</b>
Materials	Including but not limited to: <ul style="list-style-type: none"> <li>• Lubricants</li> <li>• Cleaning materials</li> <li>• Rust remover</li> <li>• Rugs</li> <li>• Spare parts</li> </ul>
Tools and Equipment	Including but not limited to: <ul style="list-style-type: none"> <li>• Tools Cutting tools - hacksaw, crosscut saw, rip saw Boring tools - auger, brace, grinlet, hand drill Holding tools - vise grip, C-clamp, bench vise</li> <li>• Measuring instruments/equipment</li> </ul>
PPE	Including but not limited to: <ul style="list-style-type: none"> <li>• Goggles</li> <li>• Gloves</li> <li>• Safety shoes</li> <li>• Aprons/Coveralls</li> </ul>
Forms	<ul style="list-style-type: none"> <li>• Maintenance schedule forms</li> <li>• Requisition slip</li> <li>• Inventory Form</li> <li>• Inspection Form</li> <li>• Procedures</li> </ul>

<b>Evidence Guide</b>	
Critical aspects of Competence	<p>Assessment requires that the candidate:</p> <ul style="list-style-type: none"> <li>• Selected and used appropriate processes, tools and equipment to carry out task</li> <li>• Identified functional and non-functional tools and equipment</li> <li>• Checked, lubricated and calibrated tools, equipment and instruments according to manufacturer's specifications</li> <li>• Replaced defective tools, equipment and their accessories</li> <li>• Observed and applied safe handling of tools and equipment and safety work practices</li> <li>• Prepared and submitted inventory report, where applicable</li> <li>• Maintained workplace in accordance with OHS regulations</li> <li>• Stored tools and equipment safely in appropriate locations and in accordance with company practices</li> </ul>
Underpinning Knowledge	<ul style="list-style-type: none"> <li>• Safety Practices <ul style="list-style-type: none"> <li>• Use of PPE</li> <li>• Handling of tools and equipment</li> <li>• Good housekeeping</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Materials, Tools and Equipment <ul style="list-style-type: none"> <li>• Types and uses of lubricants</li> <li>• Types and uses of cleaning materials</li> <li>• Types and uses of measuring instruments and equipment</li> </ul> </li> <li>• Preventive Maintenance <ul style="list-style-type: none"> <li>• Methods and techniques</li> <li>• Procedures</li> </ul> </li> </ul>
Underpinning Skills	<ul style="list-style-type: none"> <li>• Preparing maintenance materials, tools and equipment</li> <li>• Proper handling of tools and equipment</li> <li>• Performing preventive maintenance</li> <li>• Following instructions</li> </ul>
Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>• Workplace</li> <li>• Maintenance schedule</li> <li>• Maintenance materials, tools and equipment relevant to the proposed activity/task</li> </ul>
Methods of Assessment	<p>Competence should be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Demonstration/Observation with Oral Questioning</li> </ul>
Context of Assessment	<p>Competence assessment may occur in workplace or any appropriate simulated environment</p>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Use Hand Tools
Unit Code	<a href="#">IND BHP1 04 0411</a>
Unit Descriptor	This unit covers the knowledge, skills and attitudes required in safe use and handling of tools.

Elements	Performance Criteria
1. Plan and prepare tasks and workstation	1.1 Tasks to be undertaken are properly identified 1.2 Appropriate <b>hand tools</b> are identified and selected according to the task requirements 1.3 Workstation is made ready in accordance with job requirements/specifications
2. Prepare hand tools	2.1 Appropriate hand tools and equipment are checked for proper operation and safety 2.2 Unsafe or faulty tools are identified and marked for repair according to enterprise standard procedure
3. Use hand tools and test equipment	3.1 Tools are used according to tasks undertaken 3.2 All safety procedures in using tools are observed at all times and appropriate <b>personal protective equipment (PPE)</b> are used 3.3 Malfunctions, unplanned or unusual events are reported to the supervisor
4. Handle tools	4.1 Tools are handled without damage according to procedures 4.2 Tools are cleaned after every use and before storage according to standard operational procedures 4.3 Tools are stored safely in appropriate locations in accordance with manufacturer's specifications or standard operating procedures

Variable	Range
Hand tools	<ul style="list-style-type: none"> <li>Hand tools for adjusting, dismantling, assembling, finishing, cutting, sanding, laminating</li> <li>Tool set includes the following but not limited to: screw drivers, pliers, punches, wrenches, and files,</li> </ul>
Personal Protective Equipment (PPE)	<ul style="list-style-type: none"> <li>Gloves</li> <li>Protective eyewear</li> <li>Apron/overall</li> </ul>

Maintenance	<ul style="list-style-type: none"> <li>• Cleaning</li> <li>• Lubricating</li> <li>• Tightening</li> <li>• Simple tool repairs</li> <li>• Hand sharpening</li> <li>• Adjustment using correct procedures</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Laboratory materials</li> <li>• Marking materials</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• demonstrated safe working practices at all times</li> <li>• communicated information about processes, events or tasks being undertaken to ensure a safe and efficient working environment</li> <li>• planned tasks in all situations and reviewed task requirements</li> <li>• performed all tasks to specification</li> <li>• maintained and stored tools in appropriate location</li> </ul>
Underpinning knowledge	<ul style="list-style-type: none"> <li>• Safety requirements in handling tools</li> <li>• Tools: Function, Operation, Common faults</li> <li>• Maintenance of tools</li> <li>• Storage of Tools</li> </ul>
Underpinning skills	<ul style="list-style-type: none"> <li>• Reading skills required to interpret work instruction and numerical skills</li> <li>• Communication skills</li> <li>• Problem solving in emergency situation</li> </ul>
Resource Implication	<p>Tools may include the following but not limited to:</p> <ul style="list-style-type: none"> <li>• Screw drivers, Pliers, Punches</li> <li>• Wrenches, files</li> </ul>
Method of assessment	<p>Competence in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Observation/Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Assessment may be conducted in the workplace or in a simulated work environment</p>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Perform Measurements and Calculations
Unit Code	<a href="#">IND BHP1 05 0411</a>
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in identifying and measuring objects based on the required performance standards.

