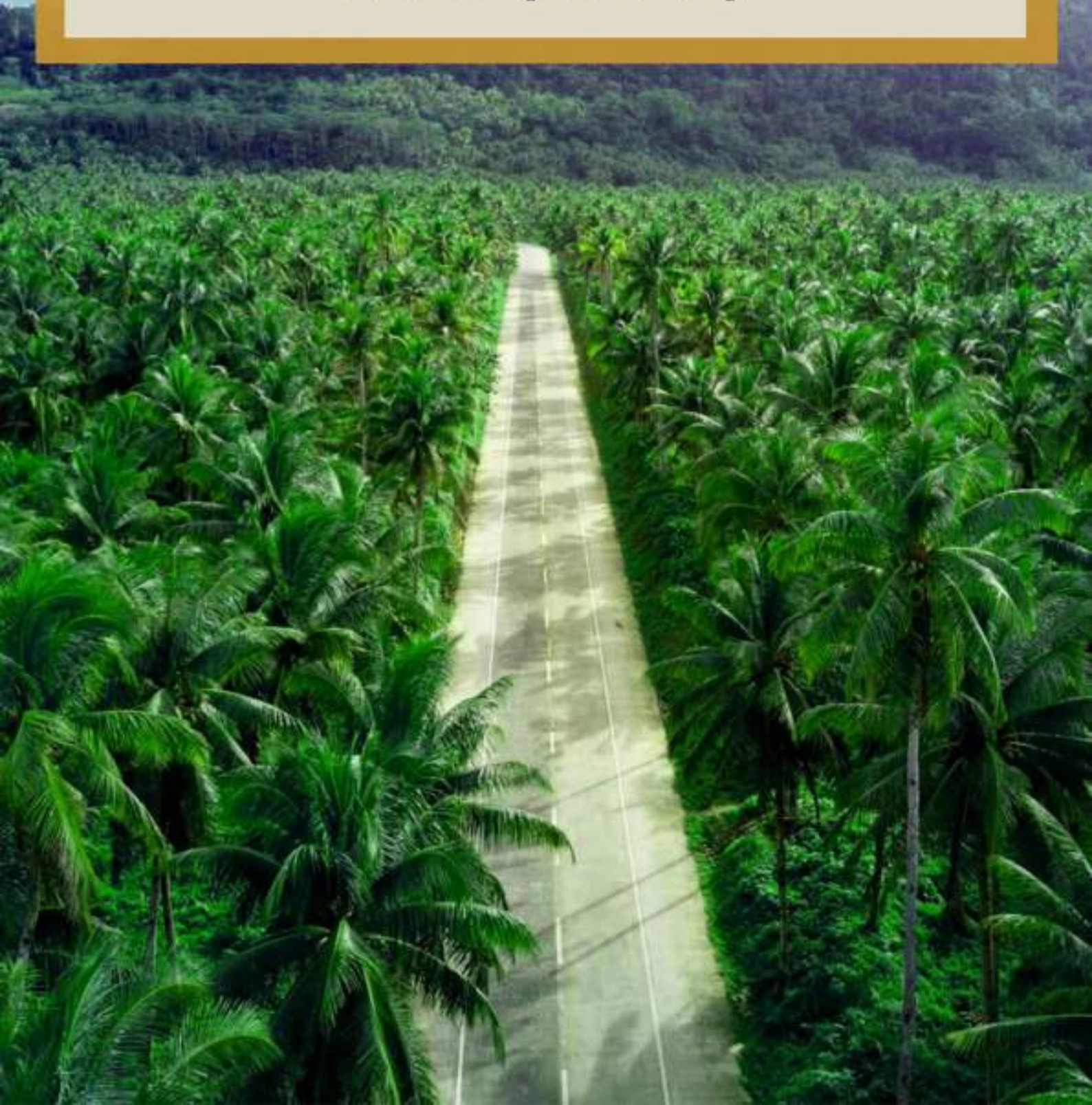




COCONUT FARMERS & INDUSTRY DEVELOPMENT PLAN (CFIDP)



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Philippines Coconut Authority
Development Academy of the Philippines
2021

PHILIPPINE COCONUT FARMERS AND INDUSTRY DEVELOPMENT PLAN (CFIDP)



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PHILIPPINE COCONUT FARMERS AND INDUSTRY DEVELOPMENT PLAN (CFIDP)



MESSAGE FROM SECRETARY WILLIAM DAR



Warmest greetings to all stakeholders of the coconut industry, most especially to our coconut farmers, who are the true heroes and beneficiaries of this historic event.

Today marks an era of change! It is the day when the millions of coconut farmers will finally set their eyes on the blueprint that will help uplift their livelihood by increasing their productivity and incomes, and sustaining the development of the coconut industry.

In our continuing quest to build a free, inclusive, and prosperous society, today we also give full recognition to the importance of not only coconut farmers, but also those who plan rice, corn, vegetables, and commercial crops, and those who raise poultry and livestock animals, and those who culture fish and catch marine species. Together, they drive our rural economy and power our progress. As

our patriots and real-life heroes, they make valuable and lasting contributions to our robust agri-fishery landscape.

On this day, therefore, we demonstrate our appreciation for these hardworking men and women in the countryside – who nourish our national life with enterprise, hard work and patience.

President Rodrigo Roa Duterte's signing of the "Coconut Farmers and Industry Fund Act" or RA 11524, on 26 February 2021, paves the way for the efficient use of the country's multi-billion-peso coconut levy, and his marching order to all concerned government agencies – including the Department of Agriculture and the Philippine Coconut Authority – is to draft a Coconut Farmers and Industry Development Plan (CFIDP).

Now, we have the Plan to efficiently use the coconut levy, of at least P75 B in the next five years, to uplift the socio-economic status of millions of farmers, and sustain the development, modernization and industrialization of the coconut sector. It is a product of exhaustive consultations with key players of the coconut industry food systems – from production, processing for both domestic and exports markets, and packing into various value-added food, consumer and industrial products.

As stipulated in RA 11524, designated government agencies will implement the following thematic programs to ensure efficient operationalization in accordance with the mandates, namely:

- Hybridization
- Farm improvement thru intercropping systems,
- Animal integration.
- Establishment of shared facilities for rural processing ventures,
- Provision of social protection,

- Empowerment of coconut farmers' organizations/cooperatives on entrepreneurship,
- Provision of credit and market support services,
- Infrastructure development, and
- Conduct of innovative research and policy studies.

Thus, the Plan serves as a guide with clear allocation and accountability of concerned implementing agencies.

To prevent the Plan and its component programs from being mere lip service, these must pass scrutiny of vetting agencies such as the National Economic and Development Authority, Department of Trade and Industry, the Department of Budget and Management, and finally by the Department of Finance to safeguard objectivity and clarity prior to the approval of President Duterte.

In all, the contributions and achievements of our coconut farmers have always been essential to building a robust and thriving Philippine agricultural economy – and they will be critical as we continue to rebuild it in the wake of the Covid-19 pandemic.

I am indeed fortunate that I was appointed by the President Duterte as Secretary of Agriculture, and serves as Chairman of the PCA Board that plays a major role in the execution of this significant legislation that will benefit millions of Filipino coconut farmers and their families, and all others who engaged in the coconut industry food systems.

We therefore commend the technical teams of the PCA and the Development Academy of the Philippines for their diligence and dedication in crafting the Plan – despite the risks of the pandemic. As always, their compliance, dedication, and quality of work remains admirable and unmatched.

This is for them as much as it is for our coconut farmers – and, also, the legislators, most especially Senator Cynthia Villar, for this continued guidance and strong support.

Nawa'y sa tulong ng ating Poong Maykapal ay maging daan ang plano at mga programang napakaloob dito upang ibangon ang mga masasaka ng niyog sa kahirapan tungo sa masaganang kabuhasan at kinabukasan.
Mabuhay!



William D. Dar, PhD.
Secretary, Department of Agriculture
and Chairman of the Board
DA – Philippine Coconut Authority

MESSAGE FROM THE ADMINISTRATOR FOR CFIDP

29 NOVEMBER 2021



The Philippine Coconut Authority (PCA) is honored to present this Coconut Farmers and Industry Development Plan or CFIDP, which aims to uplift the lives and livelihood of coconut farmers and at the same time, enhance the performance of the country's coconut industry. The CFIDP was carefully crafted and developed in accordance with the provisions of the Coconut Farmers and Industry Trust Fund Act or RA 11524 signed by President Rodrigo Roa Duterte on February 26, 2021. This law which mandates the establishment, management, and use of the Coconut Farmers and Industry Trust Fund is a fulfillment of his campaign promise in 2016 that he will return the coconut levy fund to its rightful owners, the coconut farmers. Finally, after more than four decades of waiting and several years of drafting the legislation on the trust fund, this so-called game changer aims to

provide social protection and improve the competitiveness of our coconut farmers, as well as develop and modernize the coconut sector.

The PCA is one with all the stakeholders in the industry in the desire to lift our dear coconut farmers out of poverty by providing a holistic and strategic development program, mobilizing various concerned government agencies for this purpose. This will benefit more than 3.1 million coconut farmers registered in our National Coconut Farmers Registry System (NCFRS) and their families. The PCA has partnered with fourteen (14) implementing agencies which have the competency to handle and implement the various development programs to be extended to the farmers. For the past months, these partner government agencies carefully studied and discussed the projects to be funded with relevant stakeholders through consultations in various provinces and regions.

A major component of the plan is the Hybridization Program which aims to raise the quality of seednuts and seedlings and increase the yield of our coconut trees and which will eventually redound to the farmers as increased income. We will also undertake training programs to strengthen the capacity and capability of farmers and further empower them as farmers' organizations or cooperatives. Coconut farmers and their families will also be provided with social protection through provision of crop insurance, medical and health support for their families, and scholarships for their dependents. We will also help our subsistent coconut farmers to become coconut entrepreneurs through provision of intercrops such as coffee and cacao and integration of native livestock and processing facilities for value-addition. We will also provide the necessary infrastructure, marketing

and promotion assistance, and loan access to our qualified coconut farmer organizations and cooperatives.

In line with meeting these challenging tasks, PCA shall also set up a Program Management Office that will oversee the implementation, monitoring and evaluation of the programs set out by RA 11524 which will be implemented in the next 50 years. We will ensure that small coconut farmers will primarily gain from such development of the industry.

Meanwhile, we also see the need to strengthen the PCA as an institution and develop the capabilities of our agricultural extension workers and officers. As such, we at PCA have embarked on a transformation journey utilizing our regular appropriations to ensure that we can dutifully perform this new mandate. We can only promise to do our very best to be responsive to the needs of coconut growers and in pace with the development of the industry.

We are proud to say that this development plan is a result of several months of painstaking negotiation, alignment, and integration of priority programs and activities among several agencies and instrumentalities both at the national and local levels. We would like to thank those who wrote, contributed, and provided their valuable inputs and guidance - the researchers from the Development Academy of the Philippines (DAP), the focal persons of the various implementing agencies, and the members of the PCA Board headed by its chairman, Sec. William Dollente Dar of the Department of Agriculture, as well as the representatives of the vetting agencies comprised of NEDA, DTI, DoF, and DBM.

We offer this CFIDP to our hardworking and honorable coconut farmers. You are the life and blood of the industry and we will stay committed and staunchly provide our selfless service to all of you.

Mabuhay ang magniniyog! Mabuhay ang industriya ng pagniniyog!



BENJAMIN R. MADRIGAL, JR.
Administrator, Philippine Coconut Authority

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Annexes

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Definition of Terms

DEFINITION OF TERMS

Abiotic stresses	stress is defined as the negative impact of non-living factors on living organisms in a specific environment (e.g., drought, salinity, low or high temperature, radiation, etc.)
Activated carbon	a form of carbon processed to have small, low-volume pores that increase the surface area available for adsorption or chemical reactions
Aflatoxin	group of carcinogenic compounds produced by certain molds, particularly <i>Aspergillus</i> species
Assisted Pollination Technique	manual transfer of pollen from the stamen or male part of the flower to the pistil or female part
Biotic stresses	stress is defined as the negative impact of other living organisms on living organisms in a specific environment (e.g. fungi, bacteria, virus, nematodes, etc.)
Climate risk index	level of exposure and vulnerability to extreme weather events, which countries should understand as warnings in order to be prepared for more frequent and/or more severe events in the future
Coco coir	a natural fiber extracted from the outer husk of coconut and used in products such as floor mats, doormats, brushes and mattresses
Coco husk	the rough exterior shells of the coconut
Coco peat	also known as coir dust, by-product of the extraction of the extraction of coconut fiber from husks
Coconut farmer	as defined in RA 11524, coconut farmer shall refer to (1) an owner of a coconut farm that is not more than five (5) hectares, who: (i) tills the land (owner-cultivator); or (ii) does not till the land, but has control and supervision over the cultivation of the coconut farm which is not more than five (5) hectares, (2) a leaseholder with not more than five (5) hectares or tenant who tills or supervises the cultivation of the coconut farm, (3) a farm worker or laborer, whether seasonal or itinerant, engaged in the harvesting of the nuts and processing of copra as a major means of livelihood
Coconut Farmer Cooperatives (CFCs)	shall refer to cooperatives which are duly registered with the Cooperative Development Authority (CDA); the membership of which is comprised of fifty-one percent (51%) of coconut farmers as defined herein

Definition of Terms

Coconut Farmer Organizations (CFOs)	shall refer to duly registered organizations; the membership of which are fifty-one percent (51%) comprised of coconut farmers as defined herein
Coconut Levy Assets	As defined in RA 11524, Coconut Levy Assets shall refer to any and all kinds of property, whether real or personal, tangible or intangible, wherever situated, which have been acquired through the Coconut Levy Funds as defined in this section, including those assets that may be recovered in favor of the government, as well as the fruits or income therefrom, including those acquired in exchange or substitution thereof
Coconut Levy Funds	As defined in RA 11524, Coconut Levy Funds shall refer to various funds generated from levies taxes, charges, and other fees exacted or imposed pursuant to or in connection with the sale of <i>copra rececada</i> or its equivalent in other coconut products and collected for the most part from coconut farmers, planters, millers, refiners, processors, exporters, desiccators and other end-users of <i>copra rececada</i> or its equivalent in other coconut products. Specifically, the term shall refer to any or all of the following: (i) the Coconut Investment Fund created under Republic Act No. 6260; (ii) the Coconut Consumers Stabilization Fund, later renamed as the Coconut Industry Stabilization Fund, created under Presidential Decree No. 276; (iii) the Coconut Industry Development Fund created under Presidential Decree No. 582; (iv) the Coconut Industry Investment Fund created under Presidential Decree No. 1468; and (v) the Coconut Reserve Fund under Presidential Decree No. 1468 and Presidential Decree No. 1842
Coconut Somatic embryogenesis technology (Cset)	a tool for rapid mass propagation of superior genetic stocks using immature flowers, immature embryos, and plumule or the meristematic part of the embryo
Copra	refers to the dried coconut kernels from which coconut oil is expelled
Copra cake	by-product of the oil extraction from dried coconut kernels (copra)
Cultivar	a plant variety that has been produced in cultivation by selective breeding
Dehusking	refers to the process of removing the husks from coconuts through mechanical or manual process
Desiccated Coconut (DCN)	finely cut dehydrated coconut meat

Definition of Terms

Designated Disposition Entity (DDE)	as defined in RA 11524, Designated Disposition Entity (DDE) refers to the Privatization Management Office (PMO), Land Bank of the Philippines (LBP), Development Bank of the Philippines (DBP), Social Security System (SSS), Government Service Insurance System (GSIS) which, at the time of enactment of this Act, are one hundred percent (100%) owned by the government.
<i>ex vitro</i>	taking place in an environment outside the artificial tissue culture, usually in soil or potting mixture
Food insecurity threshold	minimum magnitude or intensity of disruption of food intake or eating patterns because of lack of money and other resources
Forage	food for animals especially when taken by browsing or grazing
Geotagging	process of appending geographic coordinates to media based on the location of a mobile device
Germplasm	living genetic resources such as seeds or tissues that are maintained for the purpose of animal and plant breeding, preservation, and other research uses
Glycemic index	a number from 0-100 assigned to a food, with pure glucose arbitrarily given the value of 100, which represents the relative rise in the blood glucose level two hours after consuming food
Good Agricultural Practices (GAP)	a collection of principles to apply for on-farm production and postproduction processes, resulting in safe and healthy food and non-food agriculture products, while taking into account economic, social and environmental sustainability
Horticulture	the science and art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables and herbs, as well as ornamental trees and lawns
Hybrid coconut	NSIC certified coconut; inter-varietal crosses between two morphological forms of coconut trees
Hybridization	process of crossing between two varieties and their reciprocal crosses

Definition of Terms

Hydroponics	the science and art of gardening without soil; a type of horticulture and a subset of hydroculture which involves growing plants without soil, by using mineral nutrient solutions in an aqueous solvent
<i>in vitro</i>	performed or taking place in a test tube, culture dish, or elsewhere outside a living organism
Integrated Pest Management (IPM)	an effective and environmentally sensitive approach to pest management
Intercropping	a practice involving growing two or more crops simultaneously on a same piece of land
Liquid Milk Equivalent (LME)	A standard measure of the amount of milk (in liters) allocated to each product based on the amount of fat and protein in the product relative to the amount of fat. and protein in standardized raw milk
Medium-chain fatty acids	saturated fatty acids found at high concentrations in food such as coconut oil, with lauric acid (C12:0) representing ~50% of its fat content
Monocropping	a practice that involves growing only one type of crop per cropping season
Mulching	process of layering organic material or plastic to the soil surface for the conservation of soil moisture, improving fertility and health of the soil, reducing weed growth and sometimes improving the visual appeal of the area
Native Animals	breeds of chickens, pigs, cattle, goats, sheep, ducks and other domesticated farm animals that are more adapted to the environmental conditions of a specific geographical location, having emerged through a long process of natural selection
Non-traditional coconut products	coconut products such as Virgin Coconut Oil, Coconut Water, Coconut Sap Products, Coconut Coir Products, and Coconut Water Concentrate, that are relatively new as export products
Oleochemicals	group of various fatty acid-containing compounds for production of detergents, surfactants, soaps, paints, varnishes, lubricants, copolymers, and pharmaceutical aids
Open-pollinated varieties	plant varieties that come from the multiplication by free-pollination of a set of individuals

Definition of Terms

PAH	polycyclic aromatic hydrocarbons; family of lipophilic organic contaminants that are organic matter formed as a consequence of a series of natural processes by incomplete combustion
Philippine Economic Zone Authority (PEZA)	the government agency which promotes the establishment of economic zones in the Philippines for foreign investments and is tasked to extend assistance, register, grant incentives to and facilitate the business operations of investors in export-oriented manufacturing and service facilities in PEZA Special Economic Zones
Plumule/explants	the rudimentary shoot or stem of an embryo plant
Poverty threshold	minimum level of income deemed adequate in a particular country
Progeny	offspring of plants
Province-led Agriculture and Fisheries Extension System (PAFES)	one of the key strategies in the One DA Reform Agenda; with PAFES, the province serves as an extension hub that synchronizes agricultural plans and programs as well as orchestrate the activities of the various stakeholders
RBD	refined, bleached, deodorized oil
Secondary somatic embryogenesis	the phenomenon whereby new somatic embryos are initiated from somatic embryos
Seedfarm/seedgarden	area dedicated for the production of seednuts as planting material either hybrid or OPV
Seednut	coconut planting materials that have not germinated yet
Senile coconut palms	coconut palms that are more than 60 years and bear only 10 nuts to none
Smallholder Farmers	coconut farmers with land area not more than five (5) hectares
Smoke kilns	directly fired dryers where the smoke generated in the burning of fuel goes in contact with product being dried
Splitters	a tool to separate coconut meat from the shell
Supplemental irrigation	application of limited amounts of water to essentially rainfed crops to improve and stabilize yields when rainfall fails to provide moisture for normal plant growth

Definition of Terms

Traditional coconut products

coconut products, such as copra, coconut oil, desiccated coconut, copra meal, coco shell charcoal and activated carbon, that have been widely accepted and marketed locally and internationally for a long time

Virgin Coconut Oil (VCO)

as defined in the Philippine National Standard PNS/BAFPS 22:2007, oil obtained from the fresh, mature kernel of the coconut by mechanical or natural means, with or without the use of heat, without undergoing chemical refining, bleaching or deodorizing, and which does not lead to the alteration of the nature of the oil. Virgin coconut oil is an oil which is suitable for consumption without the need for further processing.

Virgin coconut oil (VCO) consists mainly of medium chain triglycerides, which are resistant to peroxidation. The saturated fatty acids in VCO are distinct from animal fats, the latter consisting mainly of long chain saturated fatty acids.

White Copra Central

a coconut processing facility that produces copra of high quality: white in color, low moisture content and no smoke contamination

LIST OF ACRONYMS AND ABBREVIATIONS

ACPC	Agricultural and Credit Policy Council
ACPRP	Accelerated Planting and Replanting Project
AF	Agriculture and Fisheries
AFs	Assessment Fees
AGFP	Agricultural Guarantee Fund Pool
AI	Artificial Insemination
ALS	Alternative Learning System
APW	Annual Program of Work
ARMM	Autonomous Region in Muslim Mindanao
ATI	Agriculture Training Institute
ATM	Automated Teller Machine
BAEx	Bureau of Agricultural Extension
BAI	Bureau of Animal Industry
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
BIR	Bureau of Internal Revenue
BP	Business Plan
CALABARZON	Cavite, Laguna, Batangas, Rizal, Quezon
CAR	Cordillera Administrative Region
CASCOFAMCO	Capiz Small Coconut Farmers Multipurpose Cooperative
CATD	<i>Catigan Green Dwarf</i>
CATs	Competency Assessment Tools
CBC	Competency-Based-Curriculum
CBS	Copra Buying Stations
CBT	Community-Based Training
CCCVd	Coconut <i>cadang-cadang</i> viroid
CDA	Cooperative Development Authority
CDPIP	Coco-Dairy Project Implementation Plan
CDS	Coco-Dairy Stations
CEDC	Coconut Enterprise Development Center
CFC	Coconut Farmer Cooperatives
CFIDP	Coconut Farmers and Industry Development Plan
CFITF	Coconut Farmers and Industry Trust Fund
CFITFA	Coconut Farmers and Industry Trust Fund Act
CFO	Coconut Farmer Organizations
CFR	Coconut Farmers Registry
CHED	Commission on Higher Education
CHEDRO	Commission on Higher Education Regional Office
CHP	Coconut Hybridization Program
CI	Claim for Indemnity
CME	Coconut Methyl Ester
CNO	Crude Coconut Oil
COA	Commission of Audit

List of Acronyms and Abbreviations

COC	Certificate of Competency
COCOChem	United Coconut Chemicals, Inc.
COCOFIRM	Coconut Farmers and Industry Roadmap
COD	Chiefs of Divisions
Coop	Cooperatives
COS	Contract of Service
CPMCO	CFIDP Program Management and Coordination Office
CQS	Certification of Quality Seedlings
CS	Competency Standards
CSet	Coconut Somatic embryogenesis technology
CSI	Coconut Scale Insect
CVD	Cardiovascular Diseases
CW	Coconut Water
CWC	Coconut Water Concentrate
DA	Department of Agriculture
DA-BAI	Department of Agriculture-Bureau of Animal Industry
DA-BAR	Department of Agriculture - Bureau of Agricultural Research
DA-HVCDP	Department of Agriculture-High Value Crops Development Program
DA-NDA	Department of Agriculture-National Dairy Authority
DAP	Development Academy of the Philippines
DBM	Department of Budget and Management
DBP	Development Bank of the Philippines
DC	Director's Council
DCN	Desiccated Coconut
DED	Detailed Engineering Design
DFO	Dairy Farm Operator
DOF	Department of Finance
DOJ	Department of Justice
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DOST-PCAARRD	Department of Science and Technology - Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development
DPMIS	DOST Project Management Information System
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
DTI-HO	Department of Trade and Industry-Head Office
EBT	Enterprise-based Training
FAD	Finance and Administrative Division
FAIR TSA	Fair Trade Sustainability Alliance
FAO	Food and Agriculture Organization
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FCA	Farmers' Cooperatives and Associations
FMR	Farm-to-Market Roads

List of Acronyms and Abbreviations

FOB	Free on Board
FS	Financial Statement
GAA	General Appropriations Act
GAD	Gender and Development
GAP	Good Agricultural Practices
GAT	General Assessment Team
GC	Governing Council
GDP	Gross Domestic Product
GI	Glycemic Index
GMP	Good Manufacturing Practices
GOCCs	Government Owned and Controlled Corporations
GVA	Gross Value Added
GWA	General Weighted Average
H/PPE	Health Personal Protective Equipment
HA	Hectare
HEI	Higher Education Institution
HMO	Health Medical Organization
HNRDA	Harmonized National Research and Development Agenda
HSPU	Hybrid Seed Production Units
HVCDP	High Value Crops Development Program
IA	Implementing Agency
IATC	Inter-Agency Technical Committee
IBT	Institution-Based Training
IEC	Information, Education and Communication
IPM	Integrated Pest Management
IPs	Indigenous Peoples
ITR	Income Tax Return
IWCC	Integrated White Copra Centrals
JMC	Joint Memorandum Circular
JMPT	Joint Project Management Team
JoLiNS	Job Linkaging and Networking Services
KAANIB	<i>Kasaganaan sa Niyugan ay Kaunlaran ng Bayan</i>
KEDP	KAANIB Enterprise Development Program
KG	Kilogram
LBP	Land Bank of the Philippines
LGU	Local Government Unit
LME	Liquid milk equivalent
M&E	Monitoring and Evaluation
MDP	Monthly Disbursement Program
MDS	Modified Disbursement System
MIMAROPA	Occidental Mindoro, Oriental Mindoro, Marinduque, Romblon, Palawan
MLGU	Municipal Local Government Units
MMT	Million Metric tons
MOA	Memorandum of Agreement

