



**Building Resilience:  
Developing the Skill Needs Across  
the Coconut Industry  
Labor Market Information | 2023**

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## I. Background

When it comes to coconut product production and trade within the ASEAN and the rest of the world market, the Philippines is unmatched. For this reason, the coconut remains a vital crop in the Philippine agricultural industry. The Philippine government's unwavering commitment to promoting the industry is symbolized by the establishment of the Philippine Coconut Authority (PCA) in 1973, whose mission is to grow the sector to its maximum competitive potential.

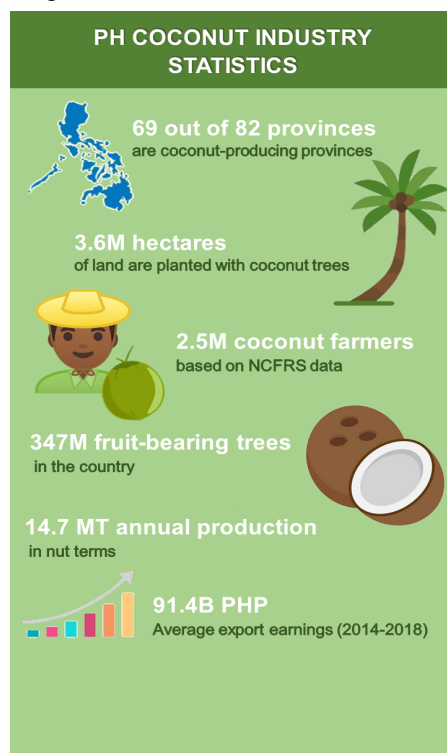
Traditional and non-traditional coconut products are the two primary categories that exist today; traditional coconut products account for the majority of exports into the markets. Non-traditional coconut products (NTCPs), on the other hand, account for a relatively modest share of world trade. Both provide job prospects for traditional products, particularly for Coconut Oil (CNO) and Desiccated Coconut (DCN), but they also require more technically skilled workers due to their substantial processing facilities, which include mills and refineries.

The market has been moving towards a more "healthy and organic" mentality in recent years, which has allowed non-traditional products to flourish. These unconventional goods, which include coconut water, shells, coco coir, coco sugar, and virgin coconut oil (VCO), have an opportunity to grow into a significant economic force.

There is potential for investment in the industry and a new sense of vibrancy in reform with the creation of the Philippine Coconut Industry Roadmap and the passing of the Coconut Farmer and Industry Fund Act. Since the business depends on the quality of its products to remain competitive in the marketplaces, it must place a high focus on skills and workforce training. Although it could be difficult, a number of suggestions have been offered to raise workforce competencies and skill levels.

According to the 2018 Philippine Coconut Authority Statistics, the country has 347 million fruit-bearing trees, 3.6 million hectares of land planted with coconut trees, 2.5 million farmers according to the National Coconut Farmers Registry System (NCFRS), 69 provinces that produce coconut, and an average annual export revenue of 91.4 billion pesos from 2014 to 2018.

Figure 1. Coconut Statistics 2018



Source: Philippine Coconut Authority Statistics

In order to further prepare and modernize the coconut industry, the Philippine government has persisted in its research and development plans and partnerships with numerous foreign organizations. Important non-traditional coconut goods include coco chemicals, coconut food, and non-food items; major traditional coconut products include copra, copra meal, coconut oil, dried coconut, coconut shell charcoal, activated carbon, and oleochemicals (PCG Vancouver, 2022). According to the Philippine Statistics Authority (PSA) early statistics, out of the ten primary commodity categories in terms of export value, coconut oil has the biggest annual increase of 95%, indicating its competitive potential among traditional coconut goods in international markets. Additionally, the data showed that the nation imports 73% of the crude oil and 60% of the coconut oil used in the United States. In 2020, the Philippines held a 52.48% global market share for coco oil exports and a 35.91% share for desiccated coconut exports (DTI, 2021).

Global market changes have changed consumer needs in recent years, affecting the domestic coconut business. Due to these changes, the sector now exports more than just coconut oil; non-traditional coconut products are becoming increasingly popular. One unconventional coconut product with promise is virgin



coconut oil, whose demand is expected to grow to USD 780 million globally by 2025.

Copra, copra meal, coconut oil, desiccated coconut, coconut shell charcoal, activated carbon, and oleochemical are examples of traditional coconut products. On the other hand, non-food items, coconut food, and coco chemicals are examples of non-traditional coconut products (PCG Vancouver, 2022).

The Philippine coconut sector needs to be prepared to meet the increased demand from around the world as the economy transitions to a post-pandemic condition where limitations are being lifted in other nations and the markets shift to a more "health and wellness" perspective.

## II. Objectives

The consultation intends to collect information on the current situation of the Coconut Industry to determine the necessary training-related support and programs for the sector. Specifically, it intends to:

- Determine the challenges and opportunities;
- Present and validate the skills map;
- Discuss the relevance of the existing Training Regulations; and
- Determine the priority skill requirements for the sector.

## III. Attendees

The Philippine Coconut Authority (PCA) assisted the Technical Education and Skills Development Authority (TESDA) in inviting stakeholders from the coconut industry across the value chain. The following organization/agencies attended the November 22, 2023 Industry Consultation meeting:

- The Technical Education and Skills Development Authority (TESDA)
  - Planning Office (PO)
  - Qualifications and Standards Office (QSO)
  - Regional Operations Management Office (ROMO)
- Philippine Coconut Authority (PCA)
- 5r Coconut Farm
- Adc Farm

- Adlawan Farms Corporation/Farms School And Training Center
- Aguipto Coconut Farmers Multipurpose Cooperative
- Aguipto Coconut Multipurpose Farmers Cooperative
- Albay Provincial Agriculture Office
- Aliarcoop
- Anacletus Agricultural Association Inc.
- Antique Federation Of Coconut Farmers Incorporated
- Ariana Coco
- Aurora Agri-Ventures Producers Cooperative
- Banilan Farmers Association
- Barangay Baylo Cocopal Farmers Association (Babacofa)
- Barangay Local Government Unit, Alegria, Cateel, Davao Oriental
- Barangay Local Government Unit, San Vicente, Cateel
- Blake's Agritourism Techno Farm Inc.
- Bohol Coconut Prime Movers Multipurpose Cooperative
- Bulacan Coconut Farmers Multi Purpose Cooperative
- Burgos Coconut Farmers Agriculture Cooperative
- Callan Sebaste Antique Coconut Farmers' Association
- Catmon Community-Based Forest Management Project Development Organization Inc.
- Egaña Coconut Farmers Marketing Cooperative
- Esther's Integrated Farm
- Glorious Land Eco Farm Training Center Inc
- Jumalon Farm /J. I. Skills Training & Assessment Center, Inc.
- Macaban Kakaw-Krayollo And Lubi-Netibo Agriculture Cooperative
- Malaya Village Farmers Agriculture Cooperative
- Man Up Multi Purpose Cooperative
- Matling Multi- Purpose Cooperative
- Maysalay Coconut Processing Producers Cooperative
- Mufda Farm
- Nickjoy Integrated Farm
- Northern Samar Coconut Farmers And Industry Development Council
- Office Of The Provincial Agriculturist
- Pacheco Agrarian Reform Cooperative
- Pamplona Multi-Purpose Agricultural Cooperative
- Pangpang Farmers Agri Coop / Trigona Bee Farm
- Pangpang Farmers Agriculture Cooperative
- Peace Pond Farmers Association
- National Organic Agri Board

- PMVAC
- Poo Integrated Coconut Corn And Rice Farmers Association
- Provincial Agricultural And Fishery Council/Arc Coconut Farmers And Fisherfolks Association
- Sahlee's Agricultural Farm
- Sicalao Lasam Agricultural Cooperative
- Silago
- Talalora Farmers Agriculture Cooperative
- Technological Expertise Services Of The Phils. Inc.
- Unlad Saka Coconut Farmer Agr. Coop/Greenlife
- Vegetari Vegetarian Products
- Y.E.S. Export & Import Corpora

#### **IV. The Highlights of the Results**

##### 4.1. Industry Situationer

The Philippine government has continually supported the agriculture sector, specifically the coconut industry. This can be seen in the creation of the Philippine Coconut Authority pursuant to Presidential Decree 232 on June 30, 1973 (PCA, n.d.). Most recently, the PCA was declared as an attached agency of the Department of Agriculture.