Element	Performance Criteria
1. Select measuring instruments	<p>1.1 Object or component to be measured is identified, classified and interpreted according to the appropriate regular <b>geometric shape</b></p> <p>1.2 Measuring tools are selected/identified as per object to be measured or job requirements</p> <p>1.3 Correct specifications are obtained from relevant sources</p> <p>1.4 Appropriate measuring instruments are selected according to job requirements</p> <p>1.5 Alternative measuring tools are used without sacrificing cost and quality of work</p>
2. Carry out measurements and calculations	<p>2.1 Accurate measurements are obtained according to job requirements</p> <p>2.2 Alternative measuring tools are used without sacrificing cost and quality of work</p> <p>2.3 Calculation needed to complete work tasks are performed using the four basic process of addition (+), subtraction (-), multiplication (x) and division (/) including but not limited to: trigonometric functions, algebraic computations</p> <p>2.4 Calculations involving fractions, percentages and mixed numbers are used to complete workplace tasks</p> <p>2.5 Numerical computation is self-checked and corrected for accuracy</p> <p>2.6 Instruments are read to the limit of accuracy of the tool</p> <p>2.7 Systems of measurement identified and converted according to job requirements/ISO</p> <p>2.8 Work pieces are measured according to job requirements</p>

Variable	Range
Geometric shape	Including but is not limited to: <ul style="list-style-type: none"> <li>• Round</li> <li>• Square</li> <li>• Rectangular</li> <li>• Triangle</li> <li>• Sphere</li> <li>• Conical</li> </ul>
Measuring instruments	including but not limited to: <ul style="list-style-type: none"> <li>• micrometer (in-out, depth)</li> <li>• vernier caliper (out, inside)</li> <li>• dial gauge with mag, std.</li> <li>• straight edge</li> <li>• thickness gauge</li> <li>• small hole gauge</li> <li>• telescopic gauge</li> <li>• steel rule</li> <li>• thermometers</li> <li>• barometer</li> </ul>
Measurements and calculations	<ul style="list-style-type: none"> <li>• Linear</li> <li>• Volume</li> <li>• Area</li> <li>• Density</li> <li>• Humidity</li> <li>• Inside diameter</li> <li>• Circumference</li> <li>• Length</li> <li>• Thickness</li> <li>• Outside diameter</li> <li>• Out of roundness</li> <li>• Temperature</li> <li>• Enthalpy</li> </ul>

Evidence Guide			
Critical Aspects of Competence	Assessment requires that the candidate: <ul style="list-style-type: none"> <li>• Selected and prepared appropriate measuring instruments in accordance with job requirements</li> <li>• Performed measurements and calculations according to job requirements/ ISO</li> </ul>		
Underpinning Knowledge and Attitudes	Demonstrate knowledge and attitudes on: <p>Trade Mathematics / Mensuration</p> <ul style="list-style-type: none"> <li>• Four fundamental operation</li> <li>• Linear measurement</li> </ul>		
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	<ul style="list-style-type: none"> <li>• Dimensions</li> <li>• Unit conversion</li> <li>• Ratio and proportion</li> <li>• Trigonometric functions</li> <li>• Algebraic equations</li> </ul>
Underpinning Skills	<p>Demonstrate skills on:</p> <ul style="list-style-type: none"> <li>• Performing calculation by addition, subtraction, multiplication and division; trigonometric functions and algebraic equations</li> <li>• Visualizing objects and shapes</li> <li>• Interpreting formulas for volume, areas, perimeters of plane and geometric figures</li> <li>• Proper handling of measuring instruments</li> </ul>
Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>• workplace location</li> <li>• problems to solve</li> <li>• measuring instrument appropriate to carry out tasks</li> <li>• instructional materials relevant to the propose activity</li> </ul> <p>Assessment of underpinning knowledge and practical skills may be combined</p>
Methods of Assessment	<p>Competence should be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Observation/Demonstration with Oral Questioning</li> </ul>
Context of Assessment	<p>Competence assessment may occur in workplace or any appropriate simulated environment</p>



Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Collect and Store Bamboo Processing Waste Materials
Unit Code	<a href="#">IND BHP1 06 0411</a>
Unit Descriptor	This unit deals with the skills and knowledge required to harvest bamboo from the field. It includes the ability to collect, cut and clean bamboo from the field.

Elements	Performance Criteria
1. Prepare for work	<p>1.1 Work requirements are correctly identified from instructions</p> <p>1.2 Quality assurance requirements are recognized and adhered to in accordance with enterprise operation</p> <p>1.3 <b>Safety requirements</b> are followed in accordance with safety plans and policies</p> <p>1.4 <b>Tools and equipment</b> selected to carry out tasks are checked for serviceability and any faults are rectified or reported prior to commencement</p> <p>1.5 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied</p>
2. Collect bamboo processing waste materials	<p>2.1 <b>Collecting equipment</b> are identified according to the <b>bamboo processing waste materials</b> to be collected</p> <p>2.2 Bamboo processing waste materials were collected in accordance to workplace standard operating procedures</p>
3. Store bamboo processing waste materials	<p>3.1 Storage area is prepared and sprayed with insecticides to protect bamboo processing waste materials and in accordance with OHS procedures</p> <p>3.2 Bamboo processing waste materials are stored on the specified location in the storage area</p> <p>3.3 Inventory and other necessary documentation are accomplished in accordance with enterprise standard procedures</p>
4. Complete work	<p>4.1 Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and following workplace procedures</p> <p>4.2 Cut-off, branches and leaves are sorted and collected following workplace procedures.</p> <p>4.3 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices</p>