List of Acronyms and Abbreviations

MRD	<i>Malayan Red Dwarf</i>
MT	Metric tons
NABPP	Native Animal Breeder Production Program
NC	National Certificate
NCA	Notice of Cash Allocation
NCFRS	National Coconut Farmers Registry System
NDA	National Dairy Authority
NEDA	National Economic Development Authority
NGO	Non-Government Organizations
NHIP	National Health Insurance Program
NIARC	National Inter-Agency Technical Committee
NOA	Notice of Award
NSIC	National Seed Industry Council
O.N.E.	Ocean Network Express
ODA	Official Development Assistance
OED-RD	Office of the Executive Director for Research and Development
OFHPS	On-Farm Hybrid Seed Nut Production Sites
OJT	On-the-Job-Training
OPV	Open Pollinated Varieties
OSDS	Office of Student Development Offices
OSEP	Online System for Submission and Evaluation of R&D Proposals
PAFES	Province-led Agriculture and Fisheries Extension System
PAFSE	Program on Accelerating Farm School Establishment
PAH	Polycyclic Aromatic Hydrocarbon
PATC	Philippine Agricultural Training Council
PCA	Philippine Coconut Authority
PCA-RDB	Philippine Coconut Authority Research and Development Branch
PCA-RO	Philippine Coconut Authority Regional Office
PCC	Per Capita Cost
PCIC	Philippine Crop Insurance Corporation
PCIEERD	Philippine Council for Industry, Energy and Emerging Technology Research and Development
PCIP	Priority Commodity Investment Plan
PD	Presidential Decree
PDP	Philippine Development Plan
PEO	PCIC Extension Office
PEPT	Philippine Educational Placement Test
PEZA	Philippine Economic Zone Authority
PhilMech	Philippine Center for Postharvest Development and Mechanization
PHP	Philippine Peso
PIN	PhilHealth Identification Number
PLGU	Provincial Local Government Units
PMO	Program Management Office
PMRF	PhilHealth Member Registration Form

List of Acronyms and Abbreviations

PNAD	Philippine Native Animal Development
POs	Provincial Offices
PPA	Programs, Projects, Activities
PRS	Pre-Registration Seminar
PSA	Philippine Statistics Authority
PTC-RD	Philippine Training Centers for Rural Development
PWDs	Persons with disability
R&D	Research and Development
R/SPC	Research/Seed Production Centers
RA	Republic Act
RBD	Refined, Bleached and Deodorized
RBO	Refined, Bleached oil
RCFIDPs	Regional Coconut Farmers and Industry Development Plans
RDC	Regional Development Council
RM	Regional Manager
RO	Regional Office
ROMO-SMD	Regional Operations Management Office- Scholarship Management Division
ROs	Regional Offices
RSBSA	Registry System for Basic Sectors in Agriculture
RTWG	Regional Technical Working Group
S&T	Science and Technology
SCFO	Small Coconut Farmer's Organization
SEARCA	Southeast Asian Regional Center for Graduate Study and Research in Agriculture
SEC	Security and Exchange Commission
SGCs	Scholarship Grant Certificates
SMS	Short Message Service
SOCCSKSARGEN	South Cotabato, Cotabato, Sultan Kudarat, Sarangani, General Santos
SSOP	Sanitation Standard Operating Procedure
SSS	Social Security Systems
SUCs	State Universities and Colleges
T2MIS	TESDA Training Management Information System
TACD	<i>Tacunan Green Dwarf</i>
TechSupportTeam	Technical Support Team
TESDA	Technical Education and Skills Development Authority
TFMC	Trust Fund Management Committee
TIP	Training Induction Program
TOR	Terms of Reference
TOT	Training of Trainers
TR	Training Regulation
TRD	Technical Research Division
TVET	Technical-Vocational Education and Training
TVIs	Technical Vocational Institutions
TWG	Technical Working Group
UCAP	United Coconut Associations of the Philippines, Inc.

List of Acronyms and Abbreviations

UHC	Universal Health Care
UHCA	Universal Health Care Act
UPLB	University of the Philippines Los Baños
USDA	United States Department of Agriculture
UTPRAS	Unified TVET Program Registration and Accreditation Systems
VCO	Virgin Coconut Oil
WCC	White Copra Central
WCO	World Cafe of Opportunities

The background image shows a tropical scene with palm trees and a large pile of coconuts. In the foreground, a person's arm is visible, using a tool to process the coconuts. Another person is partially visible on the right side of the frame. A semi-transparent orange rectangular box is centered over the image, containing the text "EXECUTIVE SUMMARY" in bold, black, uppercase letters.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

I. INTRODUCTION

Republic Act 11524 known as Coconut Farmers and Industry Trust Fund (CFITF) Act, which created the Coconut Farmers and Industry Trust Fund, was signed by President Rodrigo Roa Duterte on 26 February 2021 and declared as the policy of the state to consolidate the benefits due to coconut farmers, particularly the poor and marginalized, to attain increased incomes for coconut farmers, alleviate poverty, and achieve social equality.

The Philippine Coconut Authority (PCA) is tasked to prepare the Coconut Farmers and Industry Development Plan (CFIDP) for approval of the President of the Philippines. The CFIDP shall specifically set the directions and policies for the development and rehabilitation of the coconut industry within 50 years. In the formulation of the Plan, the PCA shall be guided by the following 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

The Plan shall provide the criteria for targeting beneficiaries, the indicators in determining the attainment of the abovementioned objectives, and the mechanisms for monitoring and evaluating the impact of the different components of the program.

The law further states that CFIDP shall include a national program for the following:

- (a) Community-based enterprises, including integrated processing of products and downstream products intended to increase incomes of coconut farmers;
- (b) Social protection that directly benefit coconut farmers, farm workers, and their families, taking into consideration existing social protection programs of the government;
- (c) Coconut farmers' organization and development;
- (d) Innovative research projects and their practical application on coconut processing, production, and distribution towards developing the local coconut industry; and
- (e) Integrated processing of coconut and downstream products.

The Coconut Farmers and Industry Trust Fund shall be maintained for 50 years under the CFIDP which shall be used for the benefit of the coconut farmers and the development of the coconut industry. The Plan shall take into account the distribution of the annual allocation for implementing agencies from the Trust Fund. Sec 9 of the Law stipulates that the utilization of the Trust Fund or any portion thereof shall be in accordance with the CFIDP. The Plan shall provide only indicative funding requirement or allocation for the implementation of programs and projects to be funded by the Trust Fund itemized or broken down on a project-to-project basis.

Executive Summary

Pursuant to RA 11524, the Bureau of Treasury shall transfer PHP 75 B to the CFITF within the first five years of the said Act's effectivity. The Law further stipulates that the amount in the Trust Fund account for disposition by the designated government shall not be lower than PHP 5 B for any given year. An initial allocation of PHP 5 B shall be available to the designated government implementing agencies (Sec 9) and that the Trust Fund Management Committee will ensure, among others, annual allocation of the Trust Fund available for disbursement which shall not be less than PHP 5 B per year (Sec 10).

For the first five years of CFIDP implementation, as per guidance of PCA, the proposed indicative investment of the CFIDP is PHP 33 B, for specific programs and projects. This 5-year indicative investment proposal does not preclude further increases above the proposed allocation for a given year. Since, this will be subject to the ability of the implementing agencies to implement and spend their corresponding budgets according to the Plan. The Plan will be reviewed every year, taking into consideration the absorptive capacity and performance of the implementing agencies and the outputs and outcomes of the programs based on performance indicators. Expected birthing pains will test the ability of the implementing agencies to undertake cohesive programs for the benefit of the coconut farmers and industry. The progress of the program implementation will be regularly monitored and evaluated to resolve gaps in the 2nd year if necessary. For the first five years, the proposed yearly budget allocation is as follows: PHP 5 B for Years 1 and 2, PHP 6 B for Year 3, PHP 7 B for Year 4 and PHP 10 B for Year 5. The plan details the component projects of each program and their indicative budgets and will be revisited and updated at the start of the 6th year and every 5 years thereafter.

Table 1. Percent distribution of annual allocation from the trust fund

PERCENT DISTRIBUTION OF ANNUAL ALLOCATION FOR PROGRAMS AND PROJECTS UNDER THE CFITF	ANNUAL BUDGET ALLOCATION (IN MILLIONS, PHP)							
	IMPLEMENTING AGENCIES	PERCENT ALLOCATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
		100%	5,000	5,000	6,000	7,000	10,000	33,000
Development of Hybrid Coconut Seed Farms, Nursery for Planting and Replanting, and Research	PCA and DOST-PCAARRD *	20%	1,000	1,000	1,200	1,400	2,000	6,600
Training of Farmers and their Families	TESDA & ATI **	8%	400	400	480	560	800	2,640
Research, Marketing, and Promotion	DTI	5%	250	250	300	350	500	1,650
Crop Insurance	PCIC	4%	200	200	240	280	400	1,320
Farm Improvements through Diversification and/or Intercropping with Livestock, Dairy, Poultry, Coffee and Cacao Production	NDA, DA-HVCDP, & DA-BAI **	10%	500	500	600	700	1,000	3,300
Shared Facilities for Processing	PhilMech	10%	500	500	600	700	1,000	3,300
Organizing and Empowerment of Coconut Farmers' Organization and their Cooperatives	CDA	5%	250	250	300	350	500	1,650
Credit Programs	DBP & LBP**	10%	500	500	600	700	1,000	3,300
Infrastructure Development	DPWH	10%	500	500	600	700	1,000	3,300
Scholarship Program for Farmers and their Families	CHED	8%	400	400	480	560	800	2,640
Health and Medical Program for Farmers and their Families	PCA with PhilHealth	10%	500	500	600	700	1,000	3,300

* PCA (15%), DOST-PCAARRD (5%)

** Equally divided among implementing agencies

After five years, the Trust Fund will be augmented with all the proceeds arising from the privatization or disposition of the coconut levy assets. Other sources of funds per program component that can be tapped to augment the needed resources for comprehensive CFIDP implementation and expansion of

services and increase of coconut beneficiaries are the GAA of the implementing agencies and other government agencies and institutions as well as LGU funds.

The Mandanas-Garcia Ruling shall increase the funds for LGUs as a result of a larger base for the computation of the IRA (now known as the National Tax Allotment or NTA). The substantial increase in the share of the LGUs from the national taxes will empower the LGUs in providing basic services and facilities to their constituents and aid them in the effective discharge of other duties and functions devolved to them under Section 17 of R.A. No. 7160. The Department of Finance initially computed and increase of PHP 134.39 B in the Internal Revenue Allotment (IRA) of the LGUs in 2022. With the enhanced budgets, and signing of E.O. No. 138 Series of 2021, which directs the full devolution of basic services and facilities from the national government to the local governments, the LGUs' participation, and support to agricultural development, including the CFIDP, can be further strengthened. Support to rural and farm-to-market roads, farmers' training centers, strategic trading posts and processing facilities and other needed local infrastructures will encourage private investments in farm and processing enterprises in partnership with farmers' cooperatives. Active support and engagement of the LGUs, inclusion and co-funding of CFIDP initiatives in their respective physical framework and development plans will greatly contribute to achieving the objectives of CFIDP.

Moreover, private investments must be infused if the vision of modernizing the coconut industry is to be realized. One of the avenues for stimulating private sector investment is the Philippine Economic Zone Authority (PEZA). The PEZA serves as locations for the operation of agro-industrial enterprises to accelerate the growth and development of the Philippine agro-industrial sector. To modernize the copra-CNO-RBD-CME-oleochemical value chain, it cannot totally be supported by the funds from CFITF. For example, to modernize the copra-CNO/RBD-oleochemicals end-to-end value chain, 864 units of white copra centrals and 1,047 units of copra buying stations costing a total of PHP 17 B need to be established (COCOFIRM, 2021). However, the estimated amount that the CFITF can provide for this purpose in the first five (5) years is only PHP 1 B. The shared facilities established by the project in the first 5 years will catalyze private sector investments by showing proofs of concept. Further, the level of support is expected to be enhanced to expand product lines as the coconut industry's growth accelerates.

II. FRAMEWORK

The CFIDP System Framework for Program Design, Coordination, Implementation, Monitoring and Evaluation presents the eight (8) program components of the CFIDP that will be implemented by 14 partner agencies. The immediate results, or outputs, of the Plan's five-year investment program, are shown in the output column. The CFIDP identified five outcomes, or medium-term results, that will be achieved from the use of the outputs, by the coconut farmers and the industry. The program outcomes are: (1) coconut productivity within ecological limit improved; (2) rehabilitation and modernization of coconut industry intensified; (3) support to coconut processing and value adding activities strengthened; (4) market access of coconut farmer organizations and MSMEs expanded; and (5) access of farmers to credit, crop insurance, health, education, and social services increased. The program strategies/activities that can contribute to improving productivity are hybrid coconut

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development and practice of intercropping/integrated farming systems) while the program activities that will lead to modernizing/rehabilitating the coconut industry are R&D, adoption of modern technologies, and shared processing facilities. Capacity building of farmers through the conduct of trainings will strengthen the support to processing and value adding activities. Among the program strategies that would contribute to expanding market access of coconut farmers organizations and MSMEs are infrastructure development, organizing farmers into formal groups/cooperatives, consolidation/clustering of farmers and MSMEs, and marketing and promotion. The strategies under the social protection program sub-components (i.e., health and medical insurance, crop insurance, and scholarship for children of coconut farmers) and the credit program sub-component as identified in Section 4 of RA 11524 are expected to increase access of farmers to credit, crop insurance, health, and education services. The long-term impacts are, sustainable increase in farmers' income, access to basic services, and global competitiveness, that will contribute to the attainment, of the Philippine Development Plan, long-term goal of *"Matatag, Maginhawa at Panatag na Buhay"* (Figure 1).

While the CFIDP framework mainly focused on the program components as stipulated in RA 11524, its components, outputs, and outcomes are anchored to the recommendations outlined in the Coconut Farmers and Industry Roadmap, which represent the holistic development plan for the coconut subsector and captures the CFIDP programs and all other relevant programs of PCA and concerned agencies. The integration and complementation of all programs, projects, and activities to be funded by the Coco Levy Fund, GAA, and other funding sources, as well as public-private partnerships, are crucial for the successful implementation and realization of the long-term goals of the CFIDP.



Figure 1. CFIDP System Framework for Program Design, Coordination, Implementation, Monitoring and Evaluation.

Only the first five years of CFIDP is detailed in this document which will showcase developmental projects on modern farming, processing, and marketing strategies with the participation of farmers'

cooperatives. With 14 government agencies, mandated by law to implement particular components of the plan, given their respective shares in budgetary allocations, the CFIDP will have decentralized implementation but joint monitoring and evaluation. PCA as the lead implementing agency will establish a CFIDP Program Management Office (CPMO) to coordinate, manage, monitor, and evaluate program implementation (see Chapters 8 and 9) and this must be made operational so that the convergence framework, particularly in the farm rehabilitation and improvement and shared facilities interventions, can have harmonized coordination from social preparation and clustered and standardized production, processing/value adding and marketing.

III. CFIDP PROGRAM COMPONENTS AND SUB-COMPONENTS

The prospect for coconut products in the world market is on the upswing, the processing sector has the capacity to increase their production and absorb significant increases in coconut production, but the productivity of our palms is on the downward trend. The sustainable growth and global competitiveness of the industry value chains are dependent on the productivity of coconut farms which provide the coconut-based industries' feedstocks and raw materials. The CFIDP with its focus on improving coconut farmers' welfare in income will jumpstart the much-needed transformation in the farm sector that will boost the sustained growth and competitiveness of the coconut industry in the global market. The following strategic interventions of the various national programs under the CFIDP are expected to converge support for the benefit of the coconut farmers, their families and strengthen farmers' organizations and cooperatives to be active players in coconut-based agri-corridors.



PROGRAM COMPONENT 1: SOCIAL PROTECTION

As mandated in RA 11524, “the Plan shall include social protection that directly benefits coconut farmers, farm workers and their families taking into consideration existing social protection programs of the government”. The social protection programs for coconut farmers and their families include: (1) the CFITF Health and Medical Program; (2) the CFITF Crop Insurance Program; (3) the CFITF Scholarship Program; and 4) Training of Coconut Farmers and their Families.

1.1 CFITF Health and Medical Program

The implementation of the CFITF Health and Medical Program shall be a partnership between PCA and the Philippine Health Insurance Corporation (PhilHealth). The main objective of the CFITF Health and Medical Program is to ensure that all the qualified NCFRS-registered coconut farmers who meet the selection/prioritization criteria are afforded access to the health and medical rights and benefits provided under the National Health Insurance Program (NHIP). Apart from the unified health benefit packages, PhilHealth, in coordination with PCA, shall develop special health benefit packages for coconut farmers and their families.

Given the annual budget allocation and the annual PhilHealth insurance premium per member for a monthly income floor of PHP 10,000, the number of target coconut farmers/households with PhilHealth insurance coverage shall be 138,888 in years 1 and 2, 111,111 in year 3, 116,666 in year 4, and 166,666 in year 5. Owing to the limited number of NCFRS-registered coconut farmers (including farm workers) who can be covered by the PhilHealth insurance, priority should be accorded to regions and provinces with high poverty incidence. Within provinces, priority municipalities shall be those with level 4 poverty incidence level (61-80%) and level 3 poverty incidence level (41-60%). The priority coconut farmer-beneficiaries are those who are most incapable of raising the amounts to pay their PhilHealth premiums. The first-priority beneficiaries shall be the coconut farm workers, followed by the tenants, and lastly, the owner-operators.

1.2 CFITF Crop Insurance

The CFITF Crop Insurance Program aims to protect the coconut farmers owning 5.0 ha and below from financial losses, reverse the risk-averse nature of coconut farmers, and encourage them to invest more in new technologies that would help increase coconut productivity. The CFITF Crop Insurance Program shall cover coconut trees as the only insurable commodity. The Coconut Tree Mortality Insurance Product Package shall be implemented during the early years of program implementation until the Yield Insurance Product Package is fully developed. Apart from protecting coconut farmers from financial losses caused by natural disasters, the Coconut Mortality Insurance package has also a built-in death benefit component amounting to PHP 10,000 provided that the coconut farmer is not more than 80 years of age at the inception of the crop insurance cover. Intercrops, livestock, and farm improvements can be insured in PCIC’s RSBSA Agricultural Insurance Program at full (100%) insurance premium subsidy subject to the availability of funds, provided farmers register in the RSBSA. The CFITF Crop Insurance Program shall cover only natural disaster-prone regions. The priority coconut farmer-beneficiaries are landowners and owner-operators who are 55 years old and above residing in

municipalities with high poverty incidence levels (i.e., poverty incidence level 3: 41-60% and poverty incidence level 4: 61-80%) or in 4th to 6th class municipalities.

1.3 CFITF Scholarship

The Scholarship Program shall cover undergraduate students who will enroll or are currently enrolled in agriculture, agricultural engineering, agribusiness management, agricultural economics and other courses identified by the Philippine Coconut Authority as vital to the needs of the coconut industry. The program shall also cover graduate students who are qualified for advance studies in State Universities and Colleges (SUCs) as identified in the implementation guidelines. The priority field of studies for graduate programs shall be identified by the PCA. Recipients of the undergraduate scholarship grant shall receive financial benefits such as monthly stipend, annual book/learning materials allowance, and thesis support, among others. Under the graduate scholarship grant, the financial assistance shall cover tuition fee in the SUCs where the scholar will enroll, monthly stipend and other school fees except thesis allowance. Thesis support for graduate scholars maybe sourced from DOST-PCAARRD, CHED, and PCA, among other research funding agencies. Financial assistance for the purchase of a laptop shall also be provided in the first year of enrolment of the undergraduate and graduate scholars. In the selection of beneficiaries, the following percentage distribution shall be used in ranking: academic performance, 60% and annual gross income, 40%. A total of 10,720 (i.e., 10,658 undergraduate and 52 graduate) scholars shall benefit from the CIFTF Scholarship Program for five (5) years. Within each region/province, priority shall be accorded to municipalities with high poverty incidence level or to 4th and 6th class municipalities owing to the limited number of scholarship slots. The total indicative investment requirement for the 5-year period shall be PHP 2.64 B.

1.4 CFITF Training

For the Training component, the criteria used by TESDA in the distribution of annual target by program are based on the identified skills requirements in the regional proposal: 70% for crops, 13% livestock, 13% processing, and 4% entrepreneurship. The ATI, on the other hand, accommodated the target plans of partner agencies that require trainings such as BAI, HVCDP, NDA, PHilMech and PCA. The general strategy that TESDA adopts for the implementation plan is the Seek-Find-Train-Assess-Certify-Employ Framework while ATI covers development of training modules and materials, administering e-Learning courses, conduct of specialist trainings and Training of Trainers, provision of grants and establishment of Learning Sites for Agriculture or Farm Schools. TESDA intends to target the farmers and their relatives up to the 4th level of consanguinity, as well as members of the community where the farm schools are located while ATI targets the farmers' organizations and cooperatives including their NCFRS-registered coconut farmer-/farm worker-members who are recipients of the Shared Facilities and Farm Improvement program components. The annual budget per training component of TESDA is proportionally based on the target beneficiaries while the regional budget allocation is in accord with the number of cooperatives and farmers' organizations (25%) and NCFRS registered farmers (25%), while taking into consideration the budget for Farm Improvements (25%) and Shared

Facilities program components (25%). The ATI based their investment on the proposed targets of the partner implementing agencies.

PROGRAM COMPONENT 2: FARMERS' ORGANIZATION AND DEVELOPMENT

For the Coconut Farmer's Organization and Development, the general strategy that CDA shall adopt would initially involve the development of a needs assessment tool and firming up of a baseline database. Then the training will be provided for the cooperative officers and members on organizational development, cooperative management and governance, and financial management, among others with the number of cooperatives and farmer-members trained as the verifiable indicators while on enterprise development, the training shall provide the needed value addition to coconut farms and precipitate the increase in income. For the conversion of farmers' organizations into cooperatives, the CDA will provide social preparation through orientation on cooperatives and pre-registration seminars including technical assistance. Orientations will be given to unorganized farmers either to form their own organization or join an existing farmers' organization or cooperative. This component targets the 2.5 M NCFRS-registered coconut farmers, the 8,819 active and 1,942 inactive coconut farmers' organizations, and the 784 active and 145 inactive cooperatives. For the investment, the first year of allocation is to harvest the low hanging fruits to engender immediate results and create maximum impact given the concentration of coconut farmers.

PROGRAM COMPONENT 3: HYBRIDIZATION

The hybridization program has two components and implementing agencies, sharing the 20% budget allocation - PCA will get 15% for development of hybrid coconut seedfarms and nursery for planting and replanting and the DOST-PCAARRD will get 5% for research.

3.1 Hybridization Operations (Development of hybrid coconut seed farms and nursery for planting and replanting)

In the next ten years, the country needs nearly 112 M planting materials to replace unproductive and senile palms and expand hybrid population in suitable areas. The key strategies under the hybridization program will produce a total of about 19.12 M seednuts and plant 111,890 ha in the next 5 years. By year 10, CFIDP would have contributed 72%, equivalent to 422,775 ha of the 587,410 ha targeted to be planted and replanted for the period. Hybrid seednut production will reach the target 10 M seednuts/year by year 6.

1. To accelerate massive production of hybrid seed nuts, the following will be undertaken by PCA: a) rehabilitation, expansion, and modernization of PCA in-house seedfarms in six locations; b) conservation, characterization and utilization of coconut germplasm for developing new hybrids and other research (to be funded by DOST-PCAARRD in the first 5 years); c) establishment of about 400 ha seedfarms in government lands in partnership with LGUs and SUCs will take about 5 years to be productive and provide stable sources of seednuts

needed for the continuous planting and replanting program in the long-term; 4) on-farm hybridization in private farms already planted with selected dwarfs and pollen from selected tall will augment the present limited capability of PCA to provide hybrid planting materials in the short- to medium-term.

2. Establishment of communal coconut nurseries that can be managed by coconut farmers' organizations and cooperatives in partnership with the private sector, or by SUCs and LGUs.
 3. Incentives and support to farmers participating in massive planting/replanting of hybrids and OPVs with outstanding qualities (suited to particular areas and uses), towards certification for Good Agricultural Practices (GAP) or organic production systems.
 4. Increasing productivity of already existing hybrid palms through fertilization support, including incentives for incorporation of decomposed coconut husks/peat in planting holes and as mulch to support zero farm waste production system.
 5. Program support to hybridization to include strategic communication and feedback among all stakeholders, coordination, monitoring & evaluations of hybridization program using remote sensing and modern information communication technologies.
- Professionalization of the coconut workforce through skills training on hybridization farms and creation of farm service crew teams.

3.2 Hybridization Research

DOST-PCAARRD is tasked to allocate funds for research and development (R&D) programs and projects on coconut hybridization, hybrid coconut seed farms, and nurseries, and related activities such as but not limited to technical capacity building, facilities upgrading, and infrastructure development as deemed necessary and agreed upon with PCA. The coconut R&D hybridization roadmap to be implemented through close collaboration of PCA with national and regional SUCs (UPLB, VSU, USM) and other research institutions and NGOs will provide innovative and demand-driven research in support of the hybridization targets of the industry for the benefit of the coconut farmers. The priority research topics and milestones for the next 5 years are developed consultatively by DOST-PCAARRD and PCA with SUCs that are active in coconut research. There are 88 research topics under the different research themes submitted to PCAARRD. Majority are collaborative research between PCA and SUCs.