Various programs and initiatives have been implemented by the agency. Their 2019 report had updates on “high-impact” programs currently being offered, such as the following:

##### Accelerated Coconut Planting and Replanting Projects (ACPRP)

The project aims to replace destroyed coconut trees by growing and transplanting high-quality Open-Pollinated Varieties (OPV) seedlings. 75% of the yearly target was achieved, with 99.8% falling under incentive-based components. 38,525 coconut farmers benefited from 6,626,370 seedlings planted on 48,245 hectares, while 36,401 farmers received an additional 4,504,904 seedlings. The PCA Governing Board has approved a policy to increase financial rewards for planting activities to promote widespread and deliberate planting.

##### Coconut Fertilization Project

The Coconut Fertilizer Project (CFP) aims to boost coconut production by addressing demand for new and emerging products like coco water and virgin coconut oil. However, only 20% of 7,326,050 targeted trees were fertilized due to procurement concerns, benefiting 7,691 farmer recipients. The project's goal is to

apply Agricultural Grade Salt Fertilizer (AGSF), which has been successful in fertilizing 69,433.1 ha. since 2008, 4.62% of the total tree population. The PCA plans to use other fertilizers to increase production in 2020.

### Kaanib Coconut Hub Project

The PCA and partner organizations have joined forces to create the Kaanib Coconut Hub Project (KCHP), which aims to "increase the income of the participating coconut farmer and to generate more on-farm and off-farm jobs" (PCA, n.d). The program's components that educate farmers on other facets of the industry also reflect these goals. These components include the following: (1) the provision of equipment and a facility for processing coconuts; logistics support; (2) the provision of appropriate technology; and (3) the enhancement of management capacity, which includes marketing and financing; (4) management training and advisory services; and (5) technical skills and quality standards offered to project beneficiaries (PCA, n.d.).

### Kaanib Enterprise Development Project

In order to improve food security, boost revenue, and generate employment in small coconut farming communities, the Kaanib Enterprise Development Project (KEDP) seeks to institutionalize and support coconut-based businesses. The project carries out sub-component programs for various kinds of coconut farms, such as the Community/Household-Level Coconut Processing Project (CHLCP), the Virgin Coconut Oil Product (VCO), the Coir Processing, the Food Confectioneries, the Coffee-Coffee Based Enterprise Development (COCOBED) and Coconut-Cacao Enterprise Development Project (CCDP), and the Coconut Intercropping Project (CIP). The initiative covered 1,203.37 hectares of coconut plantations with planted commercial crops at 1,055 sites between 2010 and 2019, benefiting 77,461 farmers. From the production of coco coir/coco peat-based organic fertilizer, the project has adopted 76 food and non-food related businesses, such as VCO, Coco Sugar, and other coconut-based businesses.

### Seed Farm Development Project

The project, in collaboration with LGUs, SUCs, the Coconut Farmers Organizations (CFOs) or Agrarian Reform Beneficiaries (ARBs) or private individuals through a Memorandum of Agreement/Contract of Lease, aims to establish a small village-based facility for providing quality seedlings for future planting and replanting activities of the PCA. A total of 14 seed farms have been identified, covering 238.0 hectares. The PCA plans to have seed farms in all coconut-producing provinces, supporting the quality of planting materials and raising its competitive edge.



## Smallholders Oil Palm Development Program

The program aimed at promoting oil palm plantation development by providing small growers with production inputs, seedlings, and fertilizers, resulting in 1,905 hectares of planted land and 243,850 hybrid oil palm seedlings.

In terms of legislation, the Philippine Government has passed various legislations for the agriculture sector, the most recent was Republic Act 11524, "*Coconut Farmers and Industry Fund Act*", which declares that " the policy of the State to consolidate the benefits due to coconut farmers, especially the poor and marginalized, under various statutes and to expedite the delivery thereof to attain increase incomes for coconut farmers, alleviate poverty, and achieve social equality" (RA 11524, 2021).

The law sets in motion reforms in the coconut industry and provides efficient utilization of the trust fund by the Coconut Farmers and Industry Development Plan for the benefit of 2.5 million coconut farmers and their families and the coconut industry in general. (treasury.gov, n.d)

Under RA No. 11524, TESDA and ATI will have an equal share of eight percent of the annual allocation from the trust fund for the training on coconut production and processing technologies, value addition of coconut products, diversification, and sustainable farming methods, including organic farming, financial literacy, and farm business schools programs for farmers and their families.

The Philippine Coconut Industry is also tasked with entering a memorandum of understanding (MOU) with TESDA to "ensure a coordinated implementation of the programs under the Development Plan, proper utilization of the allocations provided in this section, and submission of periodic accomplishment report of these implementing agencies to the PCA Board" (RA 11524, 2021).

In connection with the Coconut Farmers and Industry Development Plan (CFIDP) developed under RA 11524, then President Duterte signed Executive Order No. 172, otherwise known as "Approving the Coconut Farmers and Industry Development Plan", which approves the CFIDP and includes various components realized by the PCA, in partnership with other government agencies, such as:

- Social Protection
- Coconut Farmers Organization and Development
- Hybridization
- Community-based Farm Enterprise Development: Farm Rehabilitation and Improvement
- Integrated Coconut Processing and Downstream Products
- Innovative Research Projects and their Practical Application on

- Coconut Processing, Production, and Distribution
- Support Services

TESDA together with the PCA and the Agricultural Training Institute (ATI) signed a Memorandum of Agreement where all parties will collaborate and coordinate for the successful implementation of the programs/projects through the allocation provided in RA 11524. The MOA states that part of TESDA's duties and responsibilities is to facilitate the development of Training Regulations (TRs), Competency Standards (CS), and Competency Assessment Tools (CATs) on Coconut-related qualifications/programs. With this, TESDA, in partnership with PCA, initiated the skills prioritization process for the coconut industry. This process was duly supported by the Deputy Administrator for the Operations Branch of the Philippine Coconut Authority (PCA), DA. Roel M. Rosales. According to him, this process/activity is a chance to acknowledge the already established practice in the industry. Additionally, it is also an opportunity to professionalize and certify the work done by the farmers through the identification of the skills in the coconut industry.

#### 4.2. Challenges and Opportunities

During the industry consultation on Skills Requirements in the Coconut Industry, the stakeholders described the below-listed challenges and opportunities they currently face. These were divided into several Aspects: Economic, Employment, and Education.