<b>Variables</b>	<b>Range</b>
Safety requirements	<ul style="list-style-type: none"> <li>• OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures</li> <li>• Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organization insurance requirements</li> </ul>
Tools, Equipment and materials	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Matchete</li> <li>• Bolo/knife</li> <li>• Hack Saw</li> <li>• Bow Saw</li> <li>• Oil Stone</li> <li>• Rope</li> </ul>
Collecting Equipment	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Shovel</li> <li>• Spading Fork</li> <li>• Sacks</li> <li>• Trolleys</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• prepared for collecting work</li> <li>• collect bamboo processing waste materials</li> <li>• store bamboo processing waste materials</li> <li>• observed OHS procedures and measures</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of :</p> <ul style="list-style-type: none"> <li>• workplace and equipment safety requirements</li> <li>• quality requirements and safe work methods</li> <li>• tools and equipment types, characteristics, uses and maintenance</li> <li>• materials handling, storage and environmentally friendly waste management</li> </ul>
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> <li>• Lay-outing</li> <li>• Use hand tools</li> <li>• Perform housekeeping</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• workplace or fully equipped assessment location with necessary tools and equipment as well as consumable materials</li> </ul>

Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation/Demonstration with Oral questioning /</li> </ul>
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting

Occupational Standard: Bamboo Harvesting and Post Harvest Level I	
Unit Title	Apply Quality Standards
Unit Code	<a href="#">IND BHP1 07 0411</a>
Unit Descriptor	This unit covers the skills and knowledge to work within a quality system and apply quality standards to work operations.

Element	Performance Criteria
1. Work within a quality system	<p>1.1 Instructions and procedures are followed and duties performed according to requirements of a <b>quality system</b>.</p> <p>1.2 Impact of quality system on own work is identified.</p>
2. Assess own work	<p>3.1 <b>Concepts of product quality</b> in the workplace are identified.</p> <p>3.2 Work is continuously checked for compliance with quality standards relevant to the operation being undertaken.</p> <p>3.3 Impact of work activities on next in line process or final product outcomes is identified.</p> <p>3.4 Faulty pieces or final products are identified.</p> <p>3.5 Where required, the faults and any identified causes are recorded and reported to <b>designated personnel</b>.</p>
3. Assess quality of materials, component parts or final products	<p>4.1 Received materials, component parts or final products are checked for compliance with quality standards and specifications.</p> <p>4.2 Impact of the received materials or component parts on next in line process or final outcomes is identified.</p> <p>4.3 Materials, component parts or products are measured, if and as required, using appropriate measuring techniques.</p> <p>4.4 Faulty materials or component parts related to the operator's work are identified and isolated.</p> <p>4.5 Where required, the faults and any identified causes are recorded and/or reported to the designated personnel.</p> <p>4.6 Causes of any identified faults are investigated and addressed by corrective action or referral to designated personnel.</p>
4. Investigate causes of quality deviations	<p>4.1 Causes of deviations from specified quality standards for materials, component parts or final products are investigated and reported, as required, using appropriate measuring techniques.</p> <p>4.2 Suitable preventative action is recommended based on workplace quality standards.</p>

	4.3 Deviations due to skill limitations are identified and further skill development sought.
5. Complete documentation	5.1 Information on quality and other indicators of production performance is recorded. 5.2 All production processes and outcomes are recorded.

Variable	Range
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Quality system may include:	<ul style="list-style-type: none"> <li>• quality assurance</li> <li>• quality control</li> <li>• quality inspection</li> <li>• quality improvement</li> <li>• total quality control</li> </ul>
Concepts of product quality include:	<ul style="list-style-type: none"> <li>• consistency in quality</li> <li>• producing to specification, including time requirements</li> <li>• meeting customer requirements</li> </ul>
Designated personnel may include:	<ul style="list-style-type: none"> <li>• quality assurance officer</li> <li>• quality inspector</li> <li>• supervisor</li> <li>• management</li> <li>• team leader</li> </ul>
Quality standards may relate to:	<ul style="list-style-type: none"> <li>• materials</li> <li>• component parts</li> <li>• final product</li> <li>• production processes</li> <li>• workplace quality standards</li> </ul>
Quality specifications may include:	<ul style="list-style-type: none"> <li>• finish</li> <li>• fit</li> <li>• size</li> <li>• durability</li> <li>• product variations</li> <li>• materials</li> <li>• alignment</li> <li>• color</li> <li>• damage and imperfections</li> </ul>
Quality checks may include:	<ul style="list-style-type: none"> <li>• visual inspection</li> <li>• physical measurements</li> <li>• checks against patterns, templates and guides</li> </ul>
OHS practices	<ul style="list-style-type: none"> <li>• OHS practices include hazard identification and control,</li> <li>• risk assessment and implementation of risk reduction</li> <li>• measures specific to the tasks described by this unit, and</li> </ul>

	<ul style="list-style-type: none"> <li>• may relate to: <ul style="list-style-type: none"> <li>▪ manual handling techniques</li> <li>▪ standard operating procedures</li> <li>▪ personal protective equipment</li> <li>▪ safe materials handling</li> <li>▪ taking of rest breaks</li> <li>▪ ergonomic arrangement of workplaces</li> <li>▪ following marked walkways</li> <li>▪ safe storage of equipment</li> <li>▪ housekeeping</li> <li>▪ reporting accidents and incidents</li> <li>▪ environmental practices</li> </ul> </li> </ul>
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<b>Evidence Guide</b>	
<b>Critical Aspects of Competence</b>	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> <li>• interpret work instructions, standards and specifications</li> <li>• check and measure relevant quality specifications</li> <li>• interpret results of quality checks in terms of specifications, patterns and work standards</li> <li>• take required action where standards of materials, component parts, final product or work processes are found to be unacceptable</li> <li>• maintain accurate records</li> </ul>
<b>Underpinning Knowledge and Attitudes</b>	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• relevant quality standards, policies and procedures</li> <li>• production processes, materials and products relevant to the workplace</li> <li>• characteristics of materials used in relevant production processes</li> <li>• relevant measurement techniques and quality checking procedures</li> <li>• quality standards and practices</li> <li>• OHS practices, including hazard identification and control measures</li> <li>• workplace practices</li> <li>• recording and reporting practices</li> </ul>
<b>Underpinning Skills</b>	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> <li>• carry out relevant visual inspections of materials, component parts and final products</li> <li>• carry out relevant physical measurements</li> <li>• interpret and apply defined procedures</li> <li>• read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material</li> <li>• maintain accurate records</li> <li>• communicate within the workplace</li> </ul>