The thematic research projects aim to continuously improve, strengthen and develop innovations towards a modernized, efficient and technologically advanced coconut hybridization program. The Research and Development focus will be on (a) improved production of hybrid coconut planting materials; (b) achieving the expected high yield of hybrids to be planted; and (c) increasing productivity of existing hybrids. Technology Transfer and Promotion, Socio-economic and Policy researches will likewise be undertaken. Capacity building for the continuous development of core competencies and expertise in breeding and allied sciences through staff development is important to sustain coconut breeding and crop improvement. To support the efficient and effective implementation of the research program, a knowledge Management and M&E unit will be created by DOST-PCAARRD.

PROGRAM COMPONENT 4: COMMUNITY-BASED FARM ENTERPRISE DEVELOPMENT: REHABILITATION AND IMPROVEMENT

There are many success stories attesting to the significant contribution of intercropping to increasing land use efficiency, total farm productivity, and farmers' income through yield of intercrops and increased yield of coconuts, when intercrops are well managed. Integration of native poultry and livestock and dairying has also been documented to sustain increases in farmers' income. Expansion of these interventions to coconut farmers' organizations and cooperatives will benefit the farmers by increasing their overall farm productivity and income, consistent with the One-DA thrust of "*Ani at Kita*".

The three DA agencies tasked to implement the farm improvement components, DA-HVCDP, NDA and DA-BAI, will share equally 10% of the CFIDP budget allocation following the One-DA key strategies of consolidation, modernization, industrialization, and professionalization. The prioritization criteria of implementing agencies for each particular commodity, and the presence of coconut farmers' organizations were used for regional targets and budget allocation. The successful implementation of this program depends on the efficient and effective convergence with other implementing agencies in providing support services to intercropping, poultry, livestock, and dairy.

The implementation framework for farm improvements highlights the importance to convergence of implementing agencies to provide the needed support towards developing working agribusiness corridors in coconut communities for intercrops, poultry and livestock and dairy. This will be accomplished through farm clustering and consolidation following standardized farm management, support for shared facilities, credit, and infrastructure, where needed, and continuing capacity building of beneficiaries and farm labor towards a professionalized industry workforce. This is a challenge in developing the plan as many implementing agencies need to harmonize their targets, budgets, and implementation schemes. To implement the program, indicative investment share from the other implementing agencies will be substantial and critical to the success of the program. PCA will continue to provide support to increase yield and income from coconut to complement the increase in income from the farm improvements program.

4.1 Coffee and Cacao Intercropping

HVCDP will implement the following three key strategies over the next five years: (1) rehabilitate/rejuvenate a total of about 2.0 M coffee and 3.0 M cacao trees already intercropped under coconuts; (2) expand coffee and cacao intercropping with coconut areas with active farmers' organizations in HVCDP priority areas in 5000 ha of coffee and 7,300 ha of cacao ; and (3) establish 223 cacao and coffee nurseries, each with capacity to produce 10,000 seedlings per year. Per forward scheme is expected to double the number of beneficiaries, trees planted and potential income from the intercropping project. Additionally, over 80,500 coconut farmers will be provided the needed trainings to be skilled in cacao and coffee production and/or post-harvest and processing. A total of 140 ATI certified learning sites and 110 post-harvest and processing facilities will be established. To successfully accomplish the agri-business corridors for coffee and cacao in project areas, the

investment requirement from other implementing agencies to support training, shared facilities, strengthening of farmers' organizations, crop insurance, credit, market promotion and support is twice the of the budget allotment for HVCDP. PCA will continue to provide support from its GAA allocation to further increase yield and income from coconut intercropped with coffee or cacao.

4.2 Native Livestock Integration

The Bureau of Animal Industry for Native Poultry and Livestock will implement four (4) native animal modules - free range chicken, native swine, native goat, and native beef cattle in suitable coconut areas with active coconut farmers' organizations as identified with PCA. Each module will be provided to a cluster of 10-15 coconut farmers. Over five years, these modules will directly benefit 44,200 coconut farmers and would have distributed a total of 800,000 heads of chicken, 23,400 heads of swine, 35,370 heads of goat and 2,230 heads of cattle. The beneficiaries and animals are expected to at least double within the next 3 years with the pay-forward scheme. The project will contribute to improving farmers' nutrition, food security, farm productivity and farmers' income, consistent with DA's paradigm of "*Ani at Kita*". The total indicative investment to develop native animal breeder farms need 40% more budget coming from the other implementing agencies on top of the BAI budget.

4.3 Dairy Integration

The National Dairy Authority for dairy production will rejuvenate/expand production in coconut areas in NDA dairy zones and open up new dairy zone, and where there is a need, enhance or establish of dairy processing facilities in suitable coconut areas with active coconut farmers' organizations/cooperatives as identified with PCA and endorsed by CDA. The modules to be implemented are 3-dairy cow/carabao and 10-dairy goat modules. Over five years, the project will have distributed over 5,000 animals, breed 12,000, provided technical services to 12,000 and supplements to 7,000 animals. The beneficiaries, animals dispersed and farmers' income are expected to at least double within the next 3 years with the pay-forward scheme. Additional income will also come from the sale of the male offspring.

Professionalizing the coconut workforce is critical for the successful implementation of the hybridization and farm improvements program of CFIDP. This strategy will directly benefit, by providing them social benefits as skilled/or farm service crew, increase farmers' income and improve their welfare. To be benefitted in particular are the tenants and landless workers who compose almost 50% of the NCFRS registered coconut farmers.

PROGRAM COMPONENT 5: INTEGRATED COCONUT PROCESSING AND DOWNSTREAM PRODUCTS (SHARED FACILITIES)

The distribution of the annual allocation for Shared facilities for processing is ten percent (10%), to be implemented by PHilMech, the beneficiaries of which are coconut farmers cooperatives, in its absence, to the local government units (LGUs) of identified coconut producing towns.

The major value chains of the Philippine coconut industry are (1) Copra-Crude Coconut Oil (CNO) Refined, Bleached and Deodorized (RBD) Coconut Oil-Oleochemicals Value Chain, (2) Desiccated Coconut (DCN) Value Chain, (3) Virgin Coconut Oil (VCO) Value Chain, (4) Coconut Coir Value Chain, (5) Coconut Shell Value Chain, (6) Coconut Sap Value Chain and (7) Young Coconut Value Chain. Parallel to these, are the value chains for intercrops particularly coffee and cacao and also livestock integration with coconut farming. To enhance the efficiencies of the coconut value chains, the following are the suggested shared facilities: integrated white copra centrals, copra buying stations, integrated coconut processing facilities (wet process, the main process is Virgin Coconut Oil, coco water and coconut water concentrate), coir, shell, sap-based processing centers, young coconut processing centers, coconut food centers, coffee and cacao processing facilities, meat processing plants and farm service crews. The shared facilities will showcase viable technologies that when widely adopted will result to increased farmers' income and competitiveness of the coconut industry.

PROGRAM COMPONENT 6: INNOVATIVE RESEARCH PROJECTS AND THEIR PRACTICAL APPLICATION ON COCONUT PROCESSING, PRODUCTION AND DISTRIBUTION

Research is the foundation of any development anchored on science-based innovation as a strong support to proposed programs of the Coconut Farmers and Industry Development Plan under RA 11524. Other than for hybridization (DOST-PCAARRD) and market (DTI), no budget for other coconut research is allocated under RA 11524. To address holistically the need to harness innovative research along the coconut value chains, convergence of support from various NGAs funding including (but not limited to) PCA, the different agencies under the DOST-PCAARRD, PCIERRD, ITDI, DA-BAR, SUCs, private sector, and other external funding organizations will be harnessed. The priority areas for innovative researches for processing and utilization of food and non-food products will focus on: (a) improving competitiveness of market-driven coconut products through innovations in process efficiency and quality improvement to meet international standards; (b) expanding and developing new uses and applications of coconut and *Makapuno*; (c) harnessing the nutraceutical, health and medical applications for coconut and its downstream products; (d) medical and clinical researches on the health benefits of emerging products such as VCO and coconut sap-based products; and (e) research areas that can address issues affecting the international market for coconut oil and other products (source of allergen, trans-fat issue and the PAH studies for copra quality improvement). For non-food products, research areas include improvement and mechanization of processes; improvement or development of new product(s) with environmental applications including renewable energy sources from coconut biomass, among others to be identified as having market potential. Use of modern tools and techniques, biotechnology and bioinformatics for crop improvement and breeding, digital technology and artificial intelligence in precision coconut and farming systems, processing and marketing, technology information and promotion are other identified research areas. Research planning and implementation will be consultative and collaborative.

The indicative investment for Coconut R&D based on the initial submission of the academic institutions and the R&D funding agencies' respective programs for coconut has a grand total allocation of PHP 945.97 M for the five-year investment plan. Production research has an indicative requirement of PHP 292.97 M. For research on product development of food and non-food coconut products, a total of PHP 366.0 M allocated. The total investment requirement for biotechnology research is PHP 287.40 M. However, these projects will still have to undergo R&D network evaluation and prioritization based on the technical requirements of the core programs identified in the CFIDP. Relevant completed researches will be evaluated for their utilization in the program implementation. These researches will be categorized and assessed based on their technical viability, economic feasibility and acceptability.

PROGRAM COMPONENT 7: SUPPORT SERVICES

7.1 CFITF Credit

Ten percent (10%) of the annual budget allocation from the Coconut Farmers and Industry Trust Fund, shall be allotted to the CFITF Credit Program to be shared equally by LBP and DBP. The indicative regional investment allocation was based on the following criteria: (1) number of coconut farmers; and (2) number of active farmers' organizations and cooperatives.

The credit program will lend directly to individual coconut farmers or CDA-registered farmers cooperatives and SEC-registered farmers' organizations. Projects related to the coconut value chain and projects on the establishment of intercroops and/or poultry/livestock integration in coconut farms, production, processing, trading, on-lending and/or rediscounting to coconut farmer-members are eligible for financing. Concessionary interest rates shall be charged under the CFITF Credit Program. The CFITF Credit Program is expected to raise the amount of productive investments and economic activities in the countryside, generate more livelihood and income opportunities in coconut-producing communities, and increase productivity and income of the target beneficiaries. The priority cooperatives and SEC-registered farmers organizations shall be the beneficiaries under the Shared Facilities, Community-Based Farm Enterprise Development, and Hybridization program components and those that shall engage in on-lending and rediscounting to individual coconut farmer-members.

7.2 Marketing, Market Promotion and Research

Of the annual budget allocation from the Trust Fund, 5% shall be allotted to the Research, Marketing, Market Promotion sub-program component to be implemented by the DTI. Other DTI bureaus and attached agencies shall also actively participate in the implementation of the national program. The total indicative investment requirement for the 5-year period shall be PHP 1.65 B. to be shared by the DTI Head Office (33.3%) and the DTI Regional Offices (66.7%). The DTI's regional indicative investment allocation was based on the following criteria: number of NCFRS-registered coconut farmers, number of PCA-registered active farmers' organizations and cooperatives, coconut production, and coconut area.

DTI shall implement several strategies in providing marketing assistance to different beneficiaries of the Shared Facilities and Community-Based Farm Enterprise Development program components including but not limited to: business matching strategies and the establishment of market linkages and contract agreements between suppliers (e.g., coconut farmers, farmers' organizations and cooperatives) and buyers (e.g., processors, institutional buyers, exporters) of raw materials and/or processed coconut, coffee, cacao, dairy, and meat products; capacitate MSMEs in digital transformation and onboarding in e-commerce platforms; establishment of market linkages and contract agreements between CFO/CFC suppliers and buyers; provision of market-technology-financing linkages; assistance in preparing business and marketing plans, conduct of trade and investment promotion and facilitation, market intelligence, assistance in product packaging, labelling, and barcoding application; technical assistance for establishing geographic indicators and branding, trading hubs, one-stops shops, and market information system; facilitation of product certifications and business registration; facilitation and assistance on product certifications and business registration; and rendering business and marketing advisory services thru the DTI Negosyo Centers, among others.

To increase the domestic and export demand for processed coconut, cacao, coffee, dairy, and meat products, the DTI shall implement various market promotion strategies such as multi-media product advertising to create awareness of the nutritional, nutraceutical, health, and environmental benefits from coconut; advocate wide utilization and patronage of coconut-based products in the domestic market; conduct digital marketing and use e-commerce platforms to promote and sell product; organize local and international trade fairs, local trade missions, and other product exhibition events showcasing processed coconut, coffee, cacao, and dairy products locally, nationally, and internationally; assist farmers' organizations, and cooperatives in promoting their processed coconut, coffee, cacao, dairy, and meat products thru in-store product displays in pasalubong centers and duty free shops in airports, among others; and conduct capacity building activities to exporters and would-be exporters that will enhance their knowledge on market entry requirements, i.e., mandatory health certifications, product quality and product certifications, shipping and logistics concerns, incoterms, etc.

The priority target beneficiaries of the Marketing Assistance and Market Promotion sub-program component shall be PCA-registered farmers' organizations and cooperatives particularly the beneficiaries of the Shared Facilities and Community-Based Farm Development program components, other MSMEs, and individual coconut farmers (including farm workers). Other beneficiaries of DTI's marketing assistance shall be potential buyers of raw and processed coconut, coffee, cacao, dairy, and meat products such as big processing industries, institutional buyers, consolidators, and exporters.

DTI's market driven approach shall provide valuable insights in identifying and implementing research projects that have the potential to achieve successful product commercialization and sustainable business growth. Product test marketing will help researchers and processors gather customer feedback to improve product quality. Results of market research will be useful in identifying the types/forms of processed products that cooperatives and farmers' organizations should produce that are highly demanded in the domestic and export markets. Information on the buying trends of

consumers will also help the cooperatives and farmers' organizations tailor their marketing and sales strategies to their customers, which will ultimately result in higher sales.

DTI's different forms of marketing assistance to coconut farmers' organizations and cooperatives particularly the beneficiaries of the Shared Facilities and Community-Based Farm Development program components shall help in improving coconut farmers' organizations and cooperatives' exposure and access to domestic and international markets, which will ultimately redound to increased coconut farmers' incomes. Furthermore, market promotion of their processed products domestically and internationally is expected to result in increased demand for these finished products and in turn, improved sales and income of coconut farmers' organizations and cooperatives as well as their coconut farmer-members.

7.3 Infrastructure Development

Republic Act 11524 states that Infrastructure development, ten percent (10%) shall be implemented by the DPWH, in identified coconut producing LGUs. The law further stipulates that the DPWH shall give priority to the use of coconut coir or coconut bio-engineering solutions in controlling soil erosion and slope stabilization in the construction of roads and in other applicable projects.

In the context of the CFIDP, infrastructure would cover roads, shared production facilities, trading posts/postharvest facilities, research/training facilities, establishment/rehabilitation of irrigation facilities and others, with the main objective of helping improve the farmers' income and the social conditions of the people in the project areas. Construction of farm-to-market roads (FMRs) in coconut-producing provinces shall also be funded through regular appropriations.

The construction of buildings for shared facilities shall be facilitated by the DPWH in consultation with PHilMech and for buildings for food products, compliance with FDA standards will be ensured, while buildings for non-food products shall comply with applicable national standards.

The criteria for prioritization of the proposed projects are the following: (a) number of beneficiaries, (b) volume of production, (c) readiness of the cooperatives in the case of shared facilities, trading posts and training centers, and (d) access to markets of the products. There are several stages of implementation for Infrastructure Development: (1) project identification and selection, wherein infrastructure projects will be prioritized based on the number of beneficiaries and/or volume of crops using the recommended Infrastructure Plan of implementing agencies; and (2) procurement will be by clustering of projects.

7.4 Policies and Regulations

Policies and regulations are support services to ensure that the CFIDP implementation is in accordance with standards and legal issuances. Existing policies and regulations have to be revisited and reviewed. The hindering policies and regulations will be recommended for reformulation or revision. The PCA

will designate an office to oversee relevant policies consistent with the provisions of RA 11524 are adopted and regulations enforced. The following are initial recommendations:

1. Policies for inclusion in the program guidelines recommended for effective implementation of the hybridization program, include (but not limited to) the following: (a) National Seed Industry Council (NSIC) registration of hybrid parentals and seedlings for distribution; (b) enforcement of banning the exportation of mature coconuts and coconut seedlings (EO 1016 sec 4.12); (c) review of PCA's Charter (Art. 1, Sec. 2 of PD 1468) provisions on free distribution of hybrid seedlings and prohibition of PCA to engage in the commercialization of coconut hybrids; (d) strict implementation of RA 8048 or the "Coconut Preservation Act" as amended by RA 10598; (e) review of the international treaty on research engagement, germplasm exchange and access to our coconut genetic resources.
2. Policies and guidelines on the adoption of Community-based coconut-based farming systems Enterprise Development including (but not limited to): (a) market-driven intercrop and animal-based enterprise development; (b) clustering of small-scale enterprises for economies-of-scale and Agribusiness Corridor Development (ABC) under the One-DA Strategy; and (c) engagement of plant and animal doctors to ensure plant and animal health.
3. Policies to promote coconut processing and downstream products for increased domestic utilization and maintain/improve global competitiveness include the following priority policies: (a) Revival of EO 259 to promote and expand the utilization of coconut-oil based chemicals derived from coconut oil in the soap and detergent surfactant industry and for other purposes; (b) Implementation of the policy on increasing Coconut Methyl Ester (CME) of biofuel blends (B2-B5); (c) Enforcement and compliance to Philippine Food Safety Act of 2013; (d) Harmonization of national standards to international product standards.
4. Institutional reforms of PCA as the lead implementing and coordinating agency for CFIDP to include: (a) Revisiting the PCA Charter and Reorganization of PCA such as Creation of the CFIDP Program Management Office (CPMO) for RA 11524; and other key offices and units. Budget for the CPMO will be charged to GAA.

MONITORING AND EVALUATION

Program Monitoring and Evaluation (M&E) will cover the implementation of the different components of the Program. It is important that the Program managers and principal stakeholders are informed with accurate and timely M&E information for day-to-day decision making and the conduct of periodic assessment of program performance, and the evaluation of results in terms of relevance, efficiency, effectiveness, impact, and sustainability.

The M&E of the Plan is based on the logical/results framework that summarizes the design and strategy for implementing the different activities/projects in the six key components. Indicators of results at the output, outcome and impact levels were identified and will be covered by the M&E

system. The Investment program to be implemented by partner agencies lists the activities/inputs of the partner agencies that will be covered by an Input-Output monitoring system focusing on efficiency (quantity, quality, and timeliness) and cost effectiveness.

The M&E of the different components will be covered in the existing M&E reporting system of the 14 partner implementing agencies. The agencies M&E system will generate monthly and quarterly M&E reports for the periodic review of implementation performance, project facilitation and in the conduct of annual plan and budget activity.

The Program Management and Coordination Office will conduct the regular M&E of the overall Program to generate the consolidated reports for Program Management and other stakeholders as well as the evaluation in year 3 and end of 5 years by third party evaluators. The M&E will also report on the progress of outcome indicators annually to assess the effectiveness on the use of the completed outputs by the target beneficiaries.

The evaluation of CFIDP in achieving its development objectives (outcome and impact level) will involve periodic assessment of the outcome and impact indicators. This evaluation will be conducted for CFID program in year 3 and end of 5 years through third party evaluators as required in the law.

Three long term (Impact level) objectives are: (1) sustainable increase in farmers' income, (2) more equitable access and distribution of basic social services and (3) global competitiveness.

At the outcome level, five objective statements were developed to guide the detailing of the components to be implemented and funded by the Coconut Farmers and Industry Trust Fund. The objectives are: (1) Agriculture productivity within ecological limit improved, (2) Rehabilitation of the coconut industry intensified, (3) Support to coconut processing and value adding activities strengthened, (4) Access of farmers to credit, crop insurance, health, education, and social services increased, and (5) Market access of coconut farmers organizations and MSMEs expanded. M&E indicators were identified to assess the achievement of these outcomes.

The Monitoring and Evaluation (M&E) System will be established for the entire CFIDP which will be managed by the CFIDP Program Management Office (CPMO) under the Philippine Coconut Authority (PCA). The CPMO will manage, coordinate, monitor and evaluate the implementation of all CFIDP programs.

Onwards to Fifty Years of CFIDP

The first phase of CFIDP (2022-2026) details the investment programs/projects and policies identified and prioritized to contribute to the achievement of the results at the outcome and impact level. This phase will enable the implementing agencies led by the PCA to demonstrate the effectiveness and impact of the strategies and programs, learn from the process that will allow for the formulation of an Updated CFIDP Plan for the next phase of CFIDP (2027-2032). The remaining coco levy funds will be available to support the second phase of CFIDP with stronger private sector participation.



Figure 2. Strategic positioning of the Philippine Coconut Industry in the short, medium-, and long-term

The first five years should jump start the development of the coconut industry by showcasing developmental projects on modern farming, processing and marketing methods with participation of farmers' cooperatives. It can be anticipated that private investment can be spurred and thus generated in the process. Hence, the Plan can be viewed as an initiator, catalyst, prime mover, and guiding light of the coconut industry's development, with the private sector generating much of the needed propulsive force.

The productivity of the coconut industry depends much on the skills of the farmers, the processing workers, and the stability and organizational maturity of the cooperatives. Skills development and cooperative development activities of TESDA and CDA should therefore be sustained with the same vigor in the succeeding years. The budget allocation for the first 5 years is PHP 1.65 B. When a critical mass of skilled workers is reached, the skills diffusion to other workers will run its natural course.

One of the cornerstones of the industry is hybridization where nut production can be improved dramatically. The budget allocation for the first 5 years is PHP 6.6 B. Having clearly demonstrated how coconut hybrids are produced and its consequent economic gains starting to be realized in the sixth year, hybrid production can be henceforth of interest to the private sector. By the 11th year, the CFIDP investments on rehabilitation, the modernization and upgrading of the PCA hybridization and seed farms, duplication of coconut germplasm in Luzon and the establishment of 400 ha of seed farms and strategic nurseries would all contribute to the attainment of the 10 M hybrids and outstanding OPVs target which can sustain the coconut planting and replanting program in the long-term. Backed up by strong and sufficiently funded research, with critical mass of well-trained coconut breeders and specialists from allied disciplines, new hybrids, protocols, technologies, innovative products and uses, remote crop and soil health and pest dynamics monitoring and surveillance systems and

approaches would be continually developed and applied on-farm. There is much hope that the CSet (tissue culture) mass propagation of hybrids would be finally rolled out, among other new protocols and techniques.

It has been established that crop diversification and livestock integration into coconut farming can effectively increase farmers' incomes to triple or quadruple of their original income when only monocropping was practiced. There are a lot of opportunities for income growth from crop diversification and livestock integration into coconut farming considering that 80% of coconut farms are still monocropped. The budget for the first 5 years is PHP 3.3 B. Support for this project must continue with more vigor and with the participation of the private sector. It is hoped that agri-corridors and hubs for coconut, coffee, cacao, poultry, meat, and dairy products would be successfully operationalized with farmers' organizations and members reaping the benefits from their labor.

To modernize the copra-CNO-RBD-CME-oleochemical value chain, it cannot totally be supported by the funds from CFITF. For example, to modernize the copra-CNO/RBD-oleochemicals end-to-end value chain, 864 units of white copra centrals and 1,047 units of copra buying stations costing a total of PHP 17 B need to be established (COCOFIRM, 2021). However, the estimated amount that the CFITF can provide for this purpose in the first five (5) years is only PHP 1 B. The shared facilities established by the project in the first 5 years will catalyze private sector investments by showing proofs of concept. Further, the level of support is expected to be enhanced to expand product lines as the coconut industry's growth accelerates.

Based on the regional proposals, the most sought-after projects are farm-to-market roads. According to RA 11524, farm-to-market roads in coconut producing provinces shall also be funded through regular appropriations. It is hoped that most of the coconut farms will be accessible year-round for transport of inputs and products, enabling even those in still remote areas at present to participate in coconut-based agri-corridors and hubs.

Innovative research that can create new products and uses from coconuts and its downstream products should be continually and sufficiently supported to further expand market and maintain competitiveness. This critical component must be pursued with unwavering vigor to help the Philippine coconut industry maintain its competitive advantages. The funds for research are provided by the GAA of PCA and DOST.

The Monitoring and Evaluation component shall be continued during the entire life of the Program with the funding to be included in annual GAA of PCA. The M&E Plan specifies the conduct of evaluation by third-party in year 3 and every five years thereafter.

CFIDP provides the direction for the transformation of the coconut industry. On the supply side, continued and dedicated government support providing social protection and support services that increase farm productivity and income will incentivize farmers to have renewed and sustained vigor to nurture their coconut farms, increasing the country nut production. Stimulating private sector investment through partnerships and collaborations with strengthened and empowered coconut

Executive Summary

farmers' organizations and cooperatives on the processing and market sides, will contribute to bridging the demand-supply gap and the historical disconnect between the farm sector and the export market, benefiting all sectors of the coconut industry.



CHAPTER 1

INTRODUCTION

CHAPTER 1. THE COCONUT LEVY TRUST FUND LAW (RA 11524)

Republic Act 11524 known as Coconut Farmers and Industry Trust Fund (CFITF) Act, which created the Coconut Farmers and Industry Trust Fund, was signed by President Rodrigo Roa Duterte on 26 February 2021 and declared as the policy of the state to consolidate the benefits due to coconut farmers, particularly the poor and marginalized, to attain increased incomes for coconut farmers, alleviate poverty, and achieve social equality

The Philippine Coconut Authority (PCA) is tasked to prepare the Coconut Farmers and Industry Development Plan (CFIDP) for approval of the President of the Philippines. The CFIDP shall specifically set the directions and policies for the development and rehabilitation of the coconut industry within fifty (50) years. The recently completed Coconut Farmers and Industry Roadmap (COCOFIRM) 2020-2040 provides direction and recommendations towards sustainable development of the coconut industry, focusing on: (1) inclusive growth to lift the coconut farmers out of poverty and (2) improving the competitiveness and expanding market potential of traditional and non-traditional coconut products. Its seven thematic recommendations, based on thorough mapping, baseline and benchmark analyses of the various coconut industry clusters and product streams served as bases for the recommendations for more efficient coconut supply and value chains. The seven thematic recommendations of COCOFIRM (Figure 1.1a) are grounded on the principles of empowerment, convergence, sustainability, and inclusive growth that contribute to the attainment of food security and resilience of the agriculture sector as espoused in the Updated Philippine Development Plan 2017-2022 toward the long-term vision and aspirations of Filipinos of having a *Matatag* (strongly rooted), *Maghinawa* (comfortable), at *Panatag na Buhay* (secure life) by 2040.