Table 1. Summary of Challenges and Opportunities based on the Industry Survey

Areas	Challenges	Opportunities
ECONOMIC	<ul style="list-style-type: none"> <li>• High Rates Of Poverty</li> <li>• High Cost Of Production</li> <li>• Low Rates of Growth</li> <li>• Unstable Market</li> <li>• Unstable Coconut Product Price</li> <li>• Entry Of Foreign Direct And Indirect Competitors</li> <li>• Farm Gate Price Is Very Low</li> <li>• Lack Of Access To Financial Services</li> <li>• Lack Of Established Market</li> <li>• Lack Of Financial Capacity To Expand Product Processing</li> <li>• Low Agricultural Productivity</li> <li>• Low Buying Of Farm Products</li> </ul>	<ul style="list-style-type: none"> <li>• Access To Markets, Finances &amp; Tech</li> <li>• Copra Quality Improvement Into White Copra Processing/Production</li> <li>• Development Of Integrated Coconut Hubs</li> <li>• Diversification Of Coconut Products</li> <li>• Earn More Income from other coconut products</li> <li>• Economic Freedom</li> <li>• Farm/ Crop Diversification</li> <li>• High Market Demand</li> </ul>

	<ul style="list-style-type: none"> <li>● Lack Of Funds And Government Support in Coconut Processing</li> </ul>	<p>Products</p> <ul style="list-style-type: none"> <li>● Increase In International Demand</li> <li>● Locally Sourced Raw Materials</li> <li>● Modernized Equipment &amp; Value Adding</li> <li>● Intercropping &amp; Integrated Farming</li> </ul>
EMPLOYMENT	<ul style="list-style-type: none"> <li>● Job Security Issues</li> <li>● Majority of Farmers are of old age</li> <li>● No permanent laborer due to on and off production</li> <li>● Requiring Experience for Fresh Graduates</li> <li>● Scarcity of Skilled worker</li> <li>● Lack Skills for processing coconut</li> <li>● Unable to hire due to financial challenges</li> <li>● Workplace Environment Issue</li> <li>● Younger generation not interested/unappealing to be a farmer</li> </ul>	<ul style="list-style-type: none"> <li>● Additional Farmers Income From Coconut Byproducts</li> <li>● Better Compensation For Coconut Farmers</li> <li>● Development Of Integrated Products</li> <li>● Employment In Coconut Processing Industry</li> <li>● Encourage Technology To Foster Progress In Coconut Farming</li> <li>● Improving Coconut Varieties</li> <li>● Must Trained New Generation/Young Laborers</li> <li>● Secured Workplace</li> <li>● Influx Of Manpower Willing To Do Coconut Related Field Work</li> <li>● Upgrading Of Product Quality</li> </ul>
EDUCATION	<ul style="list-style-type: none"> <li>● Limited education and technical skills in coconut enterprise development</li> <li>● Education inequality</li> <li>● Lack of education on technology</li> <li>● Lack of financial support for students to pursue studying</li> <li>● Lack of proper training on market strategies</li> <li>● No proper training on the coconut industry</li> <li>● Experienced teacher shortages</li> </ul>	<ul style="list-style-type: none"> <li>● Allocation of Funds to Support Training Programs</li> <li>● CFIDP Funded Trainings</li> <li>● Trainings On Capacity Building, Coconut Related Products, Agricultural Farming (i.e. Animal Husbandry and Mechanics)</li> <li>● Agricultural Related Scholarships</li> <li>● Internships</li> <li>● Local Agricultural</li> </ul>

		Department Workshop and Trainings Sessions <ul style="list-style-type: none"> <li>● More Research, Marketing And Awareness Campaigns</li> <li>● More Schools In The Barangays</li> <li>● Offer Scholarships/ Techno Transfer Sessions</li> <li>● Professionalization Of Skilled Worker</li> </ul>
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One of the challenges faced in the industry is the market profile, specifically the low value of the coconut products in the industry. Additionally, low farm productivity continues to plague the industry, adding to the challenges for the farmers. Participants also mentioned that among neighboring Asian countries, the Philippines has the lowest value of raw materials, thus coconut farmers have a low share in the value chain. Most products from the coconut are made into copra, 70% to be exact, thus copra dictates the price and profitability.

On the processing side, there are also new emerging products that can be utilized but are unnoticed by the industry. There are also high-value products that need high capital to process such as oils and amino, this includes white copra. Organic pesticides and the possibility of salt production along the shore were also discussed as indicated by a participant these are needed in their plantation.

The Philippine Coconut Authority also highlighted that RA 11524 has three (3) objectives: (a) increased productivity and income of coconut farmers; (b) Poverty alleviation, education, and social equity; and (c) Rehabilitation and modernization of the coconut industry towards farm productivity and additional income to the farmers. They added that the main products of the coconut farmers are the copra (producing around 70%), coco husk (producing around 25%), buko (producing around 3%), and others (2%). With improving the skills of farmers on coconut production, the potential increase would increase. Another avenue is product diversification - they can add intercropping and animal integration in the farm.

#### 4.3. Technical Skills Requirements

The list of requirements identified by the Coconut Industry can be seen in Table 2. These were identified from the initial consultation with the Philippine Coconut Industry.

**Table 2.** The List of the Requirements for the Coconut Industry.



Value Chain (Coconut Industry)	Technical Requirements (Job/Skill/Qualification)
INPUT	<ul style="list-style-type: none"> <li>● Nursery Workers</li> <li>● Horticulture Workers</li> </ul>
PRODUCTION	<ul style="list-style-type: none"> <li>● Coconut Farmer</li> <li>● Farm Laborer</li> <li>● Farm Service Crew (Production)</li> <li>● Coconut Hybridization Production (Pollinators, Emasculators, Pollen Collection and Processing)</li> <li>● Farm equipment operator (tractor and hand tractor)</li> </ul>
POST HARVEST	<ul style="list-style-type: none"> <li>● Dehusker</li> <li>● Coconut Sheller &amp; Shell Crusher</li> <li>● Farm Service Crew (Post-harvest)</li> <li>● Copra Maker (white)</li> <li>● Paners/Papers</li> <li>● Deshellers</li> </ul>
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	<ul style="list-style-type: none"> <li>● Warehouse person</li> <li>● Warehouse Processing Clerk</li> <li>● Logistics Admin Officer</li> <li>● Logistics Supervisor</li> <li>● Distribution Supervisor</li> <li>● Inbound and Outbound Supervisor</li> </ul>
PROCESSING	<p>CNO</p> <ul style="list-style-type: none"> <li>● CNO Processors</li> <li>● Oil Millers</li> <li>● Oil Refiners</li> <li>● Cooker Machine Operator</li> <li>● Filter Press Operator</li> <li>● Centrifuge Operator</li> <li>● Processing Plant Worker</li> <li>● Machine and Equipment Technician (CNO Processing Plant)</li> <li>● Oil filling Machine Operator</li> </ul> <p>DCN</p> <ul style="list-style-type: none"> <li>● DCN Processors</li> <li>● Coconut Quality Identification/Control</li> </ul>

	<ul style="list-style-type: none"> <li>● Desiccated Coconut Cutter and Grinder Operator</li> <li>● Blanching Machine Operator</li> <li>● Multipurpose Dryer Operator</li> <li>● Coconut Meat Slicing Machines Operator</li> <li>● Disintegrator Operator</li> <li>● Grader machine Operator</li> <li>● Sorting Machine Operators</li> </ul> <p>COCONUT SHELL/ACTIVATED CARBON:</p> <ul style="list-style-type: none"> <li>● Charcoal/charcoal briquette Maker</li> <li>● Charcoal Kiln (w/ Smoke Trap) Operator</li> <li>● Charcoal Pulverizing Machine Operator</li> <li>● Charcoal Mixer Operator</li> <li>● Charcoal Briquetting Operator</li> <li>● Charcoal Briquetting Dryer Operator</li> <li>● Coco shell-based jewelry and handicraft making</li> </ul> <p>VCO</p> <ul style="list-style-type: none"> <li>● VCO Processors</li> <li>● Coconut Meat Slicing Machines Operator</li> <li>● Milling Technician</li> <li>● Disintegrator Operator</li> <li>● Screw or Hydraulic Press Operator</li> <li>● Blanching Machine Operator</li> <li>● Centrifuge Machine Operator</li> <li>● Virgin Coconut Expeller Operator</li> </ul> <p>COCONUT WATER:</p> <ul style="list-style-type: none"> <li>● Coconut Water Processor</li> <li>● Pasteurization Machine Operator</li> <li>● Degasser Machine Operator</li> <li>● Homogenizer Machine Operator</li> <li>● UHT Sterilization Machine Operator</li> <li>● Filling and Sealing Machine Operator (coconut water)</li> </ul> <p>COCONUT VINEGAR:</p> <ul style="list-style-type: none"> <li>● Coconut Water Vinegar Processing</li> </ul>
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## COCONUT COIR:

- Manual Dehusker
- Single Pass Decorticator Operator
- Peddal Type Twining Machine Operator
- Weaving Machine Operator
- Mechanized Two-Ply Twining Machine
- Coir Baling Machine Operator
- Carding Machine Operator
- Coco Coir Processor
- Decorticator Machine Operator
- Weaver/Twiner
- Coco Peat Workers
- Coco coir-based organic fertilizer production
- Geonet/ Fascines Workers
- Coir-based handicraft

## COCONUT FLOUR:

- Coconut Flour Processor
- Coconut Flour Machine Operator

## COCONUT SAP:

- Coco Sugar Processor
- Coco-Sap Tapper

## BIO-ENGINEERED COCONUT:

- Biomass Worker
- Biofertilizer Processing Worker
- Coco-Peat Fertilizer Maker
- Inoculats Preparation

## OTHER PROCESSES:

- Coco Board Maker
- Coco Pallet Maker
- Growing Bags Maker
- Chipping Machine Operator
- Manual Chipping Machine Operator
- Repair and maintenance of equipment

	<ul style="list-style-type: none"> <li>● Product packaging / labeling</li> </ul>
TRADING/MARKETING	<ul style="list-style-type: none"> <li>● Agri Entrepreneurs</li> <li>● Traders</li> <li>● Cocopreneur Counselor / Specialist</li> <li>● Consolidators</li> </ul>
OTHER REQUIREMENTS/SKILLS	<ul style="list-style-type: none"> <li>● Good Agricultural Skills</li> <li>● Intercropping</li> <li>● Livestock/Poultry Integration</li> <li>● Organic Agriculture</li> <li>● Digital Skills</li> <li>● Digital Skills</li> <li>● Agri Entrepreneurship</li> <li>● Geo Tagging and Mapping</li> <li>● Good Manufacturing Skills</li> <li>● Hazard Analysis and Critical Control Point (HACCP)</li> <li>● Coconut Hybridization Protocols</li> <li>● Integrated Pest and Disease Management</li> <li>● Green Muscardine Fungi Production</li> <li>● Reading of Bio Control Agents</li> <li>● Organic Pesticides and Insecticides Production</li> <li>● Post Terminator / Pest Control Technician</li> <li>● Village-Level Coconut oil production</li> <li>● Digital marketing and promotion</li> </ul>

The list of job/skills/priorities were considered in Question 2 of the industry consultation questionnaire, where the respondents were asked to review and identify each listed skill as needed by the industry.

#### 4.4 Identified Priority

The survey responses were processed to identify industry priorities, with Table 3 providing a summary of the survey results.

**Table 3.** Summary of Identified Priorities by the Coconut Industry



VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	VCO Processors	77.80%	22.20%	85.70%	14.30%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> <li>Need for Training</li> <li>Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Provide appropriate training and close monitoring</li> <li>Need linkaging to financial institutions; need enhancement trainings on VCO production.</li> </ul>
TRADING/MARKETING	Agri Entrepreneurs	35.30%	64.70%	47.60%	42.90%	9.50%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>New in the field of traders</li> <li>Most small coconut farmers are not capacitated</li> <li>Unskilled worker</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
TRADING/MARKETING	Traders	50.00%	50.00%	75.00%	25.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Inadequate capacity on the</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							techniques for copra buying <ul style="list-style-type: none"> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	
TRADING/MARKETING	Cocopreneur Counselor / Specialist	50.00%	50.00 %	62.50%	25.00%	12.50%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
TRADING/MARKETING	Consolidators	57.10%	42.90 %	71.40%	28.60%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PRODUCTION	Coconut Farmer	52.90%	47.10 %	60.00%	13.30%	26.70%	<ul style="list-style-type: none"> <li>Low Pay</li> <li>Not ready for innovation</li> <li>Seek higher pay</li> <li>prefered other work options</li> <li>Younger generation is not interested to pursue coconut farming</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> <li>Salary Issues</li> <li>Better compensation</li> <li>Value adding and strengthen market linkaging</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
								Training <ul style="list-style-type: none"> <li>• GAP and GMP CERT</li> </ul>
PRODUCTION	Farm Service Crew(Production)	80.00%	20.00 %	66.70%	0.00%	33.30%	<ul style="list-style-type: none"> <li>• Low Pay</li> <li>• Preferred other work options</li> <li>• Need to be trained to qualified</li> </ul>	<ul style="list-style-type: none"> <li>• Need for Standardization</li> <li>• Better compensation</li> <li>• Need for Halal Certification</li> </ul>
PROCESSING	Coco Board Maker	25.00%	75.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>• No Qualified Workers</li> <li>• Some choose to go Abroad</li> <li>• Unskilled worker</li> <li>• Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>• Need for Training</li> </ul>
PROCESSING	Coco Pallet Maker	25.00%	75.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>• No Qualified Workers</li> <li>• Some choose to go Abroad</li> <li>• Unskilled worker</li> <li>• Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>• Need for Training</li> </ul>
PROCESSING	Growng Bags Maker	25.00%	75.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>• No Qualified Workers</li> <li>• Some choose to go Abroad</li> <li>• Unskilled worker</li> <li>• Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>• Need for Training</li> </ul>
PROCESSING	Repair and maintenance of equipment	25.00%	75.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>• No Qualified Workers</li> <li>• Some choose to</li> </ul>	<ul style="list-style-type: none"> <li>• Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							go Abroad <ul style="list-style-type: none"> <li>Unskilled worker</li> <li>Lack of technical skills</li> </ul>	
PROCESSING	Product packaging / labeling	25.00%	75.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled worker</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Chipping Machine Operator	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Manual Chipping Machine Operator	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Village-Level Coconut oil production	45.50%	54.50 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Digital Skills	40.00%	60.00 %	90.00%	10.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
EMERGING REQUIREMENTS/SKILLS	Organic Pesticides and Insecticides Production	40.00%	60.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Post Terminator / Pest Control Technician	40.00%	60.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Digital marketing and promotion	40.00%	60.00 %	90.00%	10.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Good Agricultural Skills	44.40%	55.60 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Intercropping	44.40%	55.60 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							<ul style="list-style-type: none"> <li>go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	Standardization and Certification
EMERGING REQUIREMENTS/SKILLS	Livestock/Poultry Integration	44.40%	55.60%	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Agri Entrepreneurship	44.40%	55.60%	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Geo Tagging and Mapping	44.40%	55.60%	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Good Manufacturing Skills	44.40%	55.60%	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							<ul style="list-style-type: none"> <li>Lack of technical skills</li> </ul>	
EMERGING REQUIREMENTS/SKILLS	Reading of Bio Control Agents	33.30%	66.70 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Financial Literacy Skills (e.g Financial Management and Bookkeeping)	37.50%	62.50 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Hazard Analysis and Critical Control Point (HACCP)	37.50%	62.50 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
EMERGING REQUIREMENTS/SKILLS	Coconut Hybridization Protocols	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>



VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
EMERGING REQUIREMENTS/SKILLS	Green Muscardine Fungi Production	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Need for Standardization and Certification</li> </ul>
PROCESSING	Coconut Quality Identification/ Control	83.30%	16.70 %	60.00%	40.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Desiccated Coconut Cutter and Grinder Operator	80.00%	20.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Multipurpose Dryer Operator	80.00%	20.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Coconut Meat Slicing Machines Operator	80.00%	20.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Disintegrator Operator	80.00%	20.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	DCN Processors	75.00%	25.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Blanching Machine Operator	75.00%	25.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Grader machine Operator	75.00%	25.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Sorting Machine Operators	50.00%	50.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Coconut Water Processor	44.40%	55.60 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Augmentation of necessary skills training</li> </ul>
PROCESSING	Degasser Machine Operator	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Homogenizer Machine Operator	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	UHT Sterilization Machine Operator	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Filling and Sealing Machine Operator (coconut water)	75.00%	25.00 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Coconut Water Vinegar Processing	28.60%	71.40 %	71.40%	28.60%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Augmentation of necessary skills training</li> <li>Proper training provision of necessary training</li> </ul>
PROCESSING	Coco shell-based jewelry and handicraft making	50.00%	50.00 %	71.40%	28.60%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skill</li> <li>Lack of market opportunities and promotion.</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Augmentation of necessary skills training</li> <li>Need for financial assistance for start up capital.</li> </ul>
PROCESSING	Charcoal Kiln (w/ Smoke Trap) Operator	44.40%	55.60 %	71.40%	28.60%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Unskilled workers</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Charcoal Pulverizing Machine Operator	80.00%	20.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Charcoal Mixer Operator	80.00%	20.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Charcoal Briquetting Operator	80.00%	20.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Charcoal Briquetting Dryer Operator	80.00%	20.00 %	33.30%	66.70%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Decorticator Machine Operator	80.00%	20.00 %	84.60%	15.40%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> <li>Lack knowledge on Machines</li> <li>Workers seek higher pay</li> <li>Lack of training and funds as start-up capital.</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> <li>Provide trainings on Operation</li> <li>Need for conduct of training and linkage for market support.</li> </ul>
PROCESSING	CNO Processors	71.40%	28.60 %	57.10%	42.90%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>No qualified applicants</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Cooker Machine Operator	66.70%	33.30 %	60.00%	40.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Processing Plant Worker	66.70%	33.30 %	40.00%	60.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Machine and Equipment Technician (CNO Processing Plant)	66.70%	33.30 %	60.00%	40.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Oil filling Machine Operator	66.70%	33.30 %	60.00%	40.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Oil Millers	60.00%	40.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Oil Refiners	60.00%	40.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Filter Press Operator	60.00%	40.00 %	50.00%	50.00%	0.00%	<ul style="list-style-type: none"> <li>Some choose to go Abroad</li> <li>Lack of technical skills</li> </ul>	<ul style="list-style-type: none"> <li>Need for Trainings</li> </ul>
PROCESSING	Biomass Worker	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							<ul style="list-style-type: none"> <li>Unskilled workers</li> </ul>	
PROCESSING	Biofertilizer Processing Worker	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Coco-Peat Fertilizer Maker	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>
PROCESSING	Inoculats Preparation	66.70%	33.30 %	100.00%	0.00%	0.00%	<ul style="list-style-type: none"> <li>No Qualified Workers</li> <li>Some choose to go Abroad</li> </ul>	<ul style="list-style-type: none"> <li>Need for Training</li> </ul>

The initial results showed that the identified skills were all prioritized for competency standard development based on the information on the urgency and shortage of each skill/job provided by the respondents. During the validation of the results, these skills/jobs were further narrowed down to identify the top priorities for the immediate program development. These skills/jobs are summarized on the two (2) tables below. Among these five (5) skills/jobs, the validators identified Coconut Farming as the skill requirement for Training Regulations development due to the need for National Certification of individuals who will perform this skill/job. It was agreed that the remaining four (4) skills/jobs will be subjected for Competency Standards development.

Table 4. Skill/Job for Development of Training Regulations.

Value Chain Segment	Skill/ Jobs	Competencies
Production	Coconut Farming	<ul style="list-style-type: none"> <li>Hybridization</li> <li>Nursery Operation</li> <li>Fertilization</li> </ul>

Table 5. Skills/Jobs for Development of Competency Standards.

Value Chain Segment	Skill/ Jobs	Competencies
Production	Coco Tapping	
Processing	Nut-Related Products Processing	<ul style="list-style-type: none"> <li>● White Copra</li> <li>● Virgin Coconut Oil</li> <li>● Coco Water</li> <li>● Coco Water Vinegar</li> <li>● Coco Flour</li> <li>● Dessicated Coconut</li> </ul>
Processing	Sap-Related Products Processing	<ul style="list-style-type: none"> <li>● Coco sugar</li> <li>● Aminos</li> <li>● Liquor (Wine, Tuba, Lambanog)</li> <li>● Vinegar</li> </ul>
Processing	Non Food Products Processing	<ul style="list-style-type: none"> <li>● Coco Peat</li> <li>● Coco Shell (Coco Briquette)</li> <li>● Coco Husk</li> </ul>

The stakeholders also identified that the skills under the production segment, Hazard Analysis and Critical Control Point (HACCP), and for the processing segment, Good Agricultural Practice (GAP) and Good Manufacturing Practices (GMP) should be included as part of the required knowledge and not developed as separate Competency Standards. The stakeholders specified that there are different agencies that handle the training and certification of the said skills such as Department of Agriculture, Moreover, the programs to be developed must include Entrepreneurship as a competency. The participants also noticed that most of the skills identified under processing, such as machine operators, are needed by factories and plants, though most people in the coconut industry are farmers and process coconut on their own as well.

#### 4.5 Soft Skills and Skills Related to the 4IR

Apart from the technical skills, the industry recognized the importance of soft skills that employees need. According to survey results included in the skills map validation, the following soft/essential skills were identified:

- Communication Skills

- Computer Encoding
- Creativity
- Critical Thinking
- Farm Business Skills
- Financial Literacy
- Food Safety And Quality Training
- How To Manage The Coconut Farm And Other Crops
- Information Technology Skill
- Leadership
- Lean Six Sigma Or Continuous Improvement
- Management Skills (Farm/Cooperative)
- Marketing Skills
- Problem-Solving
- Record Keeping Skills
- Sales, Customer Management, International Logistics
- Situation Awareness Skills

#### 4.6 Possible Training Provider

The results also yielded the list of possible training providers identified by the respondents. It should be noted that most of the training providers identified were government agencies, such as the following:

- Agricultural Training Institute (ATI)
- Cooperative Development Authority (CDA)
- Commission on Higher Education (CHED)
- Department of Agriculture (DA)
- Department of Agrarian Reform (DAR)
- Department of Science and Technology (DOST)
- The Department of Trade and Industry (DTI)
- Philippine Coconut Authority (PCA)
- Philippine Center for Postharvest Development and Mechanization (PhilMech)
- Technical Education and Skills Development Authority (TESDA)

#### 4.7 Other Sectors/Sub Industries that will be affected

The respondents also identified possible sectors/industries which can also possibly encompass the developed skills. These sectors/industries include the following:



- Agriculture, Forestry, and Fishery
- Decorative Crafts
- Logistics
- Manufacturing
- Processed Food and Beverages
- Wholesale and Retail Trading

## V. Mapping of Skills Requirements vis-à-vis Existing TR

The table below shows the existing Training Regulations for each of the identified Priority Requirements in the Coconut Industry.