	<ul style="list-style-type: none"> <li>• sequence operations</li> <li>• meet specifications</li> <li>• clarify and check task-related information</li> <li>• carry out work according to OHS practices</li> </ul>
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	Competency may be accessed through: <ul style="list-style-type: none"> <li>• Interview / Written Test</li> <li>• Observation / Demonstration with Oral Questioning</li> </ul>
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Work with Others
Unit Code	<a href="#">IND BHP1 08 0411</a>
Unit Descriptor	This unit covers the skills, knowledge and attitudes required to develop workplace relationship and contribute in workplace activities.

Element	Performance Criteria
1. Develop effective workplace relationship	<p>1.1 <b>Duties and responsibilities</b> are done in a positive manner to promote cooperation and good relationship</p> <p>1.2 Assistance is sought from <b>workgroup</b> when difficulties arise and addressed through discussions</p> <p>1.3 <b>Feedback</b> provided by others in the team is encouraged, acknowledged and acted upon</p> <p>1.4 Differences in personal values and beliefs are respected and acknowledged in the development</p>
2. Contribute to work group activities	<p>2.1 <b>Support is provided to team members</b> to ensure workgroup goals are met</p> <p>2.2 Constructive contributions to workgroup goals and tasks are made according to <b>organizational requirements</b></p> <p>2.3 Information relevant to work is shared with team members to ensure designated goals are met</p>

Variable	Range
Duties and responsibilities	<ul style="list-style-type: none"> <li>• Job description and employment arrangements</li> <li>• Organization's policy relevant to work role</li> <li>• Organizational structures</li> <li>• Supervision and accountability requirements including OHS</li> <li>• Code of conduct</li> </ul>
Work group	<ul style="list-style-type: none"> <li>• Supervisor or manager</li> <li>• Peers/work colleagues</li> <li>• Other members of the organization</li> </ul>
Feedback on performance	<ul style="list-style-type: none"> <li>• Formal/Informal performance appraisal</li> <li>• Obtaining feedback from supervisors and colleagues and clients</li> <li>• Personal, reflective behavior strategies</li> <li>• Routine organizational methods for monitoring service delivery</li> </ul>



Providing support to team members	<ul style="list-style-type: none"> <li>• Explaining/clarifying</li> <li>• Helping colleagues</li> <li>• Providing encouragement</li> <li>• Providing feedback to another team member</li> <li>• Undertaking extra tasks if necessary</li> </ul>
Organizational requirements	<ul style="list-style-type: none"> <li>• Goals, objectives, plans, system and processes</li> <li>• Legal and organization policy/guidelines</li> <li>• OHS policies, procedures and programs</li> <li>• Ethical standards</li> <li>• Defined resources parameters</li> <li>• Quality and continuous improvement processes and standards</li> </ul>

<b>Evidence Guide</b>			
Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>• Provided support to team members to ensure goals are met</li> <li>• Acted on feedback from clients and colleagues</li> <li>• Accessed learning opportunities to extend own personal work competencies to enhance team goals and outcomes</li> </ul>		
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> <li>• The relevant legislation that affects operations, especially with regards to safety</li> <li>• Reasons why cooperation and good relationships are important</li> <li>• Knowledge of the organization's policies, plans and procedures</li> <li>• Understanding how to elicit and interpret feedback</li> <li>• Knowledge of workgroup member's responsibilities and duties</li> <li>• Importance of demonstrating respect and empathy in dealings with colleagues</li> <li>• Understanding of how to identify and prioritize personal development opportunities and options</li> </ul>		
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> <li>• Ability to read and understand the organization's policies and work procedures</li> <li>• Write simple instructions for particular routine tasks</li> <li>• Interpret information gained from correspondence</li> <li>• Communication skills to request advice, receive feedback and work with a team</li> <li>• Planning skills to organized work priorities and arrangement</li> </ul>		
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	<ul style="list-style-type: none"> <li>• Technology skills including the ability to select and use technology appropriate to a task</li> <li>• Ability to relate to people from a range of social, cultural and ethnic backgrounds.</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• Access to relevant workplace or appropriately simulated environment where assessment can take place</li> <li>• Materials relevant to the proposed activity or task</li> </ul>
Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Demonstration/Observation with Oral Questioning</li> </ul>
Context for Assessment	<ul style="list-style-type: none"> <li>• Competency assessment may occur in workplace or any appropriately simulated environment</li> <li>• Assessment shall be observed while task are being undertaken whether individually or in group</li> </ul>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Receive and Respond to Workplace Communication
Unit Code	<a href="#">IND BHP1 09 0411</a>
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to receive, respond and act on verbal and written communication.