Figure 1.1a The Seven Thematic Recommendations of the Coconut Farmers and Industry Roadmap
Source: COCOFIRM, 2021

Chapter 1. Introduction

These COCOFIRM recommendations include the following objectives stipulated in RA 11524 that will guide the CFIDP, to wit:

- (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.

The law further states that CFIDP shall include a national program for the following:

- (a) Community-based enterprises, including integrated processing of products and downstream products intended to increase incomes of coconut farmers;
- (b) Social protection that directly benefits coconut farmers, farm workers, and their families, taking into consideration existing social protection programs of the government;
- (c) Coconut farmers organization and development;
- (d) Innovative research projects and their practical application on coconut processing, production and distribution towards developing the local coconut industry; and
- (e) Integrated processing of coconut and downstream products.

Moreover, the CFIDP shall provide the following: (1) criteria for targeting beneficiaries; (2) indicators in determining the attainment of the abovementioned objectives; and (3) mechanism for monitoring and evaluating the impact of the different components of the program; and (4) indicative funding requirement or allocation for the implementation of the programs and projects stated therein, that is to be funded by the Trust Fund.

The CFIDP shall take into account the distribution of the annual allocation from the trust fund, and the respective implementing agency, as stated in Section 4 of RA 11524. The annual allocation is presented in Figure 1.1b.

The approval of RA11524 creating the CFIDP will jumpstart and sustain the transformation of the coconut industry, providing the much needed and sorely lacking social protection, health and social benefits, empowerment, and prosperity to Filipino coconut farmers.



Figure 1.1b. Allocation of Coconut Trust Fund to various Government Agencies

The background of the slide features a woman wearing a light-colored shirt, a dark apron, and a wide-brimmed hat. She is smiling and holding several coconuts. The image is overlaid with a complex pattern of semi-transparent, overlapping geometric shapes in various shades of orange, red, and yellow, creating a textured, abstract effect.

CHAPTER 2

PHILIPPINE COCONUT INDUSTRY

CHAPTER 2 : ASSESSMENT OF THE PERFORMANCE OF THE PHILIPPINE COCONUT INDUSTRY

An assessment of the constraining factors that influenced the performance of the Philippine coconut industry will serve as basis in the formulation of the CFIDP objectives, long-term goals, and implementation strategies.

**PERFORMANCE OF THE PHILIPPINE COCONUT INDUSTRY:
TRENDS AND FACTORS AFFECTING INDUSTRY PERFORMANCE****A. TRENDS IN GLOBAL, NATIONAL AND REGIONAL COCONUT AREA, PRODUCTION, AND PRODUCTIVITY****A.1 GLOBAL TREND****Decreasing World Share in Coconut Area and Production**

The Philippines, Indonesia, and India accounted for 74.6% of the world's coconut production of 62.46 million (M) metric tons (MT) in nut terms in 2019 (Table 2.1). The Philippines is the second largest producer of coconut in the world after Indonesia. Indonesia's volume of coconut production was 17.13 M MT in the same year, which was higher than the Philippines' coconut production volume of 14.77 M MT and India's 14.68 M MT. The world's area planted to coconut in the same year was placed at 11.8 M hectares (ha), with the Philippines having the largest coconut area (3.65 M ha), followed by Indonesia at 3.5 M ha, and India at 2.15 M ha.

Table 2.1. World coconut production and area by major producing country, 2019

COUNTRY	COCONUT PRODUCTION				COCONUT AREA			
	VOLUME		% Share		HECTARES		% Share	
	(MILLION MT)				(MILLION)			
	2009	2019	2009	2019	2009	2019	2009	2019
Indonesia	19.00	17.13	30.9	27.4	2.90	3.50	25.3	30.9
Philippines	15.67	14.77	25.5	23.6	3.40	3.65	29.7	18.2
India	10.82	14.68	17.6	23.5	1.89	2.15	16.5	29.7
World	61.45	62.46			11.45	11.80		

Source: FAOSTAT

As shown in Table 2.1, India posted faster growth in coconut area and production from 2009 to 2019. The increase in the country's coconut area during this period was only 7.4% compared to India's 13.8%. Moreover, the country's coconut production showed a 5.7% decline from 2009 to 2019 while India's coconut production expanded significantly by 35.7% in the same period. There is a great possibility that India will outrank the Philippines as the second largest producer of coconut in the world in the foreseeable future unless the country's coconut productivity will increase through widespread plantings of high-yielding coconut hybrids and outstanding local coconut varieties.

A.2 NATIONAL AND REGIONAL TRENDS

Slow Growth Rate in Coconut Hectarage

In 2019, there were 13.3 M ha of land devoted to agricultural production in the country of which 27.4% (3.65 M ha) were planted to coconut, second only to rice (4.65 M ha) (PSA, 2020). Over the past 11 years (2009-2019), there was limited agricultural land expansion with a net increase of only 2.05% with notable decline in the past three years of 0.2 M ha (PSA, 2020).

Coconut occupies about 27% of the country's arable land and dominates the landscape of 69 out of 82 provinces with a total of 347 M bearing palms in 2019 (PSA, 2020). The area planted to coconuts increased from 3.40 M ha in 2009 to 3.65 M ha in 2019 or by an average annual growth rate of only 0.73% per year (Figure 2.1).

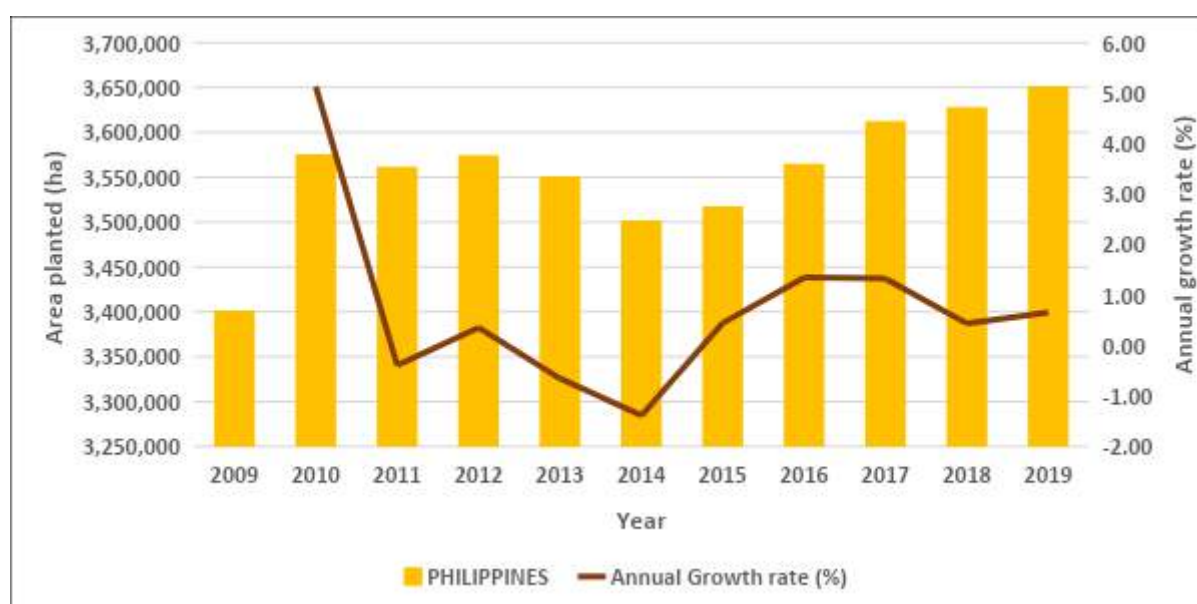


Figure 2.1. Annual area planted to coconuts (ha) and growth rate (%), Philippines, 2009-2019
Source: PSA

The coconut producing regions can be divided into three based on hectareage. In 2019, the regions with more than 300,000 ha include CALABARZON, Zamboanga Peninsula, Bicol, Davao, ARMM, Eastern Visayas, and Northern Mindanao (COCOFIRM, 2021 and Table 2.2). Those with more than 100,000 ha but less than 250,000 ha are MIMAROPA, SOCCSKARGEN Caraga, Western Visayas and Central Visayas. Minor production areas with less than 50,000 ha include Central Luzon, Cagayan Valley, Ilocos Region and CAR. Among the country's 16 administrative regions, CALABARZON had the largest coconut hectareage (13.3% share) in 2019, followed by Zamboanga Peninsula, Bicol Region, Davao Region, and Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) with coconut hectareage shares of 12.44%, 12.43%, 9.76%, and 9.1%, respectively.

As shown in Table 2.2, four regions namely Caraga, Eastern Visayas, Davao Region, and Central Visayas had an aggregate loss of 99,729 ha in coconut area from 2009 to 2019. The contraction in coconut land area in these regions can be attributed to conversion to other more profitable crops or non-agricultural uses in Davao Region, rampant illegal logging in Caraga, and severe crop damage caused by typhoon Yolanda in Eastern and Central Visayas (COCOFIRM, 2021). Davao Region slid down from

Chapter 2 : Assessment of the Performance of the Philippine Coconut Industry

2nd to 3rd place while Eastern Visayas's rank dropped from 2nd to 6th place in 2009 and 2019, respectively. The reduction in coconut areas in four regions was compensated by the huge expansion in coconut areas in other regions (i.e., totaling 350,102 ha) particularly CALABARZON, MIMAROPA, Zamboanga Peninsula, and SOCCSKSARGEN. CALABARZON with a 41.22% increase in coconut area replaced Bicol as the region with the largest coconut hectareage in 2019. Bicol ranked 1st in 2009 but slid to 3rd in 2019 with only 1.39% increase in coconut hectareage over a period of 11 years. Zamboanga Peninsula with a 23.14% increase in coconut area replaced Eastern Visayas as the region with the second largest coconut hectareage in 2019. Eastern Visayas' rank dropped from 2nd in 2009 to 6th in 2019.

Table 2.2. Coconut area planted/harvested (in ha) by region, Philippines, 2009 and 2019

REGION	2009		2019		PERCENT CHANGE (2019-2009)
	AREA (HA)	RANK	AREA (HA)	RANK	
CAR	281	16	321	16	14.23
Region I (Ilocos Region)	11,540	15	12,541	15	8.67
Region II (Cagayan Valley)	13,661	14	15,382	14	12.60
Region III (Central Luzon)	24,088	13	28,129	13	16.77
Region IV-A (CALABARZON)	343,568	5	485,197	1	41.22
Region IV-B (MIMAROPA)	179,321	9	222,984	8	24.35
Region V (Bicol Region)	447,764	1	453,994	3	1.39
Region VI (Western Visayas)	119,663	12	128,512	11	7.40
Region VII (Central Visayas)	128,707	11	124,775	12	-3.06
Region VIII (Eastern Visayas)	383,546	2	329,620	6	-14.06
Region IX (Zamboanga Peninsula)	369,013	4	454,387	2	23.14
Region X (Northern Mindanao)	300,575	7	303,978	7	1.13
Region XI (Davao Region)	375,922	3	356,384	4	-5.20
Region XII (SOCCSKSARGEN)	169,254	10	206,411	9	21.95
Region XIII (Caraga)	219,107	8	196,774	10	-10.19
BARMM	315,490	6	332,484	5	5.39

Source: PSA

Stagnant Coconut Production

The country's coconut production showed a decreasing trend at an average growth rate of - 0.54% per year from 15.66 billion (B) nuts in 2009 to 14.76 B nuts in 2019 (Figure 2.2). Nut production slumped from 15.66 B in 2009 to 15.24 B in 2019 (PSA, 2020). Peak nut production (i.e., 15.8 B) was achieved in 2012 and then decreased markedly during the period 2013 - 2016 mainly due to the infestation of coconut scale insects and the occurrence of major typhoons, which destroyed huge number of coconut palms. Nut production increased in 2017 after four years of decline but by 2019, it was down to 14.76 B nuts.

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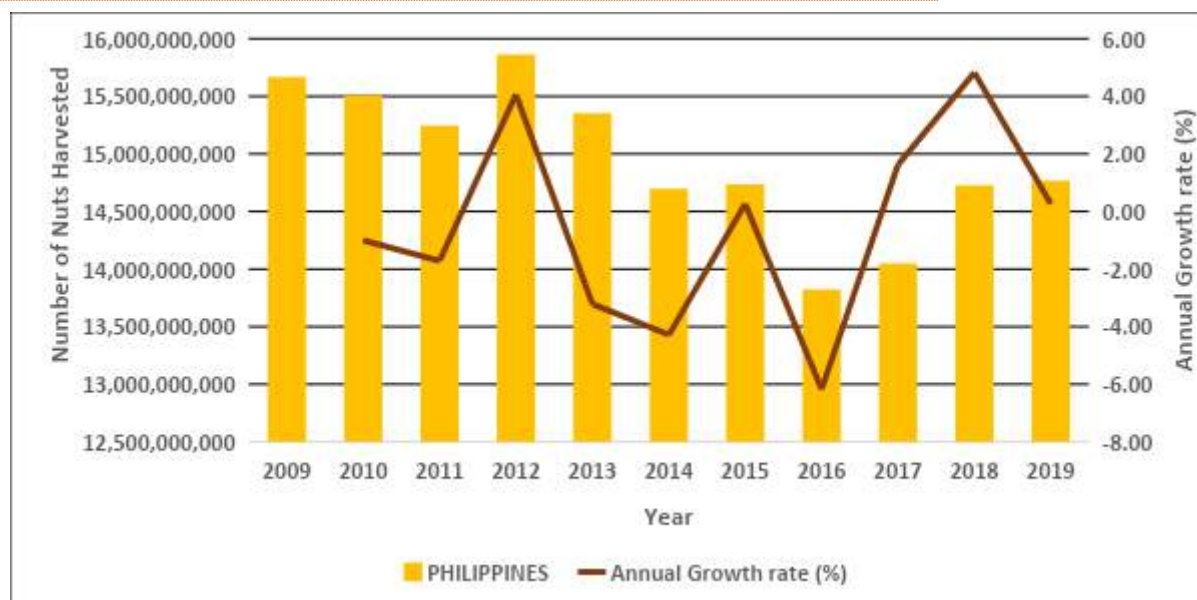


Figure 2.2. Annual nut production and growth rate (%) in the Philippines, 2009-2019

Source: PSA

Coconut production from Mindanao comprises almost 60% of the country's total nut production both in 2009 and 2019 (COCOFIRM, 2021 and Table 2.3). The aggregate coconut production share of Luzon regions decreased from 26.5% in 2009 to 23.4% in 2019. The three Visayas regions contributed 13.95% in 2009 which slightly increased to 17.2% in 2019. Davao Region posted the highest coconut production of 1.93 B nuts (13.08% share) in 2019 (Table 2.3). Davao Region maintained its position as the highest nut producer both in 2009 and 2019 despite the huge reduction in the volume of nuts produced (-759.95 M nuts) in this region due to loss of bearing palms, coconut hectareage, and nut productivity (COCOFIRM, 2021). In 2019, Northern Mindanao ranked second to Davao Region in terms of coconut production, followed by Zamboanga Peninsula, CALABARZON, BARMM, Bicol Region, SOCCSKSARGEN, and Eastern Visayas. Zamboanga Peninsula maintained its 3rd rank. Northern Mindanao jumped from 4th to 2nd and BARMM from 7th to 5th top producers from 2009 to 2019, respectively due to the increase in coconut area planted and productivity in these regions. CALABARZON improved its ranking from its being the 5th to the 4th highest nut producer mainly due to expansion in coconut area. Meanwhile, Eastern Visayas' rank dropped from 2nd in 2009 to 8th in 2019. From 2009 to 2019, Eastern Visayas suffered a -36.76% decrease in nut production equivalent to 124.7 M nuts, more than a 3rd of its 2009 production of 1.78 B nuts. This was largely due to damage caused by Typhoon Yolanda and coconut land area contraction (COCOFIRM, 2021). Caraga's rank slid down from 8th in 2009 to 10th in 2019 due to the reduction in coconut area planted. Among the 16 coconut-producing regions, Central Luzon posted the largest percentage decrease in coconut production (-40.72%) from 2009 to 2019 because this region showed the highest percentage reduction in coconut yield (-43.9%).

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Table 2.3. Coconut (with husk) volume of production (MT) by region, Philippines, 2009 and 2019

REGION	2009		2019		PERCENT CHANGE (2019-2009)
	PRODUCTION	RANK	PRODUCTION	RANK	
CAR	906	16	913	16	0.77
Region I (Ilocos Region)	38,023	15	42,621	15	12.09
Region II (Cagayan Valley)	71,896	14	72,634	14	1.03
Region III (Central Luzon)	199,730	13	118,401	13	-40.72
Region IV-A (CALABARZON)	1,430,128	5	1,643,479	4	14.92
Region IV-B (MIMAROPA)	668,361	10	791,121	9	18.37
Region V (Bicol Region)	1,257,221	6	1,246,479	6	-0.85
Region VI (Western Visayas)	478,331	11	513,397	11	7.33
Region VII (Central Visayas)	434,589	12	422,514	12	-2.78
Region VIII (Eastern Visayas)	1,776,916	2	1,123,802	8	-36.76
Region IX (Zamboanga Peninsula)	1,744,738	3	1,746,949	3	0.13
Region X (Northern Mindanao)	1,743,338	4	1,836,112	2	5.32
Region XI (Davao Region)	2,691,905	1	1,931,955	1	-28.23
Region XII (SOCCSKSARGEN)	895,086	9	1,160,991	7	29.71
Region XIII (Caraga)	985,427	8	781,884	10	-20.66
BARMM	1,250,971	7	1,331,805	5	6.46

Source: PSA

Declining Coconut Productivity

Nut productivity per year highly fluctuated from 2009 to 2019, with a general downward trend at an average of -0.74% per year, from a national annual average of 46 nuts per palm in 2009 to 44 nuts per palm in 2019 (Figure 2.3). The negative trend can be attributed to the numerous strong and super typhoons that occurred multiple times a year since 2011, the severe El Niño that lasted for 18 months in 2015-2016, and the coconut scale insect outbreak in CALABARZON and Basilan in 2014 (COCOFIRM, 2021).



Figure 2.3. Annual nut yield per palm and growth rate (%) in the Philippines, 2009-2019

Source: PSA

Chapter 2 : Assessment of the Performance of the Philippine Coconut Industry

The trend in coconut productivity varied across regions. Eight regions exhibited improvements in coconut productivity from 2009 to 2019. These include MIMAROPA, Ilocos Region, SOCCSKSARGEN, Western Visayas, CAR, Northern Mindanao, BARMM, and Central Visayas.

Davao Region's rank as the top region in terms of coconut productivity dropped to 2nd in 2019 owing to the decline in coconut yield from 68 nuts per palm in 2009 to 57 nuts per palm in 2019 (Table 2.4 and COCOFIRM, 2021). SOCCSKSARGEN replaced Davao Region as the highest yielder and its rank improved from 3rd in 2009 to 1st in 2019. Northern Mindanao's rank showed remarkable improvement from 5th in 2009 to 2nd in 2019. In contrast, Central Luzon's rank dipped markedly from 2nd in 2009 to 9th in 2019.

Table 2.4. Coconut yield (in nuts/palm) by region, Philippines, 2009 and 2019

REGION	2009		2019		PERCENT CHANGE (2019-2009)
	YIELD	RANK	YIELD	RANK	
CAR	27	13	28	13	4.4
Region I (Ilocos Region)	42	9	48	5	12.0
Region II (Cagayan Valley)	52	6	52	4	-1.6
Region III (Central Luzon)	67	2	37	9	-43.9
Region IV-A (CALABARZON)	34	12	29	12	-16.3
Region IV-B (MIMAROPA)	39	10	45	6	17.3
Region V (Bicol Region)	37	11	35	9	-3.8
Region VI (Western Visayas)	50	7	53	3	6.2
Region VII (Central Visayas)	34	12	34	10	1.5
Region VIII (Eastern Visayas)	37	11	32	11	-13.4
Region IX (Zamboanga Peninsula)	56	4	45	6	-20.8
Region X (Northern Mindanao)	55	5	57	2	4.2
Region XI (Davao Region)	68	1	57	2	-15.8
Region XII (SOCCSKSARGEN)	62	3	66	1	7.3
Region XIII (Caraga)	47	8	44	7	-7.7
BARMM	37	11	39	8	3.6

Source: PSA

B. TREND IN THE NUMBER OF COCONUT PROCESSING INDUSTRIES AND THEIR AGGREGATE RATED CAPACITIES

Underutilization of Coconut Oil Mills

About 80% of the country's total coconut production are processed into copra, the feedstock for coco oil mills. The number of coconut oil mills decreased from 69 in 2013 to 60 in 2019 (Table 2.5). Likewise, the aggregate crushing capacities of the coconut oil mills declined by 1.40 M MT/year from 4.82 M MT in 2013 to 3.42 M MT in 2019 due to unreliability of copra supply caused by yearly weather fluctuations. The oil milling industry is still characterized as having underutilized capacity due to the country's stagnant coconut/copra production. The average annual capacity utilization rate of the coconut oil mills during the period 2009-2013 was only 49.8%. The lowest average capacity utilization of the coconut oil mills was recorded in 2014 when the coconut scale infestation damaged many

Chapter 2 : Assessment of the Performance of the Philippine Coconut Industry

coconut palms in the country, especially in CALABARZON and Basilan in this year (Figure 2.4). The years when there was high-capacity utilization of the oil mills were in 2010 (61%) and 2019 (69%) due to the large supply of copra available because of favorable climate in these years.

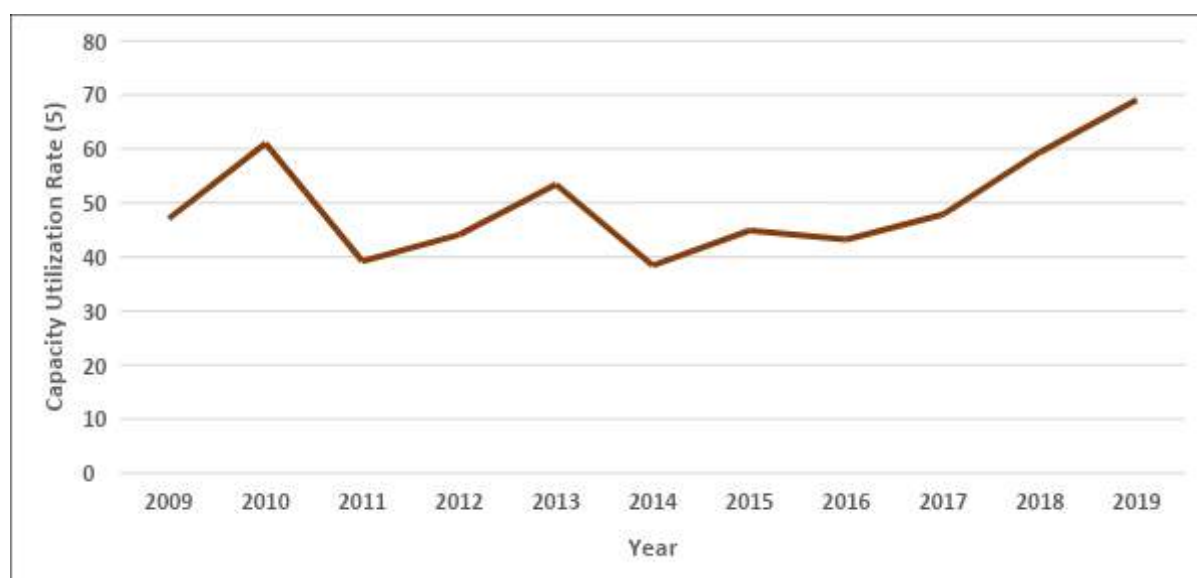


Figure 2.4. Annual capacity utilization of oil mills, Philippines, 2009-2019

Source: PCA and UCAP

As regards coconut oil refineries, despite the decrease in the total number of operating refineries from 43 in 2013 to 40 in 2019, the aggregate production capacity of these refineries increased by 1.64 M MT in 2009 to 1.99 M MT in 2019 (Table 2.5).

Expanding Number and/or Aggregate Production Capacities of Other Coconut Processing Companies

Twenty percent (20%) of the 15 B nut production in 2019 were used for the manufacture of desiccated coconut (DCN), virgin coconut oil (VCO), coconut milk, and other coconut products. The total number of companies processing desiccated coconut, coconut shell charcoal, activated carbon, oleochemicals, biodiesel, virgin coconut oil, coconut sugar, coconut water/concentrate, and coco coir products increased from 2013 to 2019. The growth in the number of these processing companies is largely influenced by favorable domestic and/or export markets for their coconut products. Except for activated carbon, the aggregate production capacities of companies manufacturing desiccated coconut, coco shell charcoal, oleochemicals and biodiesel also expanded from 2013 to 2019. The decrease in the aggregate production capacity of activated carbon companies can be attributed to the lack of coconut shell charcoal as raw material owing to the large volume of shipments of coconut shell charcoal to Japan and China in 2019.