Table 6. Equivalent Qualifications (WTR) for Identified Priority Requirements in the Coconut Industry

Value Chain Segment	Skills/ Job	Qualification (WTR)
Production	Coconut Farmer	Agricultural Crops Production NC III
Production	Farm Service Crew(Production)	
Processing	Processing Plant Worker	
Processing	Oil Millers	
Processing	Oil Refiners	
Processing	Filter Press Operator	
Processing	Desiccated Coconut Cutter and Grinder Operator	
Processing	Multipurpose Dryer Operator	
Processing	Coconut Meat Slicing Machines Operator	
Processing	Disintegrator Operator	
Processing	Charcoal Pulverizing Machine Operator	

Value Chain Segment	Skills/ Job	Qualification (WTR)
Processing	Charcoal Mixer Operator	
Processing	Charcoal Briquetting Operator	
Processing	Charcoal Briquetting Dryer Operator	
Processing	DCN Processors	
Processing	Blanching Machine Operator	
Processing	Grader machine Operator	
Processing	Charcoal Pulverizing Machine Operator	
Processing	VCO Processors	
Processing	Biofertilizer Processing Worker	
Processing	Biomass Worker	
Processing	Chipping Machine Operator	
Processing	CNO Processors	
Processing	Coco shell-based jewelry and handicraft making	
Processing	Coconut Quality Identification/Control	
Processing	Coco-Peat Fertilizer Maker	
Processing	Inoculants Preparation	
Processing	Chipping Machine Operator	
Processing	Manual Chipping Machine Operator	
Processing	Charcoal Kiln (w/ Smoke Trap) Operator	

Value Chain Segment	Skills/ Job	Qualification (WTR)
Processing	Coco Boardmaker	
Processing	Coco Pallet Maker	
Processing	Coconut Water Processor	
Processing	Coconut Water Vinegar Processing	
Processing	Growing Bags Maker	
Processing	Product packaging / labeling	
Processing	Repair and maintenance of equipment	
Trading/Marketing	Traders	
Trading/Marketing	Cocopreneur Counselor / Specialist	
Trading/Marketing	Consolidators	
Trading/ Marketing	Agri Entrepreneurs	AgroentrepreneurshipNC II
Trading/ Marketing	Agri Entrepreneurs	Agroentrepreneurship NC III
Trading/ Marketing	Agri Entrepreneurs	Agroentrepreneurship NC IV
Other Skills	Coconut Hybridization Protocols	
Other Skills	Green Muscardine Fungi Production	
Other Skills	Reading of Biocontrol Agents	
Other Skills	Digital marketing and promotion	
Other Skills	Digital Skills	

Value Chain Segment	Skills/ Job	Qualification (WTR)
Other Skills	Financial Literacy Skills (e.g Financial Management and Bookkeeping)	
Other Skills	Geo Tagging and Mapping	
Other Skills	Good Agricultural Skills	
Other Skills	Good Manufacturing Skills	
Other Skills	Hazard Analysis and Critical Control Point (HACCP)	
Other Skills	Intercropping	
Other Skills	Livestock/Poultry Integration	
Other Skills	Organic Pesticides and Insecticides Production	
Other Skills	Pest Terminator / Pest Control Technician	Pest Management (Vegetables) NC II
Other Skills	Village-Level Coconut oil production	

Representatives from the Philippine Coconut Authority noted that upon checking of the Agricultural Crops Production NC III TR, they found the competencies so broad that a program tailored specifically for coconuts is required.

## VI. TVET Capacity

Table 7. Total Number of Enrolled, Graduated, Assessed, and Certified (WTR), 2020-2022

Training Regulation	Coverage (2020)				Coverage (2021)				Coverage (2022)			
	Enrolled	Graduated	Assessed	Certified	Enrolled	Graduated	Assessed	Certified	Enrolled	Graduated	Assessed	Certified
Agricultural Crops Production NC III	1,388	1,272	2,476	2,313	2,324	1,934	1,438	1,380	1,598	2,012	3,228	3,075
Agroentrepreneurship NC II	87	0	172	171	1,945	1,299	1,163	1,143	2,949	3,323	3,667	3,597
Agroentrepreneurship NC III	25	0	73	73	0	16	52	52	25	0	58	54
Agroentrepreneurship NC IV	0	0	10	10	0	0	20	20	0	0	12	12
Pest Management (Vegetables) NC II	367	240	370	370	468	436	414	408	1,189	1,197	635	630

Source. Information and Communications Technology Office  
 Processed by: TESDA Planning Office

Based on the disaggregated data from 2020 to 2022, Agricultural Crops Production NC III, and Agroentrepreneurship NC II had the most number in terms of enrolled, graduated, assessed, and certified. While Agroentrepreneurship NC IV had the least number of enrolled, graduated, assessed, and certified from 2020 to 2022.

**Table 8.** Number of Assessment Centers, Competency Assessors, Registered Programs, and National TVET Trainers Certification Holder as of September 2023

Qualifications	No. of Assessment Centers	No. of Competency Assessors	No. of Registered Programs	No. of NTTC Holders
Agricultural Crops Production NC III	33	81	84	506
Agroentrepreneurship NC II	71	102	97	448
Agroentrepreneurship NC III	25	12	11	63
Agroentrepreneurship NC IV	15	6	0	15
Pest Management (Vegetables) NC II	27	29	35	156

*Source: TESDA Certification Office*

*Processed by: TESDA Planning Office*

## VII. Ways Forward

The industry stakeholders discussed the value of production and how it affects markets. They also mentioned the various problems that coconut farmers face and the necessity of training support. The development initiatives would emphasize the improvement of production, processing, and value addition, as well as the need for farmers to obtain a certification. Based on the conducted industry consultation, the following actions are recommended to meet those needs:

- Prioritization of Coconut-Related Skills

As a result of the industry consultation, there is a need to address skills gaps in the production and processing value chain to assist in providing more knowledge and profitability to the farmer. The skill/job recommended for the development of a full-blown Training Regulation (TR) is provided in the table below.

**Table 9.** Identified Skills/Jobs for the development of full-blown TR by the coconut industry

Value Chain Segment	Skill/ Jobs	Competencies
Production	Coconut Farmer	<ul style="list-style-type: none"> <li>■ Hybridization</li> <li>■ Nursery OperatioN</li> <li>■ Fertilization</li> </ul>

Relative to this and as part of the prioritization process, the Planning Office shall assist the determined industry champion in preparing for the presentation to the TESDA Board - Direction Setting Committee (TB-DSC).

Whereas, while waiting for the presentation to the TB-DSC and its approval, the development of a Competency Standard may be done as a parallel activity to support industry demand. Furthermore, development of the said program once prioritized shall be facilitated by the Qualification and Standards Office (QSO).

The validation meeting yielded skills for the production and processing segments for CS Development that may assist the farmers in increasing their profitability and market share. The skills recommended for Competency Standards (CS) Development are listed in the table below.

Table 10. Identified Skills/Jobs for the development of Competency Standards (CS) by the coconut industry

Value Chain Segment	Skill/ Jobs	Competencies
Production	Coco Tapping	
Processing	Nut-Related Products	<ul style="list-style-type: none"> <li>● White Copra</li> <li>● Virgin Coconut Oil</li> <li>● Coco Water</li> <li>● Coco Water Vinegar</li> <li>● Coco Flour</li> <li>● Desiccated Coconut</li> </ul>
Processing	Sap-Related Products	<ul style="list-style-type: none"> <li>● Coco sugar</li> <li>● Aminos</li> <li>● Liquor (Wine, Tuba, Lambanog)</li> <li>● Vinegar</li> </ul>
Processing	Non Food Products	<ul style="list-style-type: none"> <li>● Coco Peat</li> <li>● Coco Shell (Coco Briquette)</li> <li>● Coco Husk</li> </ul>

It is highly recommended that the development of the above-mentioned standards will consider the results of the Area-Based and Demand Driven TVET identified priority skills. Industry and experts from regions/provinces with identified related requirements. Particularly, seven (7) regions in the country (Regions 1, 4A, 4B, 5, 6, 8, and BARMM) have identified Coconut Farmer/Farming as a priority job/skill. Moreover, CARAGA and BARMM have also prioritized the job/skill in coconut oil virgin coconut oil processing respectively, which are both under the competencies of Nut-Related Products.

Furthermore, it is also recommended to embed the below-listed skills and certificates as part of the required knowledge, instead of developing them as separate Competency Standards:

- Hazard Analysis and Critical Control Point (HACCP)
- Good Agricultural Practice (GAP)



- Good Manufacturing Practices (GMP)

Likewise, Entrepreneurship is also recommended be added as a competency in the programs to be developed, as identified during the industry consultation.