Element	Performance Criteria
1. Follow routine spoken messages	<p>1.1 Required information is gathered by listening attentively and correctly interpreting or understanding information/instructions</p> <p>1.2 Instructions/information are properly recorded</p> <p>1.3 Instructions are acted upon immediately in accordance with information received</p> <p>1.4 Clarification is sought from workplace supervisor on all occasions when any instruction/information is not clear</p>
2. Perform workplace duties following written notices	<p>2.1 <b>Written notices and instructions</b> are read and interpreted correctly in accordance with <b>organizational guidelines</b></p> <p>2.2 Routine written instruction are followed in sequence</p> <p>2.3 Feedback is given to workplace supervisor based on the instructions/information received</p>

Variable	Range
Written notices and instructions	<p>It refers to :</p> <ul style="list-style-type: none"> <li>• Handwritten and printed material</li> <li>• Internal memos</li> <li>• External communications</li> <li>• Electronic mail</li> <li>• Briefing notes</li> <li>• General correspondence</li> <li>• Marketing materials</li> <li>• Journal articles</li> </ul>
Organizational Guidelines	<p>It may include:</p> <ul style="list-style-type: none"> <li>• Information documentation procedures</li> <li>• Company policies and procedures</li> <li>• Organization manuals</li> <li>• Service manual</li> </ul>

<b>Evidence Guide</b>	
Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• Demonstrated knowledge of organizational procedures for handling verbal and written communications</li> <li>• Received and acted on verbal messages and instructions</li> <li>• Demonstrated competency in recording instructions/information</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• Knowledge of organizational policies/guidelines in regard to processing internal/external information</li> <li>• Ethical work practices in handling communications</li> <li>• Communication process</li> </ul>
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> <li>• Conciseness in receiving and clarifying messages/information/communication</li> <li>• Accuracy in recording messages/information</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• Pens</li> <li>• Note pads</li> </ul>
Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Demonstration/Observation with Oral Questioning</li> </ul>
Context of Assessment	<p>Competency may be assessed individually in the actual workplace setting.</p>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Demonstrate Work Values
Unit Code	<a href="#">IND BHP1 10 0411</a>
Unit Descriptor	This unit covers the knowledge, skills, and attitude in demonstrating proper work values.

Elements	Performance Criteria
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the 'whys' of work are identified, reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is in harmony with company's values</p>
2. Apply work values/ethics	<p>2.1 <b>Work values/ethics/concepts</b> are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</p> <p>2.2 <b>Work practices</b> are undertaken in compliance with industry work ethical standards, organizational policy and guidelines</p> <p>2.3 Personal behavior and relationships with co-workers and/or clients are conducted in accordance with ethical standards, policy and guidelines.</p> <p>2.4 <b>Company resources</b> are used in accordance with transparent company ethical standard, policies and guidelines.</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</p> <p>3.2 <b>Work incidents/situations</b> are reported and/or resolved in accordance with company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 <b>Instructions</b> to co-workers are provided based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values/practices are shared with co-workers using appropriate behavior and language.</p>

Variables	Range
Work values/ethics/ concepts	May include but are not limited to: <ul style="list-style-type: none"> <li>• Commitment/ Dedication</li> <li>• Sense of urgency</li> <li>• Sense of purpose</li> <li>• Love for work</li> <li>• High motivation</li> <li>• Orderliness</li> <li>• Reliability and Dependability</li> <li>• Competence</li> <li>• Goal-oriented</li> <li>• Sense of responsibility</li> <li>• Being knowledgeable</li> <li>• Loyalty to work/company</li> <li>• Sensitivity to others</li> <li>• Compassion/Caring attitude</li> <li>• Balancing between family and work</li> <li>• Sense of nationalism</li> </ul>
Work practices	May include: <ul style="list-style-type: none"> <li>• Quality of work</li> <li>• Punctuality</li> <li>• Efficiency</li> <li>• Effectiveness</li> <li>• Productivity</li> <li>• Resourcefulness</li> <li>• Innovativeness/Creativity</li> <li>• Cost consciousness</li> <li>• 5S</li> <li>• Attention to details</li> </ul>
Incidents/ situations	May include: <ul style="list-style-type: none"> <li>• Violent/intense dispute or argument</li> <li>• Gambling</li> <li>• Use of prohibited substances</li> <li>• Pilferages</li> <li>• Damage to person or property</li> <li>• Vandalism</li> <li>• Falsification</li> <li>• Bribery</li> <li>• Sexual Harassment</li> <li>• Blackmail</li> </ul>
Company resources	May include <ul style="list-style-type: none"> <li>• Consumable materials</li> <li>• Equipment/Machineries</li> <li>• Human</li> <li>• Time</li> <li>• Financial resources</li> </ul>

Instructions	<p>May include:</p> <ul style="list-style-type: none"> <li>• Verbal</li> <li>• Written</li> </ul>
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<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• Defined one's unique sense of purpose for working</li> <li>• Clarified and affirmed work values/ethics/concepts consistently in the workplace</li> <li>• Demonstrated work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines</li> <li>• Demonstrated personal behavior and relationships with co-workers and/or clients consistent with ethical standards, policy and guidelines</li> <li>• Used company resources in accordance with company ethical standard, policies and guidelines.</li> <li>• Followed company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behavior</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• Occupational health and safety</li> <li>• Work values and ethics</li> <li>• Company performance and ethical standards</li> <li>• Company policies and guidelines</li> <li>• Fundamental rights at work including gender sensitivity</li> <li>• Work responsibilities/job functions</li> <li>• Corporate social responsibilities</li> <li>• Company code of conduct/values</li> <li>• Balancing work and family responsibilities</li> </ul>
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> <li>• Interpersonal skills</li> <li>• Communication skills</li> <li>• Self awareness, understanding and acceptance</li> <li>• Application of good manners and right conduct</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• Workplace or assessment location</li> <li>• Case studies/Scenarios</li> </ul>

Methods of Assessment	Competency may be assessed through: <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Demonstration/Observation with Oral Questioning</li> </ul>
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting



Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Develop Understanding of Entrepreneurship
Unit Code	<a href="#">IND BHP1 11 0411</a>
Unit Descriptor	This unit covers skills, knowledge and attitude required to understand the principles, functions, strategies and methods of entrepreneurship. It also covers identifying and developing the major entrepreneurial competences.