In view of the over-capacity of oil mills and the increase in the aggregate production capacities of most of the coconut processing companies, there exists a great potential for expanding the country's coconut area and production to meet the raw material and feedstock requirements of the coconut processing sector.

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Table 2.5. Number and annual aggregate production capacities of selected processing companies, Philippines, 2013 and 2019

TYPE OF PROCESSING COMPANIES/ PRODUCERS	2013		2019		CHANGE IN PRODUCTION CAPACITY (MT/YEAR)
	NUMBER OF COMPANIES	ANNUAL TOTAL PRODUCTION CAPACITY (MT/YEAR)	NUMBER OF COMPANIES	ANNUAL TOTAL PRODUCTION CAPACITY (MT/YEAR)	
Coconut Oil Mills	69	4,825,650	60	3,420,554	-1,405,096
Coconut Refineries	43	1,642,050	40	1,993,400	351,350
Desiccated Coconut	11	198,479	21	449,154	250,675
Coco Shell Charcoal	11	67,390	15	321,114	253,724
Activated Carbon	11	101,075	14	85,585	-15,490
Oleochemical	13	645,360	15	1,573,030	927,670
Biodiesel	9	484,600	12	607,900	123,300
VCO	18	No data	42	No data	No data
Coconut Coir	11	No data	165	No data	No data
Coconut Sugar	8	No data	33	No data	No data
Coconut Water/ Concentrate	7	No data	14	No data	No data

Source: PCA and UCAP

C. ECONOMIC TRENDS: COCONUT INDUSTRY'S CONTRIBUTION TO GVA IN AGRICULTURE AND EXPORT EARNINGS

Declining Coconut Industry's Contribution to GVA in Agriculture and Fisheries

At constant 2018 prices, gross value added (GVA) in Agriculture and Fisheries (AF) increased from PHP 1.210 trillion in 2019 to PHP 1.557 trillion in 2020 (PSA, 2021). However, the Agriculture and Fisheries sector posted a declining share in Gross Domestic Product (GDP) from 11.6% in 2009 to 8.0% in 2020 (Table 2.6). The crops subsector pulled down the overall growth of the agriculture and fishery sector. Crops dominated the agriculture sector, accounting for an annual average of 55% of the GVA in AF during the period 2009-2020 (PSA, 2021). The share of the crops sub sector in GVA in AF in real terms shrank from 59% in 2009 to 51% in 2020. The crops subsector's poor performance was due to: (a) typhoons and El Niño that adversely affected rice, corn, and coconut production; (b) coconut scale infestation; and (c) limited adoption of high-yielding varieties of commodities (PDP, 2017-2022).

From 2009 to 2020, the coconut industry provided an annual average contribution to GVA in AF of 5.0% in real terms, next to the rice, corn, and banana industries. However, its share in GVA in AF in real terms posted a downtrend at an annual average of -2.6% from 5.9% in 2009 to 4.4% in 2020 (Table 2.6). The declining growth of the coconut industry in the last decade can be traced to a host of factors such as low coconut R&D and infrastructure investments, senile coconut palms, limited farm diversification, scale insect pest infestation, and extreme weather conditions such as low tropical cyclones, and El Niño-induced drought, among other factors. More in-depth analysis of the causative factors that influenced the poor performance of the coconut production sector are tackled in Chapter

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3. It is hoped that the release of the coconut levy fund will reverse this trend and transform the coconut industry into a dynamic player in the agricultural economy (Adriano, 2020).

Table 2.6. Selected economic indicators at constant 2018 prices, Philippines, 2009 and 2020

ECONOMIC INDICATOR	2009	2020
% Share of Agriculture & Fisheries (AF) Sector in GDP	11.6	8.0
% Share of the Crops Subsector in GVA in AF	59.0	51.0
% Share of the Coconut Industry in GVA in AF	5.9	4.4

Source: PSA

Low and Decreasing Domestic Demand for Coconut Products

During the period 2009-2019, the country's domestic consumption of coconut products, on the average, accounted for a lower share (31%) of the total coconut utilization compared to coconut exports' share of 69% (Table 2.7). While the country's volume of coconut exports grew at a much faster rate (6.5%/year, on the average), domestic coconut consumption appeared to exhibit a relatively flat trend (i.e., average annual growth rate of only 0.4%/year) during the 11-year period under review.

Table 2.7. Total utilization, domestic consumption, and exports of coconut products in copra terms, Philippines, 2009-2019

ITEM	EXPORT	DOMESTIC CONSUMPTION ^a	TOTAL UTILIZATION
% Share, 2009	62.0	38.0	100.0
% Share, 2019	73.0	27.0	100.0
% Share, 2009-2019	69.0	31.0	100.0
Ave. Annual Growth Rate (%)	6.5	0.4	3.9

^aIncludes CNO for oleochemicals domestic consumption in copra terms

Source: PCA, PSA, and UCAP

The Philippine Statistics Authority (PSA) reported that the annual per capita consumption of coconut decreased from 6.96 kilograms (kg) per capita in 2018 to 6.88 kg per capita in 2019. However, FAO's estimate of Filipinos' annual per capita consumption of coconut in 2018 was much lower compared to PSA's reported per capita coconut intake figure. As shown in Figure 2.5, Filipinos' annual per capita intake of coconut was only 5.04 kg, much lower than the world's largest coconut consumer, Sri Lanka, at 74.67 kg and the world's largest coconut producer, Indonesia, at 14.24 kg (FAOSTAT, 2021). This can be largely attributed to the fact that market promotion efforts of the government are mostly geared towards the country's export markets. Except for virgin coconut oil, most Filipino consumers lack awareness of the nutraceutical, nutritional, health, beauty, wellness, and environmental benefits from domestic utilization of coconut products owing to limited market promotion efforts aimed at increasing local consumption/utilization of Philippine coconut products. High price is another reason for low domestic consumption of some coconut products (e.g., coconut oil vs. palm oil as cooking oil; coconut sugar vs. muscovado sweetener).

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Local consumption of virgin coconut oil is expected to remain high especially with the promising results of the DOST's experiment on the health benefits of VCO intake on Covid-19 patients. More people would be encouraged to purchase virgin coconut oil as an immune-health supplement for faster recovery, the possibility of combating African Swine Flu, and other beneficial uses of virgin coconut oil.

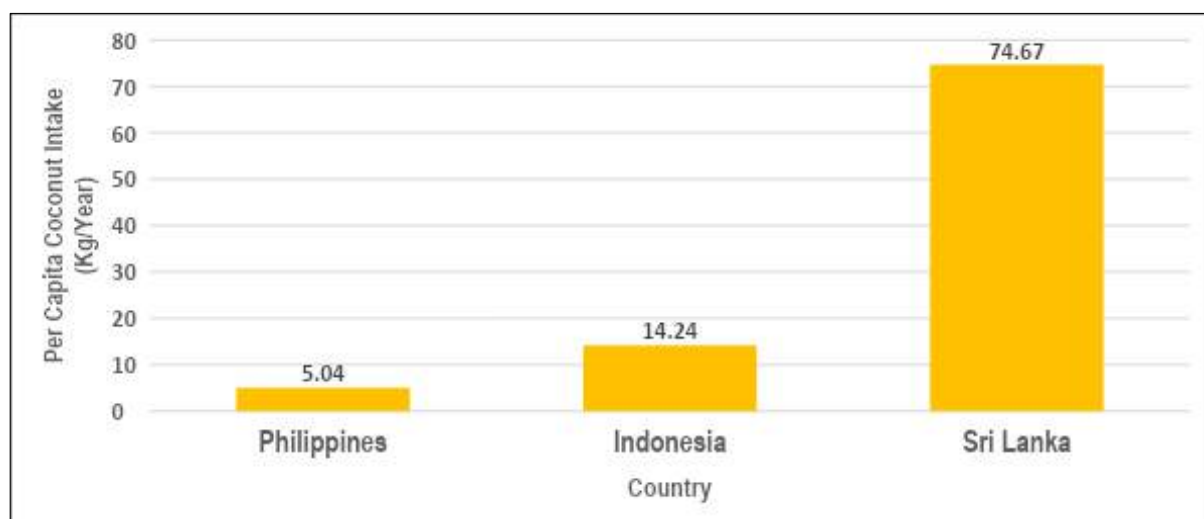


Figure 2.5. Annual per capita coconut consumption in the Philippines, Indonesia, and Sri Lanka, 2018
Source: FAOSTAT 2021

Increasing Coconut Export Earnings

The Philippines remains as the top exporter of coconut products worldwide and accounts for about 26.8% of the global coconut exports valued at an average of US\$ 229.79 M per year (DTI, 2021). Three traditional coconut products composed of coconut oil, desiccated coconut, and copra cake/meal are among the top 10 agricultural export products of the Philippines. Coconut oil used to be the country's top agricultural export product, but since 2018 it has been overtaken by fresh bananas (Table 2.8). This was largely due to the decreasing trend in coconut supply from 2017 to 2019.

Table 2.8. Share of coconut products in the total export earnings from the top agricultural exports of the Philippines, 2015-2019

COMMODITY	FOB US \$ M			AVE. % SHARE (2015-2017)	FOB US \$ M		AVE. % SHARE (2018-2019)
	2015	2016	2017		2018	2019	
Fresh bananas	657.87	730.36	1,128.58	15.0	1,382.11	1,953.84	26.1
Coconut oil	1,128.75	1,151.69	1,614.77	23.3	1,075.45	932.04	15.7
Pineapple & products	574.24	710.66	582.77	11.2	443.58	617.35	8.3
Tuna	350.30	331.21	520.64	7.2	495.36	472.42	7.6
Desiccated coconut	160.05	210.04	340.83	4.2	338.41	256.75	4.7
Manufactured tobacco	207.61	161.18	188.96	3.3	298.83	311.63	4.8
Tobacco, unmanufactured	61.89	37.68	103.07	1.2	81.83	81.32	1.3
Rubber	101.03	74.85	108.76	1.7	142.95	154.45	2.3

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Food prep for infants	29.07	5.55	56.59	0.5	51.10	74.85	1.0
Copra oil cake	70.42	52.06	63.65	1.1	66.30	60.80	1.0
Total	5,001.79	5,155.62	6,579.50	100.0	6,117.84	6,677.06	100.0

Source: PSA

Increasing Contribution of Non-Traditional Coconut Products to Total Coconut Export Earnings

During the period 2009-2019, the largest contribution to the country's coconut export earnings came from traditional coconut products. However, the contribution of traditional coconut products to the country's total coconut export earnings declined from 95% in 2009 to 83% in 2019. Moreover, exports of traditional coconut products also exhibited a sluggish growth at an average of 1.7% per year in the last decade (Tables 2.9 and 2.10).

Table 2.9. Percent contribution to total export earnings from coconut products, Philippines, 2009-2019

YEAR	PERCENT CONTRIBUTION		ALL COCONUT PRODUCTS
	Traditional Coconut Products	Non-Traditional Products	
2009	95	5	100
2019	83	17	100

Source: PSA

Conversely, non-traditional coconut products accounted for only 5% of the total coconut export earnings in 2009, but its contribution to the country's total coconut export earnings markedly increased to 17% in 2019 (Table 2.9). In addition, the total export revenue from non-traditional coconut products grew at a faster rate than traditional coconut products at an average rate of 27.1% per year from 2009 to 2019. These figures imply the growing interest among integrated coconut processors to diversify their production of various non-traditional coconut products owing to the favorable market prospects of non-traditional coconut products globally (Table 2.11).

Table 2.10. Export earnings from traditional and non-traditional coconut products, Philippines, 2009-2019

YEAR	EXPORT VALUE (FOB US\$)		
	Traditional Coconut Products	Non-Traditional Coconut Products	TOTAL
2009	831,335,338	43,240,817	874,576,155
2019	1,366,964,102	286,532,461	1,653,496,563
Ave. Annual Growth Rate (2010-2019)	1.7%	27.1%	10.2%

Source: PSA

MARKET PROSPECTS AND OPPORTUNITIES OF PHILIPPINE COCONUT PRODUCTS

Among the traditional coconut products which have favorable market prospects, coco methyl ester exhibited the highest percentage increase in export volume from 2009 to 2019, followed by activated carbon, and coco shell charcoal. Although coconut oil and desiccated coconut are the top traditional

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export products, these products exhibited lower percentage increases in export volume in the same period.

In 2019, the share of coconut oil, as a lauric acid oil, in the world's oil and fats market was measly at 2.2%. Nevertheless, it has a good reputation as cooking oil and for cosmetic and industrial use. It has emollient properties that make it a popular choice for cosmetic products, and skin and hair care. The Philippines supplies to 57 countries, approximately 45% of the total world export volume of coconut oil from 2009 to 2019. The export volume of coconut oil increased from 824,360 MT in 2009 to 1.137 M MT in 2019, or by 38% (Table 2.11). The Philippines has the highest competitive advantage in the production and export of crude coconut oil compared to its close competitors, Indonesia, and India. The country has a favorable market prospect in exporting coconut oil owing to the negative advisory against the use of palm oil in recent years. Palm oil is being phased out in Europe for use in biofuels because of the negative advisory that palm oil cultivation has accelerated deforestation and global warming. In view of these recent developments, it is expected that coconut oil's position in the oil and fats trade will improve. However, to improve the Philippines' competitive advantage over other coconut oil exporting countries like Indonesia, Filipino oil processor-exporters should give importance to producing and exporting sustainable, ethical, traceable coconut oil which should have acceptable Polycyclic Aromatic Hydrocarbon (PAH) levels, Free Fatty Acid (FFA) level, and acceptable color to comply with the stricter global product standards. Companies selling different brands of coconut oil products in Europe are now requiring complete traceability (i.e., from their shops down to coconut farms) in their purchases of coconut oil and are working with Fair Trade Sustainability Alliance (Fair TSA) for certification to ensure that a large portion of their sales from coconut oil will go directly to coconut farmers (Coca, 2020).

Table 2.11. Volume of exports of Philippine traditional and non-traditional coconut products with promising export market prospects, 2009 and 2019

COCONUT PRODUCT/BY PRODUCT	EXPORT VOLUME (MT)		% INCREASE IN EXPORT VOLUME	TOTAL NUMBER OF EXPORT MARKET DESTINATIONS (2009-2019)
	2009	2019		
Traditional Coconut Products:				
Coconut Oil	824,360	1,137,127	38	
Crude Coconut Oil	570,570	825,746	45	57
Cochin Oil (RBO)	228,606	233,208	2	50
RBD	25,184	78,173	210	67
Desiccated Coconut	118,421	155,035	31	109
Coconut Shell Charcoal	34,746	87,879	153	32
Activated Carbon	20,027	78,252	291	99
Oleochemicals (Coco Methyl Ester)	1,744	23,957	1,274	46
Non-Traditional Coconut Products:				
Coco Peat	3,581	64,992	1,715	6
Coconut Water	593	51,839	8,642	78
Glycerol	15,255	18,977	24	55
Virgin Coconut Oil	2,297	18,352	699	91
Other Raw Coir Fibers	2,816	16,012	469	11
Liquid Coconut Milk	2,106	10,016	376	62

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Coco Flour	1,004	3,247	223	57
Coco Milk Powder	1,926	3,145	63	59
Coconut Sugar*	404	420	4	24
Coconut Water Concentrate*	125	306	145	36

*Started in 2017

Source: PSA and PCA

The Philippines is the world's top exporter of desiccated coconut followed by Indonesia and Sri Lanka. The country's volume of exports of desiccated coconut rose from 118,421 MT in 2019 to 155,035 MT in 2019, or by 31% (Table 2.11). Among the traditional coconut exports, desiccated coconut has the most diverse market penetrating about 109 countries all over the world and it also commands the highest price. The country has a higher comparative advantage in producing and exporting desiccated coconut than Indonesia and Sri Lanka. The Philippines has the greatest ability to compete in the global desiccated coconut market particularly in the European Union, which is the world's largest importer of desiccated coconut. Already, the Philippine desiccated coconut fetches a higher price compared to desiccated coconut imported from Indonesia and Sri Lanka because of its premium quality. The Philippines will stand to benefit from the considerable growth in market demand for desiccated coconut by the food processing and confectionery industries in the European market.

The Philippines is the world's second major exporter of coco shell charcoal, next to Indonesia. The country's export volume of coconut shell charcoal to 32 countries increased significantly by 153% from 34,746 MT in 2009 to 87,879 MT in 2019 (Table 2.11). Coco shell charcoal was dominantly shipped to China and Japan for further processing to activated carbon. Rising volume of exports of raw coco shell charcoal has been depleting the supply of this raw material for Filipino activated carbon manufacturers. The country would benefit more if more activated carbon were produced and exported because it is a high value-added product.

The volume of exports of coco shell-based activated carbon from 2009 to 2019 increased by 291% from 20,027 MT to 78,252 MT (Table 2.11). The export market for Philippine coco shell-based activated carbon is more diverse compared to coco shell charcoal, reaching 99 destinations in the international market. The global demand for coco shell charcoal-based activated carbon is growing because government regulatory agencies in different countries have recommended coconut activated carbon as the best available material for use in air purification, mercury absorption, and water treatment applications owing to growing environmental concerns. The increasing applications of activated carbon in the food and beverage industry and the pharmaceutical sectors have also contributed to demand growth of activated carbon globally and are expected to further increase the demand for coco shell-based activated carbon from the Philippines.

Coconut oil is used as feedstock in producing oleochemicals. Among the oleochemicals, coco methyl ester showed the brightest market prospect globally. On the export side, the import ban on palm oil exports from Malaysia in Europe and the United States has largely contributed to the significant increase in the country's exports of coco methyl ester by 1,274% from only 1,744MT in 2009 to 23,957 MT in 2019 (Table 2.11).

Chapter 2 : Assessment of the Performance of the Philippine Coconut Industry

A total of 43 non-traditional coconut products were exported from 2009-2019 with the following as the top promising products: coconut water, coco peat, virgin coconut oil, other raw fibers, liquid coco milk, husk cubes, coco flour, coconut water concentrate, and coco milk powder.

As the country's top non-traditional coconut product, coconut water has been recognized globally as a natural, organic, and healthy functional drink. The volume of exports of coconut water to 78 countries increased markedly from only 593 MT in 2009 to 51,839 MT in 2019, or by 8,642% (Table 2.11). This positive trend could be due to its growing popularity especially in the non-traditional markets because of its beneficial properties as a healthy beverage and a sports drink. Coconut water which is now the fastest growing new beverage category in the United States has also gained its international popularity in the Netherlands, Australia, Japan, and other countries. Coconut water has caught on among athletes, health nuts and urbanites in these countries. Owners of Vita Coco, O.N.E., and Kirkland (Costco), the popular brands of coconut water drink in the United States and/or Europe, source their coconut water from the Philippines, among other countries.

The Philippines is the top exporter of virgin coconut oil. Globally, virgin coconut oil is gaining popularity because of its anti-microbial property, its appeal as a natural and green product, and its wider application to beauty, cosmetics, and personal care products. The country's volume of exports of virgin coconut oil expanded by 699% from 2,297 MT in 2009 to 18,352 MT in 2019. In the last decade, the country shipped out virgin coconut oil to 91 countries.

The coir products which have favorable export performance are coir peat/dust and raw fibers. The volume of export of coco peat/dust increased from 3,581 MT in 2009 to 64,992 MT in 2019, or by 1,715% (Table 2.11). China is the country's major export market for coco husk/coir/peat products. For coir and coir products, the Philippines should ride on the global trend of going green promoting products which are sustainable and environmentally friendly. Application to horticulture, soil conditioning, gardening, and hydroponics specifically the use of geotextiles for bio-engineering application and soil erosion control are some of the key market drivers for growth of coir products. Although there exist several export market opportunities for coco peat, coco chips for hydroponics growing medium, coco boards for housing and furniture making, coco coolers as alternative to styro boxes and coco pallets for shipping of products, the Philippine coco coir industry would require further product and market development, market intelligence, and intensive promotional efforts to realize the potential demand and compete globally particularly with India and Sri Lanka.

Liquid coconut milk and coco milk powder have promising export market prospects due to the rise in veganism. Rising health consciousness is driving its demand as coconut milk offers a good substitute to dairy derivatives as they are constituted of short and medium chain triglycerides. It is also rich in Vitamins C and E, which can limit tumor growth and occurrences of aging disorders. Coconut milk powder is used in the preparation of various dishes, such as smoothies, shakes, ice creams, cakes, doughnuts, sauces, and gravies. Organic coconut milk products are in high demand, owing to the increasing awareness about the benefits of coconut milk products on human health. The country exported liquid coconut milk and coconut milk powder to 59 and 62 countries during the period 2009-2019, respectively. The volume of exports of Philippine liquid coconut milk increased markedly from 2,106 MT in 2009 to 10,016 MT in 2019, or by 376%. Likewise, exports of coconut milk powder showed remarkable improvement from 1,926 MT in 2009 to 3,145 MT in 2019, or by 63%.

The export demand for Philippine coconut flour is increasing as a healthy alternative to wheat flour since gluten intolerant consumers are looking for more unique gluten free flour blends. The volume of exports of Philippine coconut flour grew significantly from 1,004 MT in 2009 to 3,247 MT in 2019, or by 223% (Table 2.11). The Philippines exported coconut flour to 57 countries. The Asia-Pacific region dominates the global market for coconut flour. Other regions like North America and Germany are expected to dominate the consumption of coconut flour because of the increasing baking activities and awareness of the benefits of gluten-free products.

Generally, coconut sugar has also a diverse market, penetrating about 24 countries all over the world. This could be due to the growing popularity of coconut sugar as a natural sweetener alternative to table sugar. Coconut sugar serves as a healthier option as sweetener due to its organic nature, low Glycemic Index (GI), filled with nutritional content and its elements from raw materials (Costales, 2019). The country should capitalize on promoting coco sugar's low glycemic index, given the rising cases of diseases such as diabetes, cardiovascular diseases (CVD), obesity rates as well as the change in dietary patterns to increase global demand. For culinary purposes, coco sugar could have unlimited application in food and drinks. As a non-food product, coco sugar is used as body scrubs, shaving gels, facial and body creams, and for hair care products.

The increasing demand for Philippine coconut products in international markets requires sufficient and sustainable supply of raw materials. The major challenges confronting the Philippine coconut industry are: (1) how the coconut production sector can keep pace with the growing demand for raw materials/feedstock of the coconut processing/manufacturing sector; (2) how to maintain the country's global competitiveness for coconut products wherein we have the highest competitive advantage; and (3) how to improve the country's global competitiveness for coconut products wherein we have less competitive advantage compared to the country's competitors. It is deemed important that part of the coco levy funds should be dedicated to increased investments in research and development to improve coconut productivity, product quality (including packaging), and safety and health standards of coconut products as well as to develop new high-value downstream coconut products. Unfortunately, the government did not provide sustained R&D investments into the sector. The General Appropriations Act (GAA)-funded budget of the PCA decreased from PHP 1.47 B in 2018 to PHP 1.12 B in 2020. The agency's R&D budget of PHP 69.25 M in 2018 accounted for a miniscule share of 4.71% of the PCA's total budget. It further drastically declined to only PHP 48.40 M (4.32%) in 2020. Hence, research and development activities aimed at increasing productivity, improving the quality of processed by-products from coconut, developing new high-value downstream coconut products, and monitoring global market demands were severely underfunded.

Expanding the domestic market for coconut products is another big challenge considering that this is a major strategy to shield the coconut industry from vulnerability to global price shocks particularly for copra and coconut oil. It is imperative that market promotion efforts must be pursued not only in the export market but also in the domestic market.

Major issues and challenges facing the coconut production sector are tackled in detail in Chapter 3.

The background of the page is a photograph of a coconut plantation. In the upper left, two workers are visible: one standing and another crouching. They are surrounded by numerous coconuts on the ground and hanging from trees. The image is overlaid with a semi-transparent orange and red gradient, which serves as a backdrop for the chapter title.

CHAPTER 3

COCONUT PRODUCTION SECTOR

CHAPTER 3: CHALLENGES AND OPPORTUNITIES IN THE COCONUT PRODUCTION SECTOR

Increasingly, the demands of the export market for sufficient, reliable volume, quality that meet international standards and traceability need to be addressed at the farm level. Meeting these demands will be important in maintaining and improving the competitiveness of our coconut products in the global market.

In order to address the challenges of meeting the growing demands for coconut products in the world market, the coconut industry must respond to bridging the historical supply-demand gap and comply with stricter international quality standards. This needs to be done while adhering to sustainable and ethical practices that provide farmers a safe and healthy workplace, assuring them decent and fair wages.

It is unfortunate that the coconut farming sector remains one of the poorest in the country, despite its contribution of about 25% of agricultural export and earning an average of PHP 91.4 billion (B) in exports every year during 2014-2018.

The coconut farmers are generally disconnected from the market sector and have always been marginalized in the coconut value chain, as mere suppliers of raw materials. However, despite the added values to the copra and nuts supplied, the coconut farmers' income remains low and majority are poor and food insecure. This situation needs to change as the sustainable growth of the coconut industry depends on the farmers' willingness to change their traditional practices and adopt methods to sustain coconut planting and replanting (Figure 3.1).

Improving the productivity, efficiency, profitability, and sustainability of coconut farms should be at the core of the industry development plan. However, without an inclusive program that will ensure that the farmers and their families are directly benefitted, shifting towards good management practices and replanting will remain a challenge. The provisions of RA 11524 in the crafting of the CFIDP will address this historical neglect of the coconut farming sector through national programs meant to uplift the welfare and end poverty among the Filipino coconut farmers.