- Scholarship Allocation

As the implementation of the Coconut related programs is covered under the partnership between the PCA and TESDA in support of the RA 11524, it is therefore noteworthy to consider that the identified skills requirements will be considered as priority in the allocation of the scholarship funds.

The Philippine Coconut Industry is also tasked with entering a memorandum of understanding (MOU) with TESDA to “ensure a coordinated implementation of the programs under the Development Plan, proper utilization of the allocations provided in this section, and submission of periodic accomplishment report of these implementing agencies to the PCA Board” (RA 11524, 2021).

## VIII. Annexes

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PRODUCTION	Coconut Farmer	52.90 %	47.10%	60.00%	13.30%	26.70%	Low Pay Not ready for innovation Seek higher pay preferred other work options Younger generation is not interested to pursue coconut farming	Need for Training Need for Standardization and Certification Salary Issues Better compensation Value adding and strengthen market linking Training GAP and GMP CERT
PRODUCTION	Farm Laborer	41.70 %	58.30%	54.50%	18.20%	27.30%	Low Pay Few skilled workers in the community Preferred other work options	Need for Standardization Skills training is needed Better compensation
Input	Nursery Worker	85.70 %	14.30%	50.00%	16.70%	33.30%	Low Pay Preferred other work options	Need for conduct of training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							Need to be trained to qualified	Need for Standardization and certification Better compensation
INPUT	Horticulture Workers	66.70 %	33.30%	80.00%	0.00%	20.00%	Seek higher pay	Salary Issues Need for Standardization
PRODUCTION	Coconut Hybridization Production ( Pollinators, Emasculators, Pollen Collection and Processing)	85.70 %	14.30%	50.00%	16.70%	33.30%	Low Pay Preferred other work options Need to be trained to qualified	Need for conduct of training Need for Standardization and certification Better compensation
PRODUCTION	Farm equipment operator (tractor and hand tractor)	85.70 %	14.30%	50.00%	16.70%	33.30%	Low Pay Preferred other work options No Financial Budget	Need for Training Better compensation

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PRODUCTION	Farm Service Crew(Production)	80.00 %	20.00%	66.70%	0.00%	33.30%	Low Pay Prefered other work options Need to be trained to qualified	Need for Standardization Better compensation Need for Halal Certification
POST HARVEST	Dehusker	38.50 %	61.50%	66.70%	8.30%	25.00%	VERY LOW PAY Seek higher pay preferred other work options seek higher pay	Need for Training Salary increase Needed Need for Standardization Better compensation
POST HARVEST	Copra Maker (white)	53.80 %	46.20%	61.50%	23.10%	15.40%	Low Pay No facilities Seek higher pay Preferred other work options seek higher pay Lack of funds and government support in putting up of facilities for white copra production	Need for Training Salary increase Needed Need for Standardization Need for conduct of training on white copra production and financial assistance for putting up of facilities.

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
POST HARVEST	Coconut Sheller & Shell Crusher	55.60%	44.40%	60.00%	10.00%	30.00%	Low Pay Seek higher pay Preferred other work options seek higher pay	Need for Training Salary increase Needed Need for Standardization
POST HARVEST	Farm Service Crew	55.60%	44.40%	62.50%	12.50%	25.00%	Low Pay Seek higher pay Preferred other work options seek higher pay	Need for Training Salary increase Needed Need for Standardization Need for conduct of training on white copra production and financial assistance for putting up of facilities.
POST HARVEST	Deshellers	55.60%	44.40%	75.00%	0.00%	25.00%	Low Pay Seek higher pay Preferred other work options	Need for Training Salary increase Needed Need for Standardization
POST HARVEST	Paners/Papers	75.00%	25.00%	33.30%	0.00%	66.70%	Low Pay	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Decorticator Machine Operator	80.00 %	20.00%	84.60%	15.40%	0.00%	No Qualified Workers Some choose to go Abroad Lack knowledge on Machines Workers seek higher pay Lack of training and funds as start-up capital.	Need for Training Provide trainings on Operation Need for conduct of training and linkage for market support.
PROCESSING	Weaver/Twiner	92.30 %	7.70%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Coco Peat Workers	69.20 %	30.80%	76.90%	23.10%	0.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of funds as start-up capital.	Need for Training No Competitive Wage Rate Need for conduct of training and linkage for market support.

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Coir Baling Machine Operator	41.70%	58.30%	58.30%	16.70%	25.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Coco coir-based organic fertilizer production	58.30%	41.70%	75.00%	25.00%	0.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Carding Machine Operator	45.50%	54.50%	54.50%	18.20%	27.30%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Coir-based handicraft	54.50%	45.50%	72.70%	27.30%	0.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							funds as start-up capital.	
PROCESSING	Charcoal/charcoal briquette Maker	50.00%	50.00%	62.50%	37.50%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills Lack of funds and government support in putting up facilities for charcoal/charcoal briquette making.	Need for Training Augmentation of necessary skills training Need for conduct of training on charcoal/charcoal briquette making and financial assistance for putting up of facilities.
PROCESSING	Coco shell-based jewelry and handicraft making	50.00%	50.00%	71.40%	28.60%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skill Lack of market opportunities and promotion.	Need for Training Augmentation of necessary skills training Need for financial assistance for start up capital.
PROCESSING	Manual Dehusker	90.00%	10.00%	70.00%	30.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training Provision of equipment



VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							Lack of equipment & facilities Lack of training and funds as start-up capital.	and machineries to reduce labor cost Need for conduct of training and linkage for market support.
PROCESSING	Weaving Machine Operator	50.00 %	50.00%	50.00%	20.00%	30.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Provision of equipment and machineries to reduce labor cost Need for conduct of training and linkage for market support.
PROCESSING	Coco Coir Processor	50.00 %	50.00%	60.00%	20.00%	20.00%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilities Lack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Charcoal Kiln (w/ Smoke	44.40 %	55.60%	71.40%	28.60%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
	Trap) Operator						Unskilled workers Lack of technical skills	
PROCESSING	VCO Processors	77.80 %	22.20%	85.70%	14.30%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills Need for Training Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	Need for Training Provide appropriate training and close monitoring Need linking to financial institutions; need enhancement trainings on VCO production.
PROCESSING	Coconut Water Processor	44.40 %	55.60%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills	Need for Training Augmentation of necessary skills training
PROCESSING	Single Pass Decorticator Operator	88.90 %	11.10%	66.70%	33.30%	0.00%	No Qualified Workers Some choose to go Abroad Lack of equipment &	Need for Training Provision of equipment and machineries to

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							facilitiesLack of training and funds as start-up capital.	reduce labor cost Need for conduct of training and linkage for market support.
PROCESSING	Peddal Type Twining Machine Operator	55.60%	44.40%	55.60%	11.10%	33.30%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilitiesLack of training and funds as start-up capital.	Need for Training Provision of equipment and machineries to reduce labor cost Need for conduct of training and linkage for market support.
PROCESSING	Mechanized Two-Ply Twining Machine	55.60%	44.40%	55.60%	11.10%	33.30%	No Qualified Workers Some choose to go Abroad Lack of equipment & facilitiesLack of training and funds as start-up capital.	Need for Training Need for conduct of training and linkage for market support.
PROCESSING	Geonet/Fascinies Workers	66.70%	33.30%	88.90%	11.10%	0.00%	No Qualified Workers Some choose to go Abroad Lacking of equipments &	Need for Training Need for conduct of training and linkage for