Elements	Performance Criteria
1. Describe and explain the principles, concept and scope of entrepreneurship	<p>1.1 The principles, concept and terminology of entrepreneurship are analyzed and discussed</p> <p>1.2 The different / various forms of enterprises in the community are identified and their roles understood</p> <p>1.3 The identified enterprises are categorized and <b>classified</b></p> <p>1.4 The terms and elements involved in the concept of enterprising, both on a personal level and in the context of being enterprising in business are identified and interpreted</p> <p>1.5 Functions of entrepreneurship in business and how the entrepreneurs improved business and economic environment are explained</p>
2. Discuss how to become entrepreneur	<p>2.1 Self-employment as an alternative option for an individual economic independence and personal growth is discussed and analyzed</p> <p>2.2 Advantages and disadvantages of self-employment are discussed and explained</p> <p>2.3 Entrepreneurial characteristics and traits are identified and discussed</p> <p>2.4 Self-potential is assessed to determine if qualified to become future entrepreneur</p> <p>2.5 Major competences of successful entrepreneurship are identified and explained</p>
3. Discuss how to organize an enterprise	<p>3.1 The importance and role of business entrepreneurship in the society are discussed and correlated to the operations of the economy</p> <p>3.2 Facts about small and medium enterprises are discussed, clarified and understood</p> <p>3.3 Key success factor in setting up small and medium business are identified and explained</p> <p>3.4 Business opportunities are identified and assessed</p>

	<p>3.5 Business ideas are generated using appropriate tools, techniques and steps</p> <p>3.6 Procedures for identifying suitable market for business are discussed and understood</p> <p>3.7 <i>Major factors</i> to consider in selecting a location for a business are identified and discussed</p> <p>3.8 Basic types of business ownership are identified and explained</p> <p>3.9 Amount of money needed to start an enterprise estimated and distinction between pre operations and initial operation payments clarified</p> <p>3.10 Advantages and disadvantages of using various sources of capital to start an enterprise are identified</p>		
<p>4. Discuss how to operate an enterprise</p>	<p>4.1 Disadvantages and advantages of <i>three alternative</i> means of becoming an entrepreneur are identified and understood</p> <p>4.2 Process of hiring and managing people is discussed and explained</p> <p>4.3 The importance and techniques of managing time are discussed and understood</p> <p>4.4 The techniques and procedures of managing sales are discussed and explained</p> <p>4.5 Factors to consider in selecting suppliers and the steps to follow when doing business with them are identified and discussed</p> <p>4.6 Awareness of how new technologies can affect small and medium business are developed</p> <p>4.7 Characteristics of appropriate technology for use in small and medium business are identified and explained</p> <p>4.8 Different types of cost that occur in a business and how to manage them are discussed and understood</p> <p>4.9 Factors and procedures in knowing the cost of the enterprise are discussed and understood</p> <p>4.10 Importance of financial record keeping and preparing simple financial statement are explained and understood</p> <p>4.11 The application of self-management skills and negotiation skills are discussed in operating a business</p> <p>4.12 Risk assessment and management of business enterprise are performed</p>		
<p>5. Develop one's own business plan</p>	<p>5.1 Process of preparing/ writing a business plan is discussed and applied</p> <p>5.2 Standard structure and format are applied in preparing</p>		
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	<p>business plan</p> <p>5.3 Findings of the business plan are interpreted, assessed and analyzed</p> <p>5.4 Feasibility of the business idea is made clear and understandable</p> <p>5.5 Problems that may arise or encounter when starting a business are identified and understand</p> <p>5.6 Techniques and procedures in obtaining and sourcing information are discussed and understood</p>
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Variables	Range
Classification	<ul style="list-style-type: none"> <li>• Private vs public</li> <li>• Profit vs non-profit</li> <li>• Formal vs Non-formal</li> <li>• Individual vs Community</li> <li>• Local vs Foreign</li> <li>• Business vs Social</li> <li>• Small vs Large</li> <li>• Manufacturing vs Service</li> <li>• Consumer vs Industrial</li> </ul>
Major factors	<ul style="list-style-type: none"> <li>• Economics (local economy)</li> <li>• Population</li> <li>• competition</li> </ul>
Three alternative	<ul style="list-style-type: none"> <li>• Buying an existing business</li> <li>• Starting a new business</li> <li>• Operating a franchising business</li> </ul>

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>• explained principles and concept of entrepreneurship</li> <li>• discussed how to become entrepreneur</li> <li>• discussed how to organize an enterprise</li> <li>• discussed how to operate an enterprise</li> <li>• develop business plan</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li>• Entrepreneurship principles, concepts and terminologies</li> <li>• Entrepreneurial competence</li> <li>• Entrepreneurial motivation</li> <li>• Risk assessment and evaluation</li> <li>• Principles and process of negotiations</li> <li>• Self-management and self-employment</li> <li>• Managing sales, people and time</li> </ul>

	<ul style="list-style-type: none"> <li>• Factors in setting up small and medium business</li> <li>• Small and Medium Enterprise</li> <li>• Business plan development</li> <li>• Discussion techniques and procedures</li> </ul>
Underpinning Skills	<p>Demonstrate skills in:</p> <ul style="list-style-type: none"> <li>• Planning and Leading</li> <li>• Presentation skills</li> <li>• Using technology</li> <li>• Managing money</li> <li>• Preparing simple financial statement</li> <li>• Selecting suppliers</li> </ul>
Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• Tools, equipment and facilities appropriate to the proposed activities</li> <li>• Materials relevant to the proposed activities</li> </ul>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> <li>• Interview/Written Test</li> <li>• Demonstration/ Observation with Oral Questioning</li> </ul>
Context of Assessment	<p>Competency may be assessed in the work place or in a simulated work place setting</p>

Occupational Standard: Bamboo Harvesting and Post Harvest Works Level I	
Unit Title	Apply 5S Procedures
Unit Code	<a href="#">IND BHP1 12 1012</a>
Unit Descriptor	This unit of competence covers the skills, attitudes and knowledge required by an employee or worker to apply 5S procedures (structured approach to housekeeping) to their own job and work area and maintains the housekeeping and other standards set by 5S. The unit assumes the employee or worker has a particular job and an allocated work area and that processes in the work area are known by the individual.