The CFIDP with its focus on providing the coconut farmers social protection, organizing farmers, strengthening their organizations/cooperatives, and supporting coconut hybridization and farm improvements, including shared facilities and infrastructures will jumpstart the much needed and long delayed transformation in the production sector. Consequently, it will boost the sustained growth and competitiveness of the coconut industry in the global market

Chapter 3. Challenges and Opportunities in the Coconut Production Sector

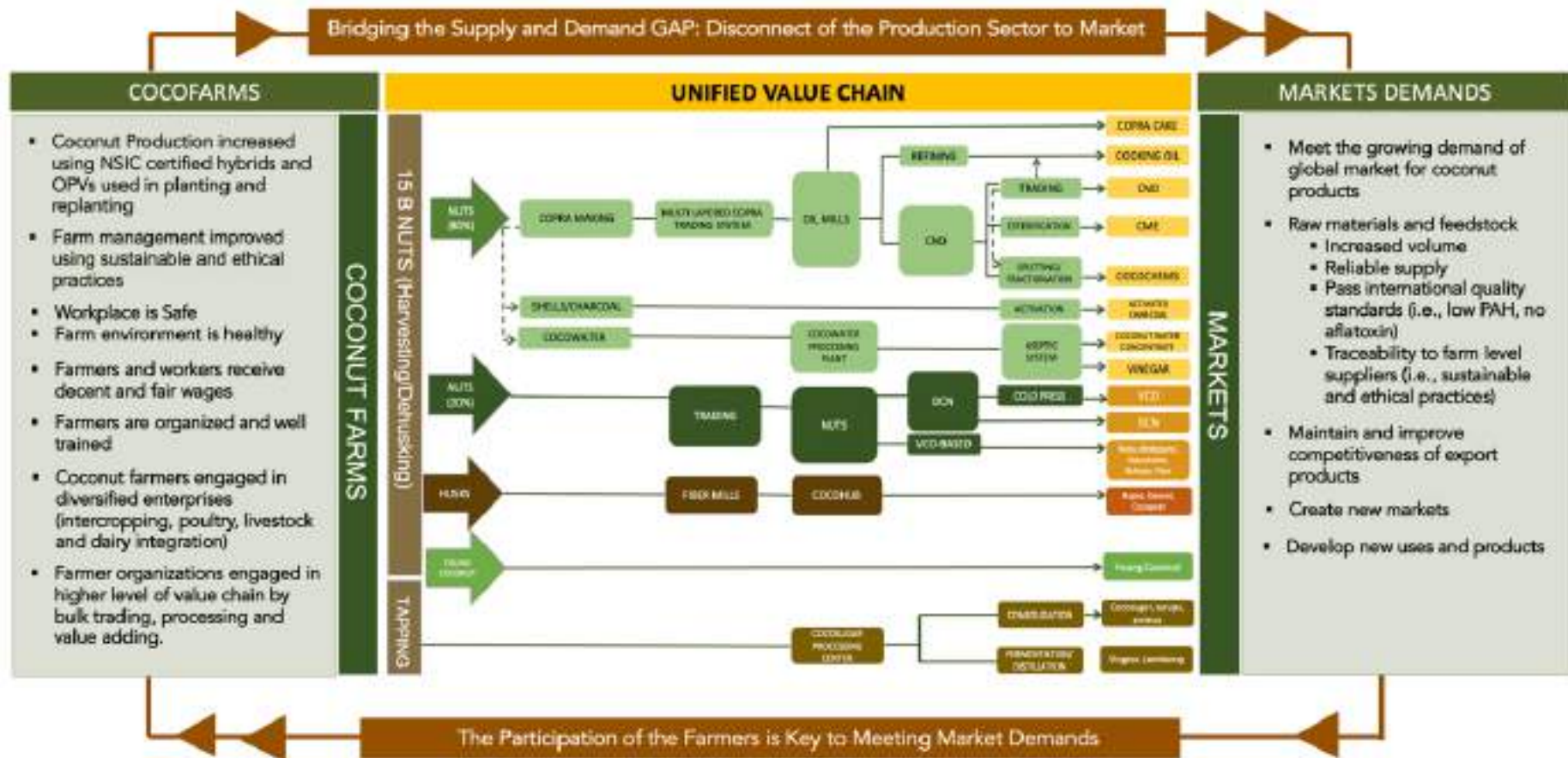


Figure 3.1. Unified coconut value chain showing the disconnect between the production - processing and marketing sector

3.1 CHALLENGES IN THE PRODUCTION SECTOR

The challenges in the coconut production sector have not changed over the past decades. These are a combination of socio-economic, biophysical, environmental, technology, and policy.

3.1.1 Low Coconut Farm Productivity

Sustainable growth and global competitiveness of the industry value chains are dependent on the productivity of coconut farms which provide the coconut-based industries' feedstocks and raw materials. The prospect for coconut products in the world market is on the upswing, the processing sector has the capacity to increase their production and absorb significant increases in coconut production, but the productivity of the country's palms is on the downward trend.

While some 15 B nuts are harvested annually from 345 M bearing palms planted in 3.65 M ha, coconut productivity in 2019 was only 44 nuts per tree per year (PSA, 2020). This is only 50% of the potential yield of the native tall variety and 30% of the potential yield of local hybrids.

The low productivity, particularly in highly suitable and suitable areas for coconut production should be addressed according to their particular needs or constraints to increase yield (Figure 3.2). The fertilization program of PCA reported an average of 35% increase in the yield of fertilized palms, ranging from 9% in the Bicol Region to a high of 49% in BARRM. Continuing and regular fertilization is needed to sustain high productivity, and wherever possible, supplemental irrigation/watering during prolonged or intense dry season. Farmers have to make decisions on how to manage pests and diseases applying the integrated pest management (IPM) approaches based on preventive protocols, monitor pest and disease incidences, provide natural control and implement necessary measures to address the impact of these pest and disease risks. Precision water, nutrient and pest management of coconut and intercrops using modern technologies and innovations is expected to increase yield, improve production efficiency and enhance income of the farmers.

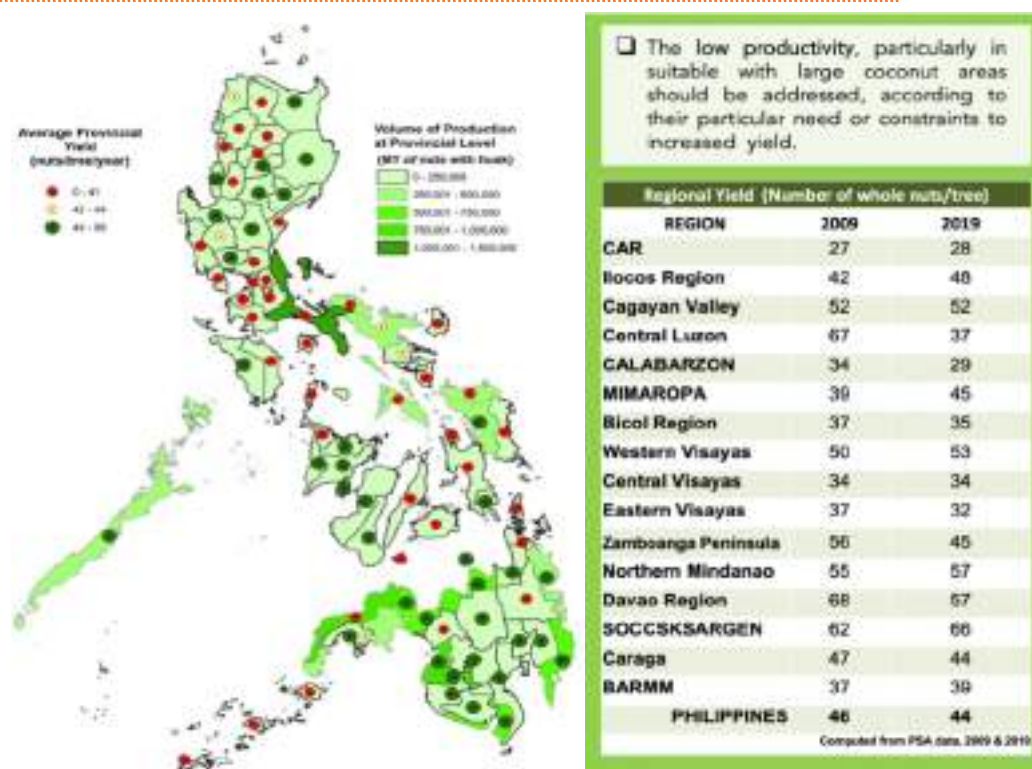


Figure 3.2. Map of average provincial yield superimposed with volume of nut production and table of regional palm productivity/year in 2009 and 2019

Source: PSA

The causes of low productivity in the Philippines are many, such as the following: senility of palms; poor management practices, recurrent extreme climate events such as typhoons and drought, pests and diseases and continuing indiscriminate cutting and conversion of coconut farms to other uses. The coconut population in the country has an average of 10% senility. Around 1.78 M ha, or 50% of coconut areas, are nutrient deficient. The typical coconut farm is poorly managed, i.e., rainfed, unfertilized, and with no regular pest and disease monitoring and control. Within the next 10 years, it is estimated that the country needs about 112 M improved planting materials for the planting and replanting program.

3.1.2 Increasingly Stricter Quality and Traceability Standards of the Global Market

The traditional practices of the farmers must change from chronic neglect of coconut farms towards Good Agricultural Practices (GAP) or organic certification which is increasingly demanded by the market. Sustainable and ethical practices that provide safe and healthy environment and decent and fair wages for workers are the concern of the global market. The traditional copra processing method practiced by farmers, using smoke kilns, produce undercooked copra at 15–20% moisture content, that is contaminated with aflatoxin with high PAH. Multi-layered marketing that could take one to three months from small upland farmers to millers, results in further physical and quality losses. The Philippines stands to lose the export markets if the country cannot comply with the stricter standards on allowable limits of aflatoxin and PAH in coconut oil and copra cake. Radical changes in farm management, harvesting, copra processing and trading to allow farmers' organizations and

Chapter 3 : Challenges and Opportunities in the Coconut Production Sector

cooperatives to produce and market sufficient volume of high-quality white copra, among other coconut products will benefit the farmers and the large processors but will be a major challenge to implement radical changes.

3.1.3 Low Income from Coconut Farming

Farmers cannot depend on coconut alone for decent living, especially with the prevalent 2.0-ha or below landholding. The price dependence of local nut and copra on the fluctuating price of the world oil market results in low income of farmers from coconut. Among the players in the numerous coconut value chains, the farmer is the most marginalized and vulnerable, bearing the burden of low and fluctuating prices of copra and even whole nuts. All other players—the traders, consolidators, processors, brokers, exporters—operate on a margin. Hence, whether prices are high or low, they all earn profit, unlike the coconut farmers who are paid based on the prevailing coconut oil price with discounts for poor quality but generally without premium for good quality.

Many studies report on the income earned by farmers from coconut farming, and all converge on the same conclusion—farmers generally earn low income from coconut farming and coconut farming alone cannot provide a decent income for a typical coconut farmer, no matter what product from coconut he sells. Of the total 1.44 M farmers, only 5.6% earn more than PHP 102,000. A great majority (83%) earn less than PHP 50,001, of which 46% earn PHP 10,000 (0.528 M) or less, and the other 37% earn between PHP 10,001–50,001 (0.425 M) (NCFRS, 2018). The food threshold for a Filipino family of five in 2018 need at least PHP 7,337, on the average, to meet the family basic food needs for a month, or PHP 88,044/year. In the 2019 NCFRS early registration, a random sample of 72 farmers from eight regions validated the low income of coconut farmers with an average of PHP 26,145/ha. Income from coconut ranged from PHP 10,675/ha to PHP 70,800/ha.

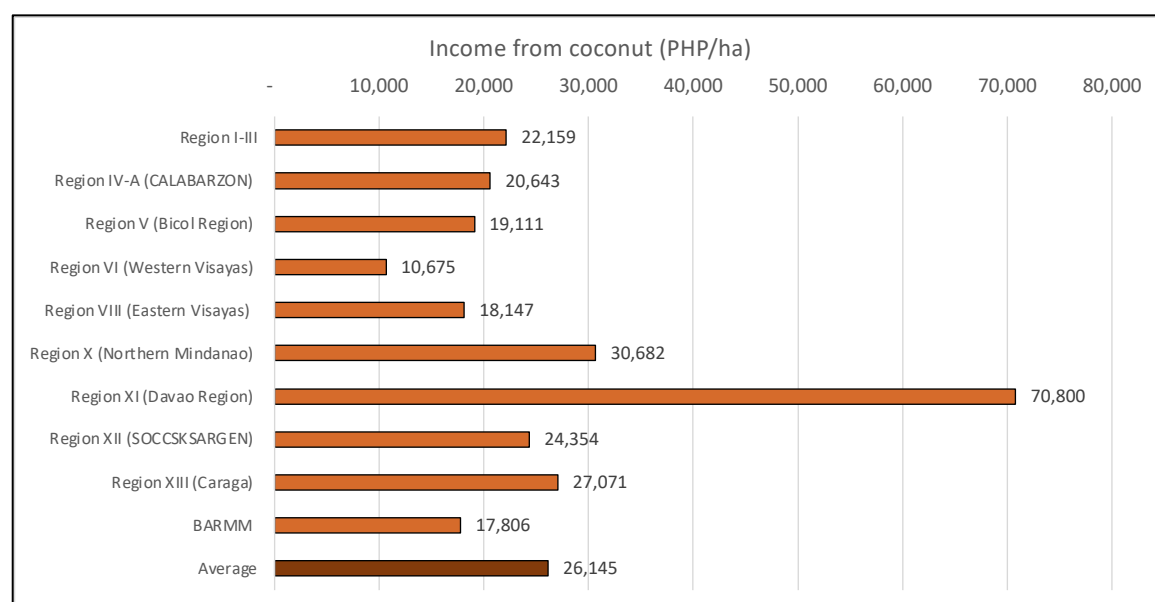


Figure 3.3. Income level of coconut registrants to the 2019 NCFRS

In the conduct of the value chain analysis interviews by COCOFIRM (2021), the average earnings/ha of farmers also support the data in the NCFRS survey. Farmers who engage in value-adding by

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processing sap to coco syrup/sugar and cooperative marketing system (i.e., Alabat agro-hub) earn about four times as much as a copra processor and three times as much as sellers of young buko or whole nuts. Generally, all the farmer-respondents have poor management of coconut farms - rainfed, no fertilization (except for salt when PCA provides), no pest and disease management, occasional weeding just to facilitate harvesting. While there are farms with higher nut productivity per tree (more nuts/harvest), the income from copra and matured nuts was more price dependent at the time of sale. Matured nut sellers to VCO processors additionally get a price premium, particularly when the farm is certified organic.

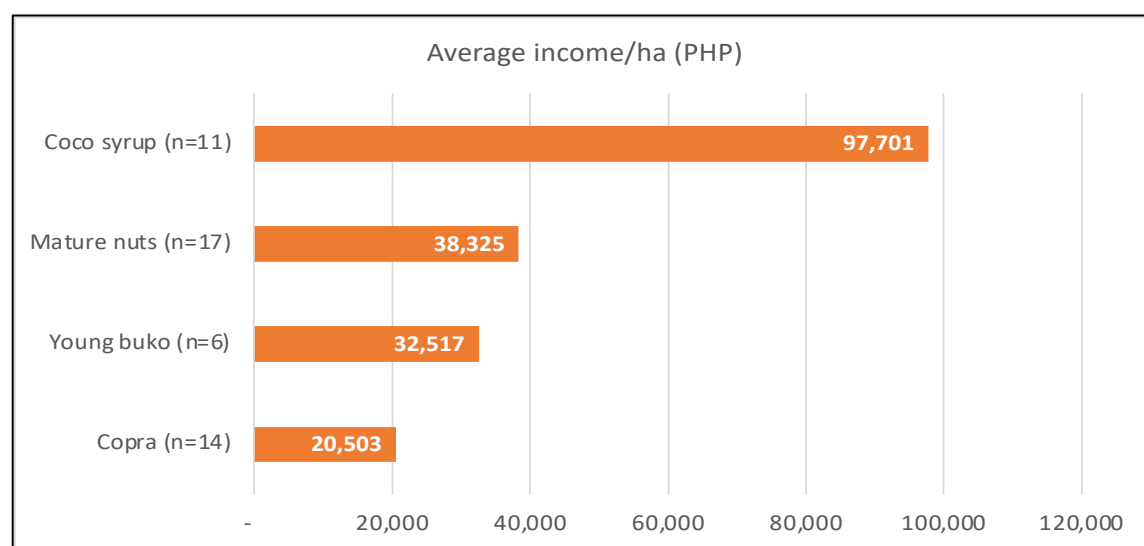


Figure 3.4. Net cash income of farmers selling specific products from coconut

To meet both basic food and nonfood needs (poverty threshold), the family needs PHP 10,481/month or PHP 125,775 per year (PSA, 2019). It is a sad reality that more than 90% of our coconut farmers are food insecure and only less than 6% have incomes above the poverty threshold.

3.1.4 Lack of Social Protection and Welfare Benefits of Coconut Farmers

Of the 2.5 M coconut farmers registered in the National Coconut Farmers Registry System (NCFRS, 2018) of PCA, majority are landless (51% tenants and workers), 49% are owners. Coconut farms are small, 75% are 2.0 ha and below and fragmented, and farms in uplands have accessibility constraints.

The coconut production sector is largely informal. Coconut farmers, particularly the farm workers, have no social protection and welfare benefits from the industry. Traditional harvesting practices pose health and safety risks, associated with the skilled and manual labor, in nut harvesting (or tapping for sap), dehusking, nut splitting and recurrent and prolonged exposure to smoke in copra processing.

3.1.5 Unorganized Coconut Farmers

Only 29% (756,490) of NCFRS (2018) - registered farmers are members of about 11,540 coconut farmers' organizations (CFOs) and coconut farmers' cooperatives (CFCs), but only 87% are active CFOs/CFCs with 657,512 members.

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Small hold coconut farmers lack capital and infrastructure and have no sustained access to formal credit sources. Farmers' organizations should undertake collective action and policy advocacy activities to voice out their socio-economic and other concerns. The problem of a lack of sufficient entrepreneurial and leadership skills of CFOs and CFCs that will enable them to successfully engage in business enterprises, needs to be addressed.

3.1.6 Vulnerability of the Coconut Production Sector to Recurring Climate-Related Hazards

An analysis of coconut production trends revealed that the series of strong and super typhoons, pest incursion, severe drought caused by intense and prolonged El Niño, have devastated the coconut regions, reduced the number of bearing palms, and decreased tree productivity for several years. Major production grids—Davao and Eastern Visayas— have been severely affected and have not fully recovered. The impact of climate change, which has caused great devastation to many regions including major production grids, is expected to remain a concern, given the country's geographic location. The Philippines is ranked 4th in the long-term climate risk index in 2021, having the highest number of extreme weather events (2009–2019) among those in the top ten countries.

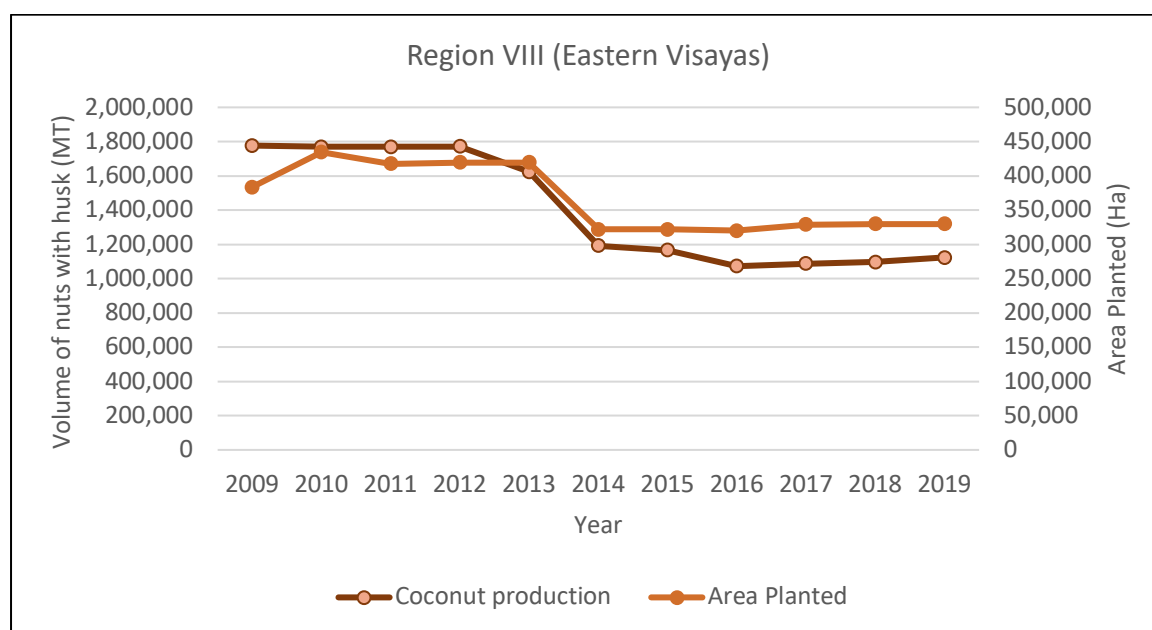


Figure 3.5. Coconut production (MT) and area (ha) in Eastern Visayas, 2009-2019

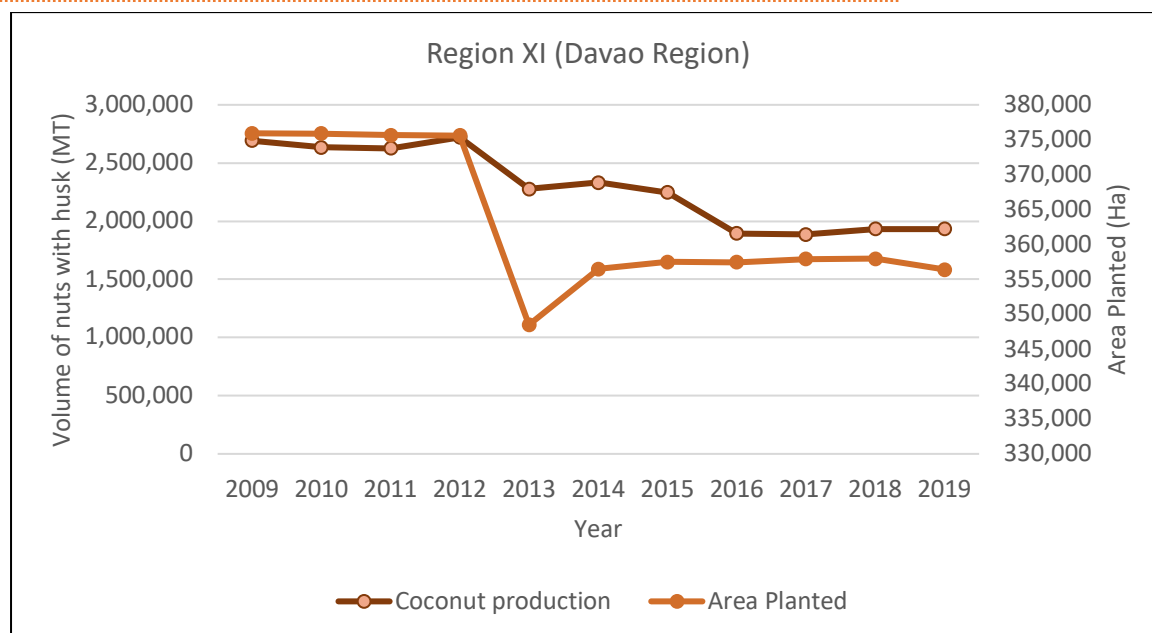


Figure 3.6. Coconut production (MT) and area (ha) in Davao Region, 2009-2019

3.1.7 Lack of Sufficient High Quality Planting Materials

A third of the coconut population is non-bearing. By age of palms, 17% are over 50 years old and 32% are below 10 years. Hence, only half of the total palm population in the country are more or less in peak productive stage (11-50 years) (NCFRS, 2018). Massive and continuing planting and replanting are needed to maintain the country's status as a leading coconut producer and exporter.

PCA's coconut planting and replanting program from 2010/2011 to 2019 reported 102 M palms planted in 0.962 M ha (benefiting more than 608,000 farmers), but coconut areas expanded only to 3.65 M ha, or by about 150,000 ha from 2009-2019. Planting and replanting could barely cover the palms lost for several reasons, including palms cut under RA 8048, damaged by typhoons, pests and diseases, illegal cutting and change in land-use.

PCA's in-house capability in seven (7) Research/Seed Production Centers (R/SPC) to produce planting materials is highly limited. With only 21,000 mother palms, these seed farms are projected to produce about only 7.7 M hybrid seednuts by 2025, which fall short of the projected requirements for hybrids and OPVs by 2.27 M OPV and about 640,000 hybrids (Figure 3.7). The deficit will be carried over in succeeding years, ballooning further if no remedial or catch-up plans are put in place.