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							facilities Lack of training and funds as start-up capital.	market support.
PROCESSING	Coco Sugar Processor	87.50 %	12.50%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Less skilled sugar processors Low salary No stable buyers Unskilled workers	Need for Training Conduct training for skills enhancement Salary Increase Needed
PROCESSING	Coco Board Maker	25.00 %	75.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled worker Lack of technical skills	Need for Training
PROCESSING	Coco Pallet Maker	25.00 %	75.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled worker Lack of technical skills	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Growing Bags Maker	25.00 %	75.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled worker Lack of technical skills	Need for Training
PROCESSING	Repair and maintenance of equipment	25.00 %	75.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled worker Lack of technical skills	Need for Training
PROCESSING	Product packaging / labelling	25.00 %	75.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled worker Lack of technical skills	Need for Training
PROCESSING	CNO Processors	71.40 %	28.60%	57.10%	42.90%	0.00%	Some choose to go Abroad No qualified applicants Lack of technical skills	Need for Trainings
PROCESSING	Coconut Meat Slicing Machines Operator	85.70 %	14.30%	83.30%	16.70%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills	Need for Training Provision of start up capital Need linkaging to financial institutions; need

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							Need for Training Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	enhancement trainings on VCO production.
PROCESSING	Milling Technician	85.70 %	14.30%	83.30%	16.70%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	Need for Training Need linkaging to financial institutions; need enhancement training on VCO production.
PROCESSING	Virgin Coconut Expeller Operator	85.70 %	14.30%	83.30%	16.70%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of financial capacity to expand business and to train and	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							hire more workers as well as to upgrade facilities.	
PROCESSING	Coconut Water Vinegar Processing	28.60 %	71.40%	71.40%	28.60%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills	Augmentation of necessary skills training Proper training provision of necessary training
PROCESSING	Coco-Sap Tapper	71.40 %	28.60%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Less skilled coco-sap tapper Low salary Job not stable	Need for Training for both processor and tapper Need to Increase Salary and Insurance
PROCESSING	Cooker Machine Operator	66.70 %	33.30%	60.00%	40.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Processing Plant Worker	66.70 %	33.30%	40.00%	60.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Machine and Equipment Technician (CNO Processing Plant)	66.70 %	33.30%	60.00%	40.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Oil filling Machine Operator	66.70 %	33.30%	60.00%	40.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Coconut Quality Identification/Control	83.30 %	16.70%	60.00%	40.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Disintegrator Operator	83.30 %	16.70%	83.30%	16.70%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of financial capacity to expand business and to train and	Need for Training Provision of startup capital Need linkaging to financial institutions; need enhancement training on VCO production.



VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							hire more workers as well as to upgrade facilities.	
PROCESSING	Coconut Flour Processor	83.30%	16.70%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad No facilities Unskilled workers	Need Provision for training
PROCESSING	Oil Millers	60.00%	40.00%	50.00%	50.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Oil Refiners	60.00%	40.00%	50.00%	50.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Filter Press Operator	60.00%	40.00%	50.00%	50.00%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Trainings
PROCESSING	Desiccated Coconut Cutter and Grinder Operator	80.00%	20.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Multipurpose Dryer Operator	80.00%	20.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Coconut Meat Slicing Machines Operator	80.00%	20.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Disintegrator Operator	80.00%	20.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Charcoal Pulverizing Machine Operator	80.00%	20.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Charcoal Mixer Operator	80.00%	20.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Charcoal Briquetting Operator	80.00%	20.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Charcoal Briquetting Dryer Operator	80.00%	20.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Screw or Hydraulic Press Operator	80.00 %	20.00%	75.00%	25.00%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	Need for Training Provision of start up capital Need linkaging to financial institutions; need enhancement training on VCO production.
PROCESSING	Blanching Machine Operator	80.00 %	20.00%	75.00%	25.00%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	Need for Training Provision of startup capital Need linkaging to financial institutions; need enhancement training on VCO production.
PROCESSING	Centrifuge Machine Operator	80.00 %	20.00%	75.00%	25.00%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate funding for the conduct of training Lack of	Need for Training Provision of startup capital Need linkaging to financial institutions; need

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							financial capacity to expand business and to train and hire more workers as well as to upgrade facilities.	enhancement training on VCO production.
PROCESSING	Pasteurization Machine Operator	80.00 %	20.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Coconut Flour Machine Operator	80.00 %	20.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad No facilities	Need for Training
PROCESSING	Centrifuge Operator	75.00 %	25.00%	33.30%	66.70%	0.00%	Some choose to go Abroad Lack of technical skills	Need for Training
PROCESSING	DCN Processors	75.00 %	25.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Blanching Machine Operator	75.00 %	25.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Grader machine Operator	75.00 %	25.00%	33.30%	66.70%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Degasser Machine Operator	75.00 %	25.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Homogenizer Machine Operator	75.00 %	25.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	UHT Sterilization Machine Operator	75.00 %	25.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Filling and Sealing Machine Operator (coconut water)	75.00 %	25.00%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Biomass Worker	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers	Need for Training
PROCESSING	Biofertilizer Processing Worker	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Coco-Peat Fertilizer Maker	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Inoculats Preparation	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Chipping Machine Operator	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
PROCESSING	Manual Chipping Machine Operator	66.70 %	33.30%	100.00%	0.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
PROCESSING	Sorting Machine Operators	50.00%	50.00%	50.00%	50.00%	0.00%	No Qualified Workers Some choose to go Abroad	Need for Training
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Warehouse person	58.30%	41.70%	72.70%	9.10%	18.20%		Need for Standardization Salary increase
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Warehouse Processing Clerk	54.50%	45.50%	57.10%	14.30%	28.60%	Low pay	Need for Standardization
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Logistics Admin Officer	71.40%	28.60%	66.70%	0.00%	33.30%	Low pay Seek higher pay	Need for Standardization Salary increase
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Logistics Supervisor	71.40%	28.60%	66.70%	0.00%	33.30%	Low pay Seek higher pay	Need for Standardization Salary increase

VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Distribution Supervisor	83.30%	16.70%	60.00%	0.00%	40.00%	Low pay	Need for Standardization
INBOUND AND OUTBOUND LOGISTICS/DISTRIBUTION	Inbound and Outbound Supervisor	80.00%	20.00%	50.00%	0.00%	50.00%	Low pay	Need for Standardization
TRADING/MARKETING	Agri Entrepreneurs	35.30%	64.70%	47.60%	42.90%	9.50%	No Qualified Workers Some choose to go Abroad New in the field of traders Most small coconut farmers are not capacitated Unskilled worker Lack of technical skills	Need for Training Need for Standardization and Certification
TRADING/MARKETING	Traders	50.00%	50.00%	75.00%	25.00%	0.00%	No Qualified Workers Some choose to go Abroad Inadequate capacity on the techniques for copra buying	Need for Training



VALUE CHAIN SEGMENT	JOBS/SKILLS/ QUALIFICATIONS  (TECHNICAL SKILLS)	JOBS/SKILLS IMMEDIATELY NEEDED (% Share)		ASSESS THE SHORTAGE OF WORKERS IN FILLING-UP THE SKILLS REQUIREMENTS (% Share)			REASONS/CONSTRAINTS IN FILLING-UP THE SKILLS REQUIREMENTS  (e.g. no qualified applicants, prefer to work abroad, seek higher pay, work schedule)	RECOMMENDED ACTION  (e.g. need for the conduct of training, standardization, certification)
		In the next 1-3 years	In the next 3-5 years	Low (below 100)	Medium (100-500)	High (above 500)		
							Unskilled workers Lack of technical skills	
TRADING/MARKETING	Cocopreneur Counselor / Specialist	50.00 %	50.00%	62.50%	25.00%	12.50%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills	Need for Training
TRADING/MARKETING	Consolidators	57.10 %	42.90%	71.40%	28.60%	0.00%	No Qualified Workers Some choose to go Abroad Unskilled workers Lack of technical skills	Need for Training

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**Office of the Deputy Director General for Policies and Planning**  
Planning Office - Labor Market Information Division  
Planning Office - Policy Research and Evaluation Division

TESDA Complex, East Service Road, South Superhighway,  
Taguig City, 1630  
[www.tesda.gov.ph](http://www.tesda.gov.ph) | (02) 8817-2675