Elements	Performance Criteria
1. Develop understanding of quality system	1.1 Discuss quality assurance procedures of the enterprise or organization 1.2 Understand the relationship of quality system and continuous improvement in the workplace 1.3 Identify and relate to workplace requirements the purpose and <b>elements</b> of quality assurance (QA) system 1.4 Explain the <b>5S system</b> as part of the quality assurance of the work organization
2. Sort needed items from unneeded	2.1 Identify all <b>items</b> in the work area 2.2 Distinguish between essential and non-essential items 2.3 Sort items to achieve deliverables and value expected by downstream and final customers 2.4 Sort items required for regulatory or other required purposes 2.5 Place any non-essential item in a appropriate place other than the workplace 2.6 Regularly check that only essential items are in the work area
3. Set workplace in order	3.1 Identify the best location for each essential item 3.2 Place each essential item in its assigned location 3.3 After use immediately return each essential item to its assigned location 3.4 Regularly check that each essential item is in its assigned location
4. Shine work area	4.1 Keep the work area clean and tidy at all times 4.2 Conduct regular housekeeping activities during shift 4.3 Ensure the work area is neat, clean and tidy at both

	beginning and end of shift
5. Standardize activities	<p>5.1 Follow <b>procedures</b></p> <p>5.2 Follow checklists for activities, where available</p> <p>5.3 Keep the work area to specified standard</p>
6. Sustain 5S system	<p>6.1 Clean up after completion of job and before commencing next job or end of shift</p> <p>6.2 Identify situations where compliance to standards is unlikely and take actions specified in procedures</p> <p>6.3 Inspect work area regularly for compliance to specified standard</p> <p>6.4 Recommend improvements to lift the level of compliance in the workplace</p>

Variable	Range
Elements of QA system	<ul style="list-style-type: none"> <li>• corrective action</li> <li>• mission statements</li> <li>• monitoring procedures</li> <li>• SOPs</li> <li>• work instructions</li> <li>• PDCA concept</li> </ul>
5S	<p>5S is a system of work organization originally developed in Japan based around housekeeping principles. A close translation of the five stages in the housekeeping approach is:</p> <ul style="list-style-type: none"> <li>• sort</li> <li>• set in order</li> <li>• shine</li> <li>• standardize</li> <li>• sustain</li> </ul> <p>Japanese terms:</p> <ul style="list-style-type: none"> <li>• seiri - eliminating everything not required for the work being performed (sort)</li> <li>• seiton - efficient placement and arrangement of equipment and material (set in order)</li> <li>• seison - tidiness and cleanliness (shine)</li> <li>• seiketsu - ongoing, standardised, continually improving seiri,</li> <li>• seiton, seison</li> <li>• shitsuke - discipline with leadership</li> </ul>
Items in the work area	<p>Includes:</p> <ul style="list-style-type: none"> <li>• tools</li> <li>• jigs/fixtures</li> <li>• materials/components</li> <li>• plant and equipment</li> </ul>

	<ul style="list-style-type: none"> <li>• manuals</li> <li>• personal items (e.g. bags, lunch boxes and posters)</li> <li>• safety equipment and personal protective equipment</li> <li>• other items which happen to be in the work area</li> </ul>
Sort	<p>Sort involves keeping only what is absolutely necessary for the processes in the work area. Sort includes:</p> <ul style="list-style-type: none"> <li>• clearing the work area of all non-essential equipment and materials</li> </ul> <p>Non-essential items are those not required to either produce product, conduct process or operations, or make required adjustments to equipment during process or operations</p>
Set in order	<p>After removing unnecessary materials, the remaining materials must be those that are required immediately for either the machine or the job at hand. All of these materials/change/parts etc must have an assigned location on the production floor.</p> <p>Locations should be clearly marked and labeled to show what belongs where. assigning required equipment and materials appropriate locations in the work area</p>
Shine	<p>includes:</p> <ul style="list-style-type: none"> <li>• keeping the work area clean at all times</li> <li>• this should be carried out to a regular daily schedule against allowed time and, on most occasions, at the end of a job</li> </ul>
Standardize	<p>Once 5S is established, standardizing activities help maintain the order and the housekeeping standards. Standardizing may use procedures and checklists developed from a procedure. Standardizing includes:</p> <ul style="list-style-type: none"> <li>• activities that help maintain the order and the housekeeping standards</li> <li>• using procedures and checklists developed from a procedure</li> <li>• OHS measures such as signage, symbols / coding and labeling of work area and equipment</li> </ul>
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> <li>• work instructions</li> <li>• standard operating procedures</li> <li>• formulas/recipes</li> <li>• batch sheets</li> <li>• temporary instructions and similar instructions provided for the operation of the plant</li> <li>• good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) and government regulations</li> </ul> <p>Procedures may be:</p> <ul style="list-style-type: none"> <li>• written, verbal, computer based or in some other format</li> </ul>