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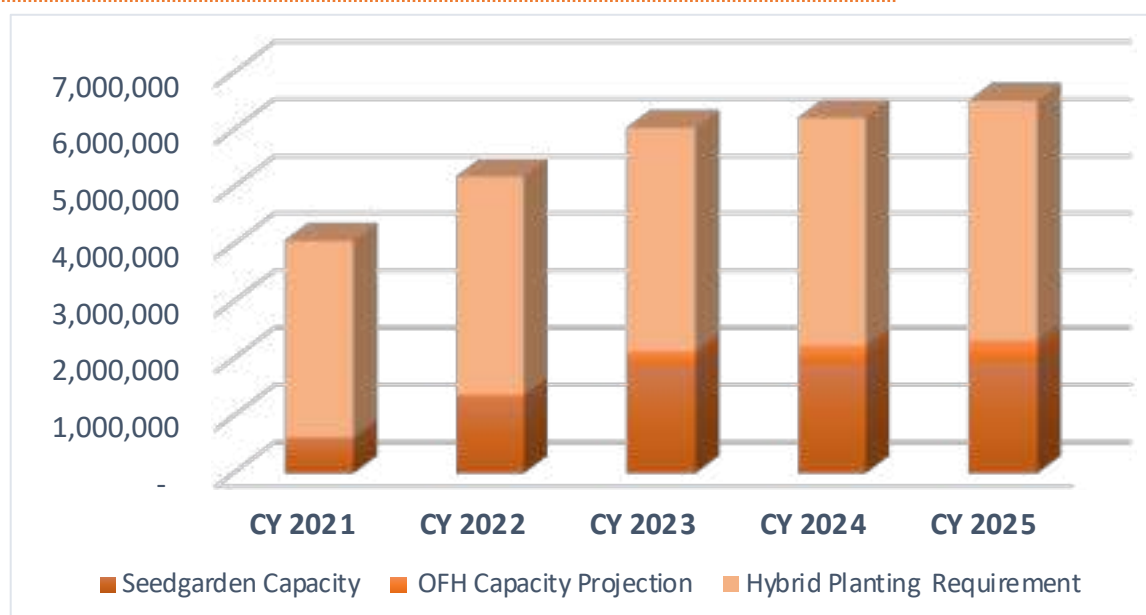


Figure 3.7. Supply gap in hybrid requirements vs in-house and on-farm hybridization programs from 2021-2025

In the next ten years, the country needs nearly 112 M planting materials to replace unproductive and senile palms and expand hybrid population by 21.3 M palms in suitable areas as required by the PCA regional offices. Additional sources of quality seed nuts of selected OPVs and hybrids need to be established urgently to continue the planting and replanting program.

3.2 OPPORTUNITIES TO OVERCOME CHALLENGES

3.2.1 Providing Social Protection and Social Benefits to Farmers

There is no formal training for the farm workers who are constantly exposed to safety and health hazards, given the traditional harvesting and smoke-kiln based copra processing. As stated in RA 11524, it is the policy of the State to consolidate the benefits due to coconut farmers, especially the poor and marginalized, to attain increased incomes for coconut farmers, alleviate poverty and achieve social equity. Under the law the farmers and their families will finally benefit with the provision of social protection including health and medical benefits, crop and livestock insurance, scholarships for their children, access to credit, and skills and certificate trainings, among other interventions to increase their farm productivity, welfare and income.

3.2.2 Organizing Farmers and Strengthening Farmers' Organizations

Successful coconut farmers' organizations highlighted during the 2021 coconut week webinars are multi-purpose cooperatives who had persisted and have harnessed the support of PCA and other groups institutions and the private sector. That there is strength in number, mutual respect and cooperation towards a common goal of providing diversified income to members has been proven by these exemplary cooperatives, among which are *Yakap at Halik* in Quezon for copra trading, marketing, credit and livelihood projects, the Alabat Multi-purpose Coconut Cooperative, an

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agribusiness hub in Quezon supported by the LGU with PCA , DOST, DTI for coco-sugar, livestock, cacao and other intercropping, the Calauan Cooperative in Laguna for Livestock integration for cattle and swine, and the Capiz Coconut Farmers Multipurpose Cooperative (CASCOFAMCO) for direct copra marketing and for making white copra and processed into cooking oil. RA 11524 allocates funding for the CDA to support coconut farmers to get organized, to strengthen and empower coconut organizations and cooperatives. NCFRS-registered farmers should take advantage of this program and get involved actively.

3.2.3 Professionalizing the Coconut Workforce

The timely supply of the volume required for quality raw materials rests on the availability of tappers for sap harvest, nut harvesters, dehuskers, splitters, and operators of the various machines and equipment in coconut processing plants. Additionally, a farm service crew who can manage, monitor crop health, and provide an early warning for pest and disease as well as render farm services such as farm harvesting and dehusking are critical support system in a modernized coconut industry.

Professionalizing the coconut workforce through certificate trainings and continuing education will mainstream them into the formal workforce as wage earners and would qualify them for Social Security Systems (SSS) membership. The professionalization of the coconut workforce and incentivizing the farmer owners to participate in improving productivity, efficiency, and sustainability of coconut farms is at the core of this coconut industry development plan. Further, providing social protection and benefits to farmers as well decent livelihoods for increased income from coconut farms will motivate them to take better care of their coconut farms that would be beneficial for the whole industry.

3.2.4 Bridging the Demand-Supply Gap through Accelerated Hybridization and Massive Planting and Replanting Program

Assurance of a steady supply of good quality coconuts, the lifeblood of the various coconut-based value chains industry clusters, is key to sustainable growth of the industry. Massive, continuing, and strategic planting and replanting using high quality planting materials of outstanding OPVs and hybrids, supported by strong market promotion, research and government policies, will ensure that that the country will continue to be a leading coconut producer and competitive in the global market.

Accelerating the hybridization program is a key strategy to increase productivity per palm and unit area. Support to hybridization program will enable PCA to produce and supply the regional requirements of 21.3 M hybrid planting materials, needing more than 100,000 mother palms in the next five years. The country has the biggest germplasm collection globally which is our edge over other countries since we have the parent materials for hybridization coupled with the available assisted pollination technology that can be utilized to produce more hybrids. Massive planting of early bearing and high yielding varieties with the appropriate inputs is expected to yield 80 to 150 nuts per tree per year to address the persistent challenge of supply-demand gap. The incentivized Participatory Planting and Replanting Program needs to be upgraded by using quality hybrids and OPVs planting materials with known desired traits for specific product line. Updating of the coconut suitability map to include exposure to climate-related hazards will identify strategic locations for

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hybridization of seed farms and planting and replanting of hybrids and OPVs with outstanding qualities for long-term sustainability of investments. To optimize the maximum benefits from Hybridization, research should be sufficiently and continuously supported through DOST-PCAARRD funding. With sustained support in science-based technologies and strategies toward good management practices and expansion of PCA's participatory on-farm hybridization using assisted pollination technique, a farmer- inclusive program can be replicated and upscaled to further increase utilization of good varieties and hybrids to expand the country's nut production toward a target of 20 B nuts by 2030 and 30 B nuts by 2040 despite the challenges. The convergence of government agencies led by PCA, and private sector support, is a key strategy to achieving this goal.

3.2.5 Meeting Market Demands for Quality Standards and Traceability

Meeting the growing market demands for coconut products hinges to a large extent on transforming the traditional practices of coconut farmers by improving copra processing to produce white copra with low PAH and aflatoxin levels. The copra/RBD-oleochemicals value chain cluster utilizes about 80% of the total nut production of the country and earns the most in export value. While the technology for oil mill processing in the country is highly efficient and world class, the low quality of copra supplied to oil mills increases the processing costs, with significant reduction in milling efficiency and oil recovery.

The traceability and sustainable practices increasingly required by the export market need to be addressed by incentivizing farmers who adopt GAP or organic production system, with support towards certification, when they are ready. Recycling through utilization of coconut farm biomass particularly of coconut husk/peat as soil amendment needs to be adopted like in other countries where farmers are incentivized to use husk and peat as soil amendment/enhancer.

3.2.6 Incentivizing Farmers to Sustain and Improve Coconut Production by Increasing Farm Productivity and Farmers' Income (ANI at KITA)

It has been and will remain a challenge to make coconut farmers continue to plant/replant and shift towards good management practices, without an inclusive program that will directly benefit them and their families. Farmers need to be incentivized and motivated to continue planting and sustainably manage their coconut farms following the recommended good agricultural practices or organic production system.

The following are among the priority strategies outlined in the Updated PDP 2017- 2022 to expand access of farmers to economic opportunities and enhance resilience of the sector: (1) ensure sustainable and resilient production and food availability by (i) improving agricultural productivity within ecological limit (e.g., intercropping and integrated farming systems); (ii) intensifying the development and adoption of climate and disaster resilient production technologies; and (iii) increasing and protecting access of small farmers to land and water resources; (2) expand access of small farmers to markets by (i) increasing access to digitally supported value chains; (ii) increasing agribased enterprises (e.g., strengthening the linkage of the agriculture and industry sector, and diversifying into commodities with high value adding and market potential); and (iii) increasing access to innovative, affordable and adequate financing; and (3) improve access of consumers to nutritious,

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affordable and safe food through (i) enforcing food safety standards and regulations; and (ii) increasing the development and adoption of processing and packaging technologies, among others.

There is a huge potential for increasing coconut productivity and farmers' income by integration with other enterprises such as intercropping, livestock production and coconut processing and value adding. Systematically designed integrated coconut-based farming systems should be the norm in coconut farms. Integration of other enterprises with coconuts has been proven to significantly increase total farm productivity and farmers' income (Figure 3.8). Intensified land use and increased agrobiodiversity with intercropping also provide environmental benefits. An increase and multiple sources of income, food security and asset building among farmers will also improve their resilience to extreme events.

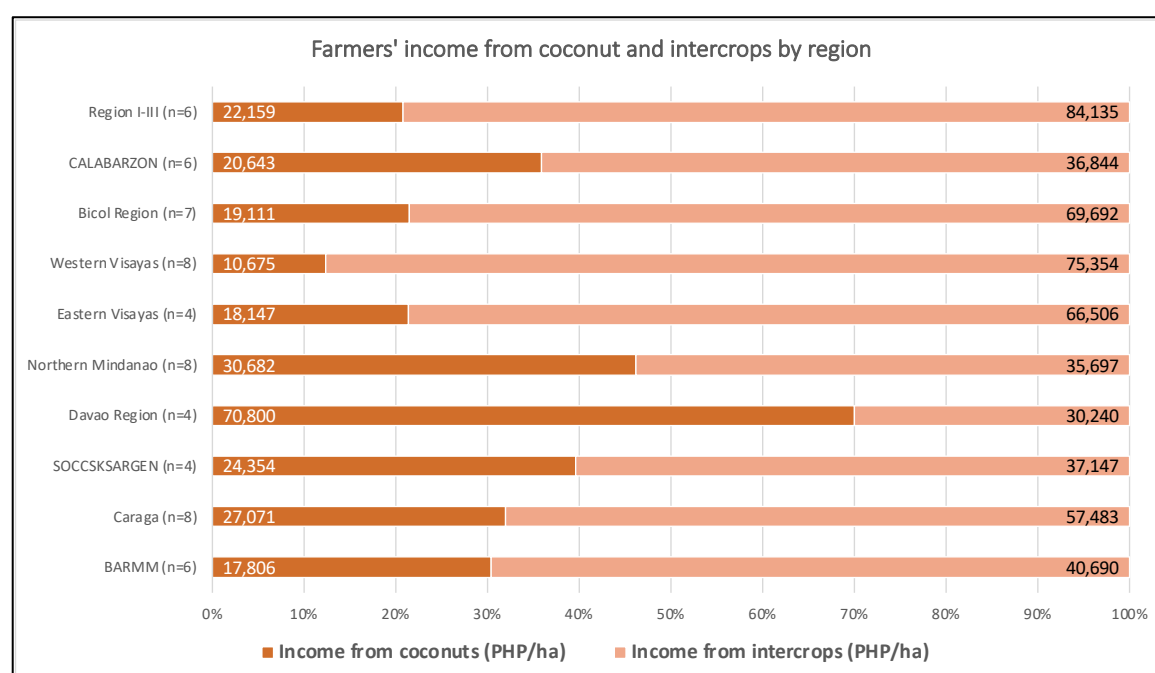


Figure 3.8. Income from coconut and intercropping in selected regions

Source: PCA NCFRS, 2021

Incentivizing coconut farmers through organizations/cooperatives to integrate complementary enterprises with improved coconut production practices such as intercropping, dairy, poultry and livestock integration and processing/value adding has been proven to increase total farm productivity and income as well as expand opportunities for them to participate in the higher level of coconut, intercropping, and livestock-based value chains.

Successful business models can be replicated/expanded where intercropping and livestock are already found suitable and profitable. There are existing best practices for agro-industrial hubs for major intercropping such as coffee, cacao, banana, and high-value vegetables, that can be replicated and upscaled. The livestock industry has viable commercial models of vertical integration and specialized production, which can be adapted to community-based models. There are partnership models for CFOs and private investors to create a backward integration system for coconut and intercropping processing hubs. A radical transformation of the CNO/RBD-oleochemical value chain through the

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establishment of farmers-owned buying stations and White Copra Central (WCC) and the establishment of Community-based Integrated Coconut Processing hubs and corridors (VCO-based and Coconut sap-based products) would increase the coconut farmers' participation in the value chain and contribute greatly to increasing their income.

Already successful and promising projects are low-hanging fruits that may be prioritized for support toward clustering under centralized management and linkage to a reliable market. Support should be provided to enable farmers to do cooperative management from production to processing and marketing, ensuring adherence to market standards on reliability and quality. This will mainstream farmers' participation in agro-industrial corridors of development.

The table below presents the accomplishments of PCA in developing integrated enterprises of coconut farmers' organizations called KANIB. Best practices in successful projects and lessons learned from those that have not maximized the benefits will guide the criteria for selecting beneficiaries and implementation protocols of similar projects.

Table 3.1. Gross income (PHP) earned by farmers in intercropping of coconut farmers' organizations supported by PCA's KANIB Enterprise Development Program (KEDP), 2013-2018

INTERCROP(S)	NO. OF CBO	NO. OF FARMER-BENEFICIARIES	TOTAL GROSS INCOME (PHP)	AVERAGE GROSS INCOME (PHP)/FARMER
Banana	59	1,052	22,136,564	21,042
Cacao	59	1,504	64,677,847	43,004
Coffee	52	1,096	33,643,097	30,696
Calamansi	2	176	3,485,525	19,804
Lanzones	2	85	832,120	9,790
Pineapple	1	2	800	400
Rambutan +Lanzones	4	220	3,345,800	15,208
Banana + Jackfruit + Ginger	1	57	421,800	7,400
Rambutan + Lanzones + Jackfruit	2	84	2,426,720	28,890
Rambutan + Mangosteen + Banana + Lanzones	1	73	1,398,920	19,163
Rambutan and/or Mangosteen, Durian, Banana, Jackfruit, Lanzones	2	143	1,589,520	11,116
Banana and/or Calamansi, Jackfruit, Coffee, Corn	4	121	3,247,960	26,843
TOTAL	189	4,613	137,206,672	19,446

Source: PCA

Table 3.2. Gross income (PHP) earned by farmers in poultry and livestock integration of coconut farmers' organizations supported by PCA's KANIB Enterprise Development Program (KEDP), 2013-2018

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POULTRY/LIVESTOCK	NO. OF CBO	NO. OF FARMER-BENEFICIARIES	TOTAL GROSS INCOME (PHP)	AVERAGE GROSS INCOME (PHP)/FARMER
Chicken	6	113	522,434	4,623
Swine	5	28	1,457,800.0	52,064.3
Cattle	125	1,332	44,555,623	33,450
Carabao	53	386	12,225,332	31,672
Goat	33	446	3,127,399	7,012
Sheep	1	3	28,000	9,333
Carabao + goat or cattle	3	62	1,484,950	23,951
Cattle+carabao or goat	27	470	19,622,204	41,749
Swine+carabao+cattle	1	7	319,200	45,600
Carabao+cattle+goat	4	88	1,575,000	17,898
TOTAL	258	2,935	84,917,943	26,735

Source: PCA

Table 3.3. Gross income (PHP) earned by farmers in coconut processing and value adding enterprises of coconut farmers' organizations supported by PCA's KAANIB Enterprise Development Program (KEDP), 2013-2018

COCONUT TRADING/ PROCESSING /VALUE ADDING	NO. OF CBO	NO. OF FARMER-BENEFICIARIES	TOTAL GROSS INCOME (PHP)	AVERAGE GROSS INCOME (PHP)/FARMER
Copra	8	172	1,322,044	7,686
Dessicated coconut (DCN)	1	50	3,022,908	60,458
VCO	20	558	7,949,000	14,246
VCO + Coco Vinegar + Charcoal	1	27	1,035,000	38,333
Coco sugar	20	637	23,023,906	36,144
Coco coir/fiber	81	3,164	13,417,760	4,241
Coco peat	6	400	756,000	1,890
Coco twine	6	393	130,980	333
Geonet	4	315	1,574,400	4,998
Coco bed	2	3	252,000	84,000
Charcoal	7	248	310,018	1,250
Coco Jam + Coco Toyo	1	30	496,800	16,560
Charcoal + Coco toyo + Coco jam	1	29	1,125,000	38,793
Shellcraft, doormats, flower vase, keychains, basket, etc.	7	342	775,200	2,267
Coconut water vinegar, distilled spirit, syrup, coconut food processing	9	164	2,331,238	14,215
Coco Toyo + Coco Vinegar + Coco Jam + Coir Processing	1	30	1,809,750	60,325
Charcoal Production + Coco Vinegar + Coco Jam + Coir Processing	1	25	469,500	18,780
TOTAL	176	6,587	59,801,504	23,795

Source: PCA

3.2.7 Building Climate Resilience in the Coconut Production Sector

Buffering the farmers and the industry from the severe impacts of climate-related risks and hazards is important by integrating Disaster Risk Reduction and Management (DRRM) in the programming, including pest and disease surveillance, monitoring, early warning, and rapid response system in PCA's operations and research programs, including the CFIDP.

Recurring extreme weather risks and changing pest and disease dynamics should be considered in the recalibration of targets and prioritization for rehabilitation, planting, and replanting of coconuts particularly of hybrids, and the choice of intercrops and other enterprises. A comprehensive crop and

Chapter 3 : Challenges and Opportunities in the Coconut Production Sector

livestock insurance should be included in the design of programs and interventions. Adopting climate-resilient coconut-based farming systems should be integrated in planning for agribusiness corridors both for coconuts and intercrops to provide stability and distribution of farmers' income among several livelihood sources. Continuing innovative and strong research and science-based recommendations and strategies should back-up the national program.

Massive and continuing planting and replanting program will be an important strategy to increase the coconut industry's resilience. Young highly productive plantations in strategic areas will buffer the country's production against recurrent typhoon damages and will contribute to a more sustainable growth of the industry which is dependent on the reliability of volume and quality of coconuts.

3.2.8 Convergence of Institutional Support

The approval of RA 11524 creating the Coconut Farmers and Industry Trust Fund will jumpstart the transformation of the coconut industry, particularly of the production sector with direct interventions towards farmers social protection and increased income through farm rehabilitation and farm improvements. There are 17 implementing agencies which will support the implementation of interventions in accordance with the provisions of the law. The Cooperative Development Authority (CDA) accreditation and assessment of maturity and preparedness of CFOs and CFCs to undertake agribusiness projects is essential. Other implementing agencies include the Technical Education and Skills Development Authority (TESDA) and the Agricultural Training Institute (ATI) for certificate trainings, the Philippine Coconut Authority (PCA) and the Department of Science and Technology-Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (DOST-PCAARRD) for hybridization operations and research, respectively, and the Department of Agriculture-High Value Crops Development (DA-HVCDP), the Bureau of Animal Industry (BAI), and the National Dairy Authority (NDA) for farm improvements-intercropping native animals and dairy integration, respectively. Support services to farmers and organizations include provision of crop and animal insurance by the Philippine Crop Insurance Corporation (PCIC), credit support through the Land Bank of the Philippines (LBP) and the Development Bank of the Philippines (DBP) for operational capital and other needs, the Department of Trade and Industry (DTI) for market promotion, research, and marketing assistance, the Philippine Center for Postharvest Development and Mechanization (PHilMech) for shared facilities and the Department of Public Works and Highways (DPWH) for the infrastructure support including road networks that will link farms to processing centers and to market, among others. Existing programs of these implementing agencies can be expanded to include more coconut farmers and provide other services and support through their respective general budget appropriations under the GAA.

Despite the backdrop of a struggling coconut industry, there are also many encouraging developments. In view of the growing need of consumers for healthier products and the global direction toward green products, the Philippine coconut industry must take advantage of this growing market potential. Infrastructure, such as road networks and ports to support logistics for distribution, has improved. Communication facilities and other support systems have been modernized. In partnership with the LGUs and the private sector, agribusiness corridors and hubs for coconut, intercrops and native animal processing and value adding enterprises of farmers' organizations can

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take advantage of the existence of Philippine Economic Zone Authority (PEZA) zones, where a number of coconut processors already exist as well as the Province-led Agriculture and Fisheries Extension System (PAFES) framework under the One DA. PAFES is a strategy for development of commodities wherein the province has a comparative advantage based on the Provincial Commodity Investment Plans with PCA as co-chair for Regions IV-A, IV-B and VIII. In the private sector-led processing sector, there are highly efficient coconut processing companies which are among the world's benchmark and are primed to increasing their processing capacities given the reliable and quality supply of raw materials and feedstock. Bridging the historical disconnect between the market-processing-production sectors through convergence of support to coconut farmers' organizations will be critical to attaining the country's vision for a secure, resilient, and globally competitive coconut industry with socially protected, empowered and prosperous farmers.



CHAPTER 4

OVERALL FRAMEWORK

CHAPTER 4 COCONUT FARMERS AND INDUSTRY DEVELOPMENT PLAN: 2022-2026

OVERALL FRAMEWORK

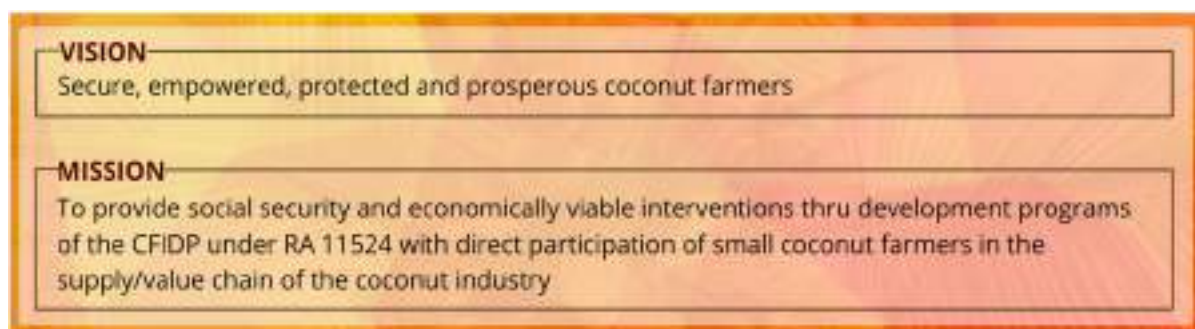


Figure 4.1a. Vision and Mission of CFIDP

OVERALL FRAMEWORK

Figure 4.1b presents the CFIDP Systems Framework for Program Coordination, Implementation, Monitoring, and Evaluation. The framework has considered the PDP, the One DA: 12-Point Agenda, RA 11524, and the COCOFIRM's thematic recommendations as guide documents for the development of the CFIDP. It has also considered the entire coconut supply/value chain (i.e., from farming to processing and marketing) and commodity diversification as areas to be provided with the necessary interventions to achieve a resilient coconut industry with empowered and prosperous coconut farmers. The framework also considers the transformation and strengthening of PCA as the prime mover in crafting and implementing the plan to ensure active participation of the small coconut farmers in program activities.

As shown in Figure 4.1b, the proposed National Coconut Farmers and Industry Development Program consists of six (6) program components and 11 sub-program components to be funded under the Coco Levy Fund as stipulated in RA 11524 as well as two (2) program components and three (3) sub-program components for GAA funding. The implementation of program strategies/activities for the aforementioned program components and sub-program components is expected to produce outputs, which in turn, shall generate program outcomes as follows: (1) coconut productivity within ecological limit improved; (2) rehabilitation and modernization of coconut industry intensified; (3) support to coconut processing and value adding activities strengthened; (4) market access of coconut farmer organizations and MSMEs expanded; and (5) access of farmers to credit, crop insurance, health, education, and social services increased.