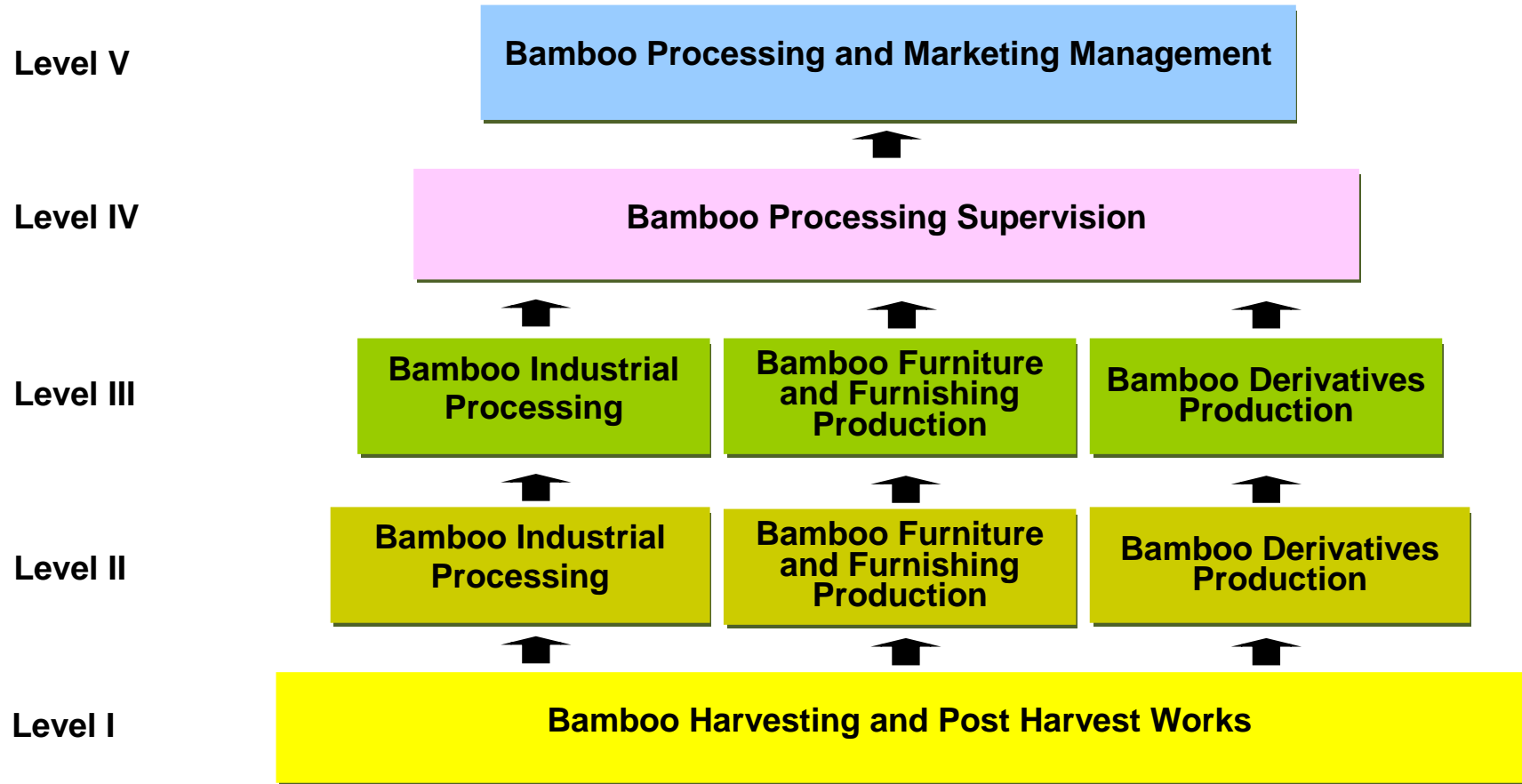
Sustain	<p>includes:</p> <ul style="list-style-type: none"> <li>• making sure that daily activities are completed every day regardless of circumstance</li> <li>• cleaning up after a job</li> <li>• undertaking inspections, including: <ul style="list-style-type: none"> <li>– informal inspections carried out often, at least weekly</li> <li>– formal inspections carried out at least monthly</li> </ul> </li> <li>• generating continuous improvement actions from daily activities</li> <li>• following up specific actions to generate continuous improvement</li> </ul>
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<b>Evidence Guide</b>	
Critical Aspects of Competence	<p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify own tasks and responsibilities and relate them to organization and customer requirements</li> <li>• identify and explain the stages of 5S</li> <li>• implement 5S in own work area</li> <li>• identify waste (muda) in the work area</li> <li>• routine practice of 5S as part of their job</li> </ul>
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> <li>• operations and processes relevant to own job</li> <li>• basic principle of quality assurance system and its elements</li> <li>• quality procedures and continuous improvement (kaizen)</li> <li>• meaning and application of 5S steps to own job and work area</li> <li>• principles of efficient workplace organization</li> <li>• purposes of 5S</li> <li>• methods of making/recommending improvements</li> </ul>
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> <li>• communicating with others to clarify issues during 5S implementation, communicate results and contribute suggestions for improvement</li> <li>• visualizing operations in terms of flow and contribution to customer outcomes</li> <li>• planning own tasks in implementation of 5S</li> <li>• implementing 5S in own work area according to instructions</li> <li>• identifying waste (muda)</li> <li>• organizing, prioritizing activities and items</li> <li>• reading and interpreting documents describing procedures</li> <li>• recording activities and results against templates and other prescribed formats</li> <li>• working with others</li> <li>• solving problems</li> </ul>



Resources Implication	<p>Access may be required to:</p> <ul style="list-style-type: none"> <li>• workplace procedures and plans relevant to work area</li> <li>• specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the candidate</li> <li>• documentation and information in relation to production, waste, overheads and hazard control/management</li> <li>• reports from supervisors/managers</li> <li>• case studies and scenarios to assess responses to contingencies</li> </ul>
Methods of Assessment	<p>A holistic approach should be taken to the assessment. Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> <li>• demonstration in the workplace</li> <li>• workplace projects</li> <li>• suitable simulation</li> <li>• case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on)</li> <li>• targeted questioning</li> </ul> <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p>
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting. Assessment of performance must be undertaken in a workplace using or implementing 5S as competitive systems and practices.</p>

**Sector: Industry Development**  
**Sub-Sector: Bamboo and Craft Production**



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This occupational standard was developed on April 2011 in Center of Excellence for Engineering (CEE), Addis Ababa.

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