Chapter 4. Overall Framework

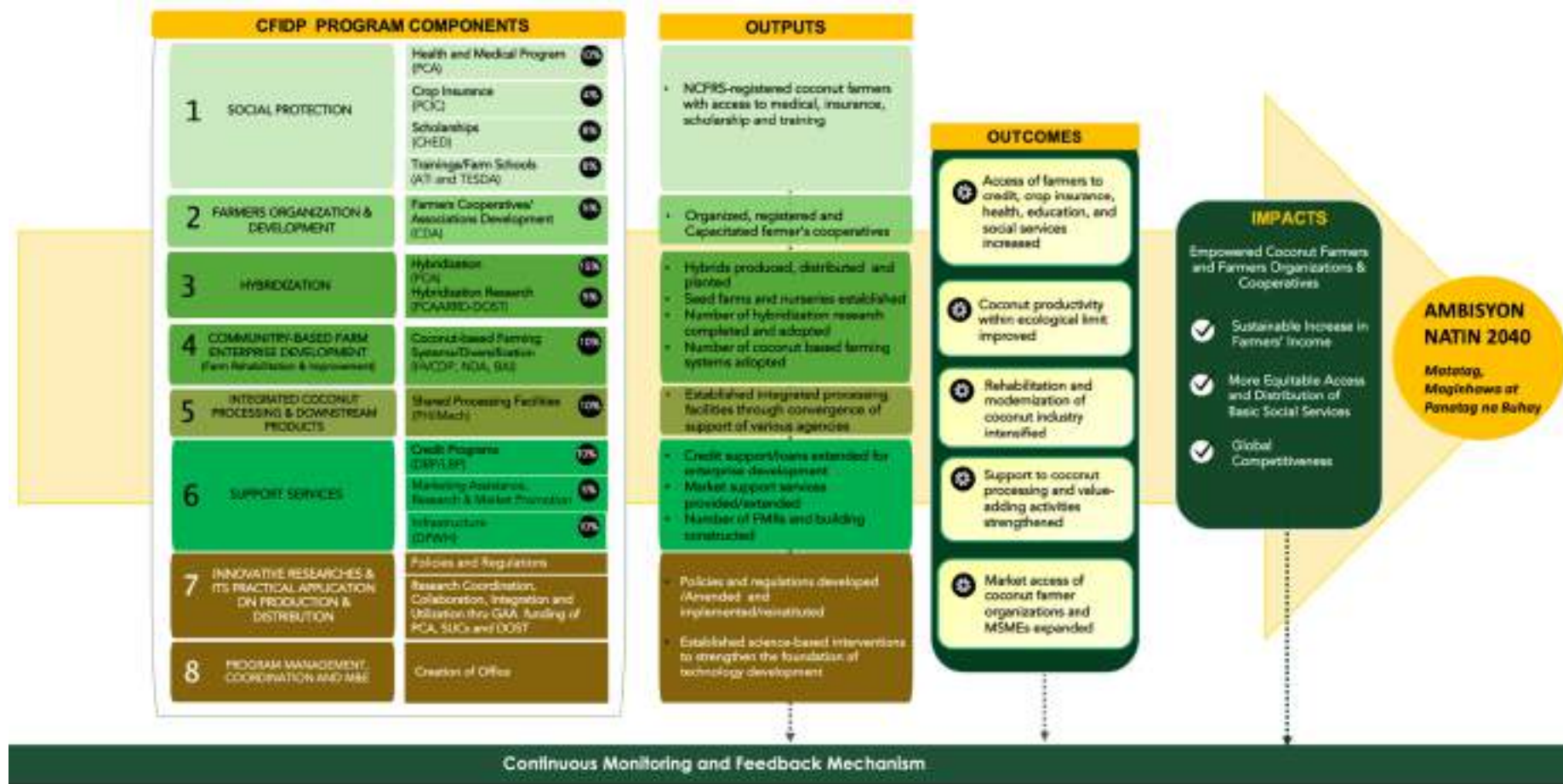


Figure 4.1b. CFIDP Systems Framework for Program Coordination, Implementation, Monitoring, and Evaluation

Chapter 4. Overall Framework

The program strategies/activities that can contribute to improving productivity are hybrid coconut development and practice of intercropping/integrated farming systems) while the program activities that will lead to modernizing/rehabilitating the coconut industry are R&D, adoption of modern technologies, and shared processing facilities. Capacity building of farmers through the conduct of trainings will strengthen the support to processing and value adding activities. Among the program strategies that would contribute to expanding market access of coconut farmers organizations and MSMEs are infrastructure development, organizing farmers into formal groups/cooperatives, consolidation/clustering of farmers and MSMEs, and marketing and promotion. The strategies under the social protection program sub-components (i.e., health and medical insurance, crop insurance, and scholarship for children of coconut farmers) and the credit program sub-component as identified in Section 4 of RA 11524 are expected to increase access of farmers to credit, crop insurance, health, and education services.

The ultimate impacts of implementing the Plan are sustainable increase in farmers' income, more equitable access and distribution of basic social services, and global competitiveness of Philippine coconut products. These are all congruent with the PDP long-term goals of *"Matatag, Maginhawa at Panatag na Buhay"*.

While the foregoing CFIDP framework mainly focused on the program components as stipulated in RA 11524, its components, outputs, and outcomes are anchored to the recommendations outlined in the Coconut Farmers and Industry Roadmap, which represent the holistic development plan for the coconut subsector and captures the CFIDP programs and all other relevant programs of PCA and concerned agencies. The integration and complementation of all programs, projects, and activities to be funded by the Coco Levy Fund, GAA, and other funding sources, as well as public-private partnerships, are crucial for the successful implementation and realization of the long-term goals of the CFIDP.

Only the first five years of CFIDP is detailed in this document which will showcase developmental projects on modern farming, processing, and marketing strategies with the participation of farmers' cooperatives. With 14 government agencies, mandated by law to implement particular components of the plan, given their respective shares in budgetary allocations, the CFIDP will have decentralized implementation but joint monitoring and evaluation. PCA as the lead implementing agency will establish a CFIDP Program Management Office (CPMO) to coordinate, manage, monitor, and evaluate program implementation (see Chapters 8 and 9) and this must be made operational so that the convergence framework, particularly in the farm rehabilitation and improvement and shared facilities interventions, can have harmonized coordination from social preparation and clustered and standardized production, processing/value adding and marketing.

The first phase of CFIDP (2022-2026) details the investment programs/projects and policies identified and prioritized to contribute to the achievement of the results at the outcome and impact level. This phase will enable the implementing agencies led by the PCA to demonstrate the effectiveness and impact of the strategies and programs, learn from the process that will allow for the formulation of

an Updated CFIDP Plan for the next phase of CFIDP (2027-2032). The remaining coco levy funds will be available to support the second phase of CFIDP with stronger private sector participation.

The first year will focus on the provision of social protection and social and organizational preparation of the beneficiaries who are NCFRS-registered coconut farmers. The formation and strengthening of the cooperatives will be utilized as the vehicle for technology transfer. The technologies that will be introduced are very broad in scope, from crop production, to processing, and to marketing of products. Procurement and establishment of facilities will take about one year and will likely start operation in the 2nd year. The implementation of projects and provision of support services (i.e., credit, market support and promotion) will be fully undertaken within the first two years. One year allowance is provided for any slippages in the process. The first five years' phase is projected to jump start the development of the coconut industry. It can be anticipated that private investment can be spurred and thus generated in the process. Thus, the first five years of CFIDP implementation can be viewed as an initiator, catalyst, prime mover, and guiding light of the coconut industry's development, with the private sector generating much of the needed propulsive force. The succeeding series of five years will be planned with the benefits of the lessons learned and experiences from the previous five years.

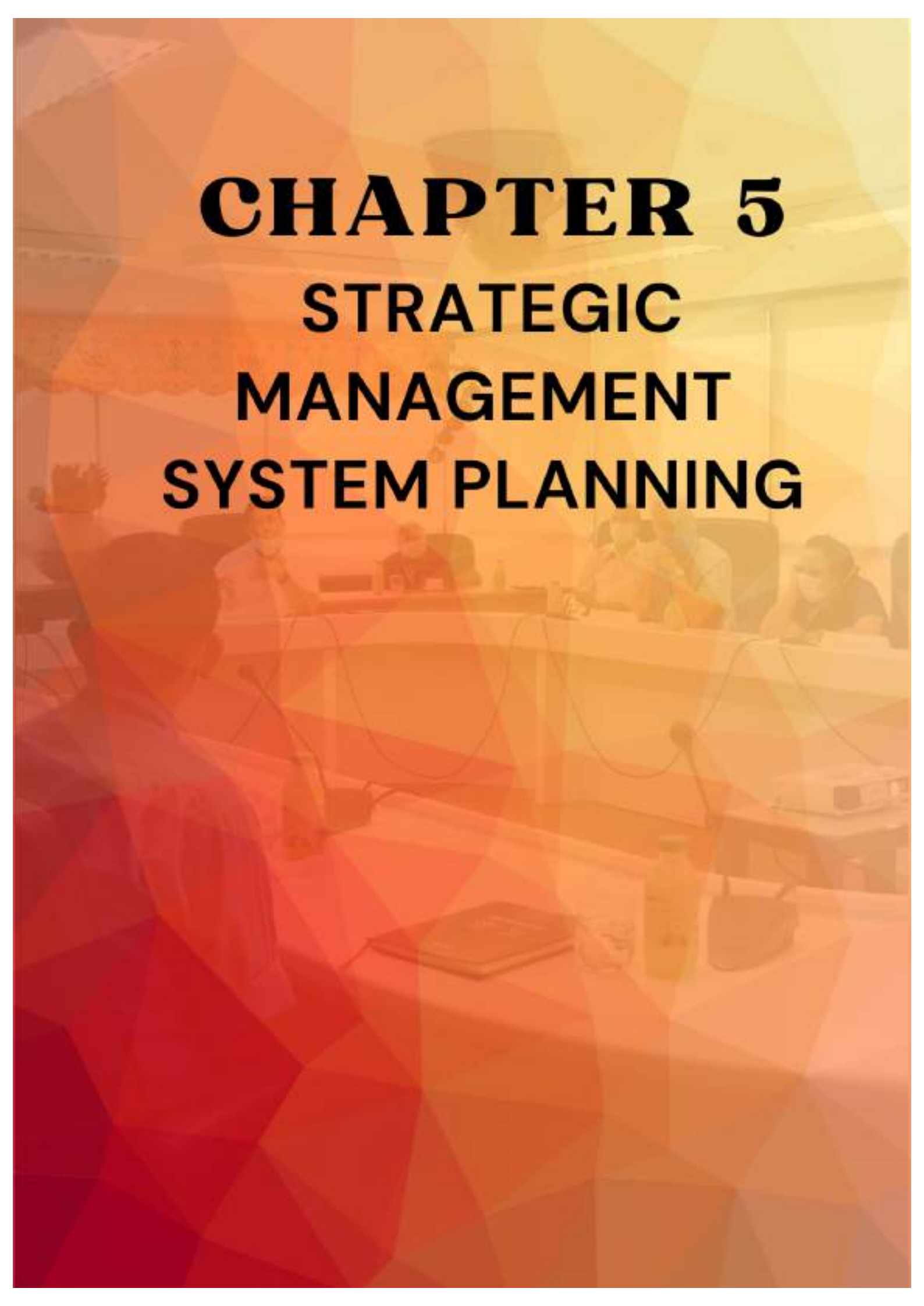
The first phase of CFIDP (2022-2026) details the investment programs/projects and policies identified and prioritized to contribute to the achievement of the results at the outcome and impact level. This phase will enable the implementing agencies led by the PCA to demonstrate the effectiveness and impact of the strategies and programs, learn from the process that will allow for the formulation of an Updated CFIDP Plan for the next phase of CFIDP (2027-2032). The remaining coco levy funds will be available to support the second phase of CFIDP with stronger private sector participation.

The CFIDP program's farm interventions, while improving farmers' welfare and increasing farm productivity and income, is critical towards attaining the strategic positioning of the Philippine coconut industry in the global market, in the short, medium, and long-term (Figure 4.1c). With the professionalization of the coconut workforce, strengthened farmers' organizations cooperatives, and the expanded participation of farmers' cooperatives in direct trading, processing and value adding enterprises, the limited connectivity between the production and markets sectors is expected to be improved. In the medium term, by the 6th year of CFIDP, it is envisioned that the hybridization and rehabilitation and farm productivity improvements programs will increase the volume and yield per palm by 60% and that the domestic utilization and processing of certified high value downstream coconut products for export will expand.

By year 12 of CFIDP (2034), the country would have regained its position as the leading world producer and maintained its role as top exporter of certified high value coconut derivatives with increased farmers' participation in the coconut value chain. By 2040, the long-term goal of the CFIDP, in line with the *Ambisyon Natin 2040 (Matatag, Maginhawa at Panatag na Buhay)* for a sustainable, resilient, and globally competitive coconut industry with socially protected, empowered and prosperous coconut farmers will hopefully be achieved.



Figure 4.1c. Strategic positioning of the Philippine Coconut Industry in the short, medium-, and long-term

The background of the slide is a photograph of a meeting room. Several people are seated around a large conference table, some with their hands raised as if participating in a discussion. The room has large windows and modern decor. Overlaid on this image is a semi-transparent, low-poly geometric pattern in shades of orange and red, which frames the text.

CHAPTER 5

STRATEGIC MANAGEMENT SYSTEM PLANNING

CHAPTER 5 STRATEGIC PLANNING IN THE DEVELOPMENT OF THE COCONUT FARMERS AND INDUSTRY DEVELOPMENT PLAN OF RA 11524

The CFIDP referred to as the “PLAN” of RA 11524 shall be prepared by PCA and to be approved by the President. The utilization of the trust fund created under the RA 11524 shall be in accordance with this PLAN. In the formulation of the PLAN, the PCA shall be guided by the following objectives:

- (1) Increased productivity and income of coconut farmers
- (2) Poverty alleviation, education, and social equity
- (3) Rehabilitation and modernization of the coconut industry.

The planning process adopted a bottom-up approach which involved consultation with various industry stakeholders, participatory planning, needs assessment, integration and harmonization of plans and targets in accordance with the stipulation of RA 11524. Moreover, a top-down approach was adopted in the preparation of the Plan since the PCA National Coordinator and the Development Academy of the Philippines (DAP) technical writers provided guidance and set the directions in the preparation of the Regional Coconut Farmers Industry Plans (RCFIDPs).

As mentioned earlier there are eight (8) programs to be implemented by 14 agencies with percentage allocation per program component from the Coconut Levy Trust Fund under the law. Each implementing agency (IA) is mandated to support the programs and activities identified in the CFIDP. To warrant an objective, practical, inclusive, and doable PLAN, the following strategic planning process was adopted:

- (1) Strategic Assessment and Strategy Development
- (2) Planning with Implementing Agencies and Regional Core Planners
- (3) Iterative Consultations and Harmonization of Plans
- (4) Integration and Program Analysis
- (5) Resource and Logistics Assessment
- (6) Operational Planning and M & E
- (7) Performance Reporting System

CFIDP Framework Conceptualization

As guided by RA 11524, the CFIDP framework was conceptualized in accordance with the objectives of the law. Also as indicated in the law, the must substance of the CFIDP shall include the criteria for targeting the beneficiaries, the indicators in determining the attainment of the objectives, indicative funding requirement for program implementation, the distribution of the annual allocation from the trust fund and the responsibilities of the respective IAs.

The COCOFIRM presents the status, challenges, prospects, and the road to go forward in achieving a resilient, sustainable, and competitive coconut industry with empowered and prosperous coconut farmers. The COCOFIRM which presents a comprehensive situational analysis and direction of the coconut industry serves as one of the references in the crafting of the CFIDP. RA 11524 as shown in the CFIDP framework in Chapter 4 shall serve as the basis for the development of the implementation plan of the identified implementing agencies in accordance with the law with defined functions and

Chapter 5. Strategic Planning in Development of CFIDP of RA 11524

the percentage allocation of investment to execute the programs as set in the law. Key strategies, projects and interventions per program objectively stated in the PLAN with focused target beneficiaries shall be the basis of the Trust Fund Committee in the allocation of funds. Moreover, these programs shall be supported by policies and support systems emanating from the government-funded regular programs of the PCA allied agencies recognized by RA 11524 to have a comprehensive program implementation. The CFIDP will be updated every 5-years based on the results of the third party evaluation. The plan will be revisited and updated at the start of the 6th year and every 5 years thereafter

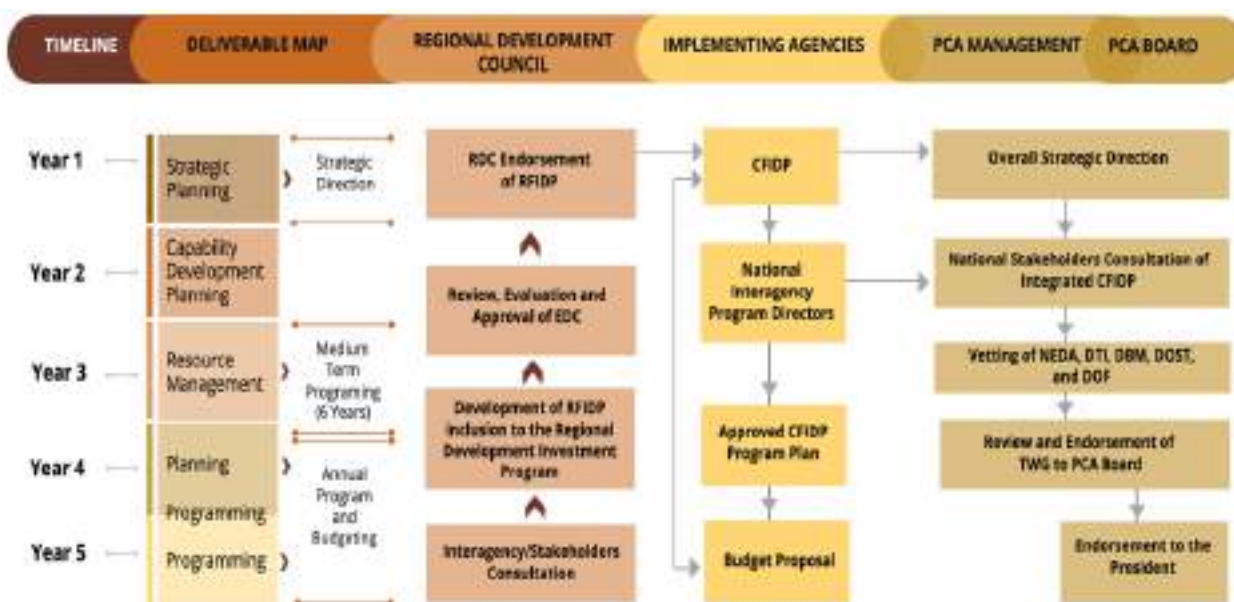


Figure 5.1a. CFIDP strategic planning and management system

A. Preparatory Phase of the CFIDP Development

Upon the directive of the PCA Board, the Development Academy of the Philippines (DAP) was commissioned to craft the PLAN with a pool of experts tasked to integrate, harmonize, and assess the technical feasibility, economic viability and social acceptability of the programs and projects. These projects were initially identified in the RCFIDP prepared by the Technical Working Group organized at the regional level composed of focal persons from the IAs and coordinated by the PCA. The PCA National Coordinator set the timelines and consultation activities and briefing to have a common understanding of the strategic planning process among the key players involved in the CFIDP crafting. In the preparation of the RCFIDP, a series of consultations were conducted for guidance and direction setting by the DAP technical writers. The technical writers set regular consultations with the regional core planners and the IAs to harmonize the plans at the regional and the national level planning.

B. Preparation of the RCFIDP

Chapter 5. Strategic Planning in Development of CFIDP of RA 11524

The PCA Regional Offices were tasked to organize the core planning team or the Regional Technical Working Group (TWG) thru the Regional Development Council (RDC). The RDC served as the clearing house of the RCFIDP at the regional level. Each PCA regional office designated a focal person in the preparation of the RCFIDP to serve as coordinator of the regional planning. The core planning team was composed of focal persons from IAs to plan out regional programs in consultation with various industry stakeholders particularly the coconut farmers. Matrices needed for regional strategic planning were developed by the National Planning Coordinator and the DAP technical writers and provided to the PCA Regional Core Planners to have uniformity and common directions in the planning process. There were three major activities undertaken at the regional level, namely: (a) industry assessment of regional industry supply-value chain, (b) regional inter-agency and stakeholders' consultation, and (c) crafting of the RCFIDP for endorsement of the RDC to the national TWG. The national TWG was composed of the following: focal persons of the IAs, PCA focal persons, DAP technical writers and the CFIDP Coordinator with the PCA Administrator as the Technical Adviser. The TWG was tasked to integrate, harmonize, and prioritize the projects under the RCFIDP based on agreed criteria and allocation under the RA 11524 provisions.

C. Harmonization and Prioritization of the RCFIDP

A workshop was conducted by the DAP technical writers with the focal persons of IAs and the regional core planners by island regions (Luzon, Visayas, Mindanao). Prior to the workshop, the DAP technical writers provided the PCA Regional focal persons with production data and the supply chain map for their respective region. Likewise, to have a systematic presentation, they were provided with matrices for guidance in target setting and in providing the indicative investment of their proposed project per program component as stipulated in RA 11524. The PCA Regional Core Planners presented their respective regional plans which were prepared based on the availability of the resources, the coconut industry supply chain, raw material demand requirements of existing processing industries in their respective region, as well as the potential demand for processed coconut, coffee, and cacao products. Through the workshop, the criteria for project prioritization were also established to have a cohesive system of prioritization in agreement with the core planning team and in accordance with the provisions of the law.

D. Evaluation and Integration of Regional Projects and Targets

This activity was undertaken through a series of iterative consultations of the technical writers with the IAs in accordance with the Plans and Programs as per MOA with the IAs and the PCA with defined deliverables and Terms of Reference (TOR). Prior to integration, all RCFIDPs were assessed based on the technical feasibility and economic viability of the identified projects by the CFIDP technical writers. The technical writers engaged the IAs in the evaluation process. The analysis of the viable RCFIDP projects was based on the responsiveness to the needs, resources, capacity, and prospects of the industry of the respective region. In the integration process, the projects and targets were subjected to a set of criteria agreed upon by the CFIDP technical writers with the concurrence of the IAs. These projects were also reviewed and harmonized with the implementation plan of the IAs to come up with the final RCFIDPs.

E. Implementation Plan of the IAs

As the coordinating agency of RA11524, the PCA was tasked to develop the CFIDP to ensure that the IAs prepare their respective implementation plan. Each IA harmonized its plan with the respective regional planners especially regarding targets and indicative investment. The technical writers recommended the setting of criteria for each program component which was adopted by the IAs in target setting and prioritization of projects based on the indicative annual allocation and the percentage share of the respective partner IAs. Each program identified the key strategies, selection criteria of beneficiaries and the indicative investment for the five-year program implementation period. Considering that the IAs must take the ownership of their respective program plan, their respective plan must be in accordance with their mandate and program implementation process. With the guidance of the technical writers in the development of the implementation plan, a series of activities was undertaken such as virtual consultations and workshops. Likewise, convergence among agencies within one program was deemed necessary to have complete support systems (i.e., training, organization and strengthening of cooperatives, credit, infrastructure development, and marketing assistance).

F. The Integration, Convergence and the Harmonization Process Among IAs and the Regional Core Planners

As presented in Figure 5.1b, the planning process is iterative and complex involving 14 various agencies. However, with the strategic planning process adopted in the crafting of the CFIDP, the criteria for distribution and the annual budget allocation were established in the PLAN. Consultations, harmonization, and assessment are the key mechanisms in integrating plans and systems for a comprehensive and inclusive planning process. With such program schemes and target setting, these will guarantee the attainment of the RA 11524 objectives for the welfare of the coconut farmers.

Chapter 5 : Strategic Planning in Development of CFIDP of RA 11524

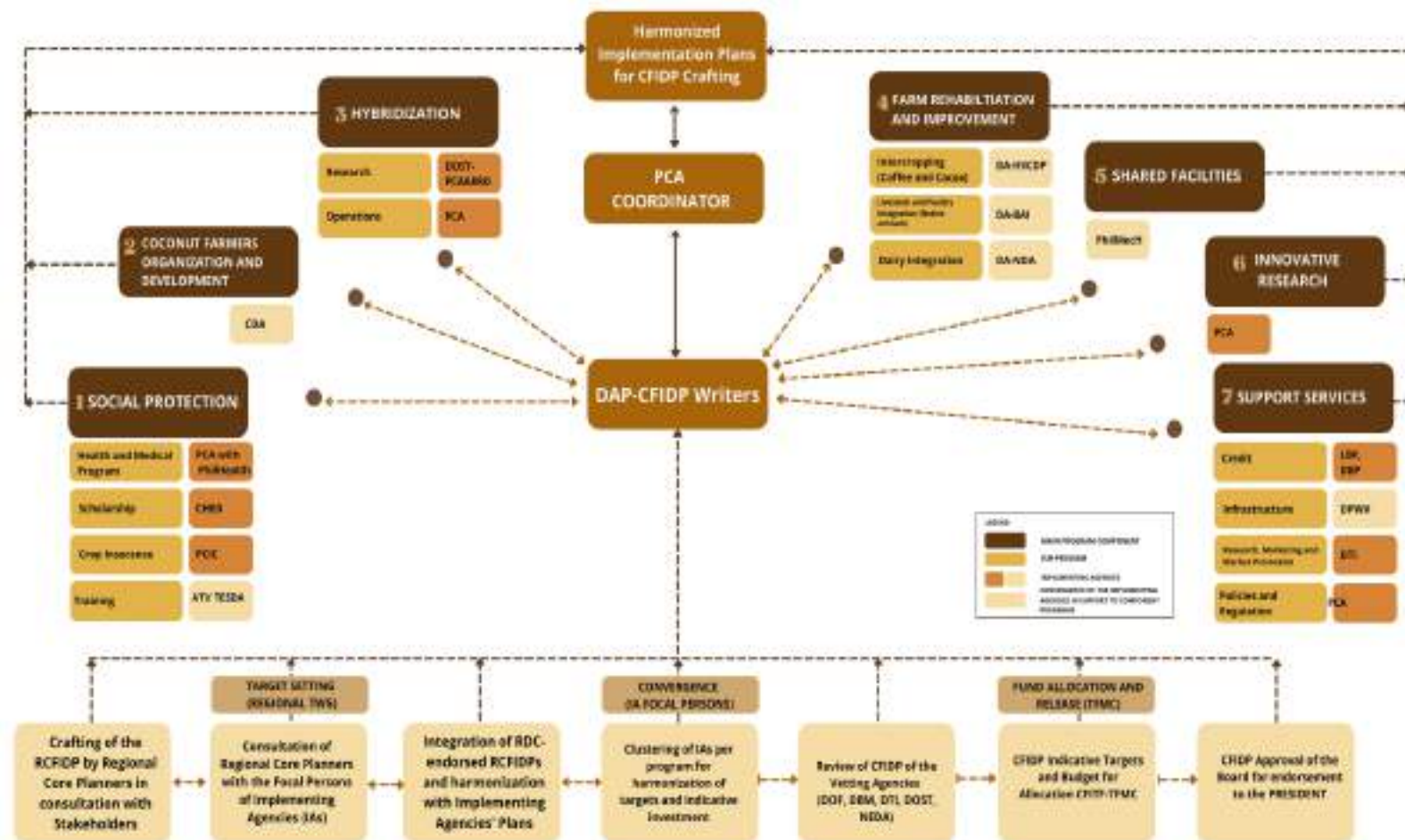


Figure 5.1b. CFIDP Iterative and Integrative Process Flow

Chapter 5 : Strategic Planning in Development of CFIDP of RA 11524

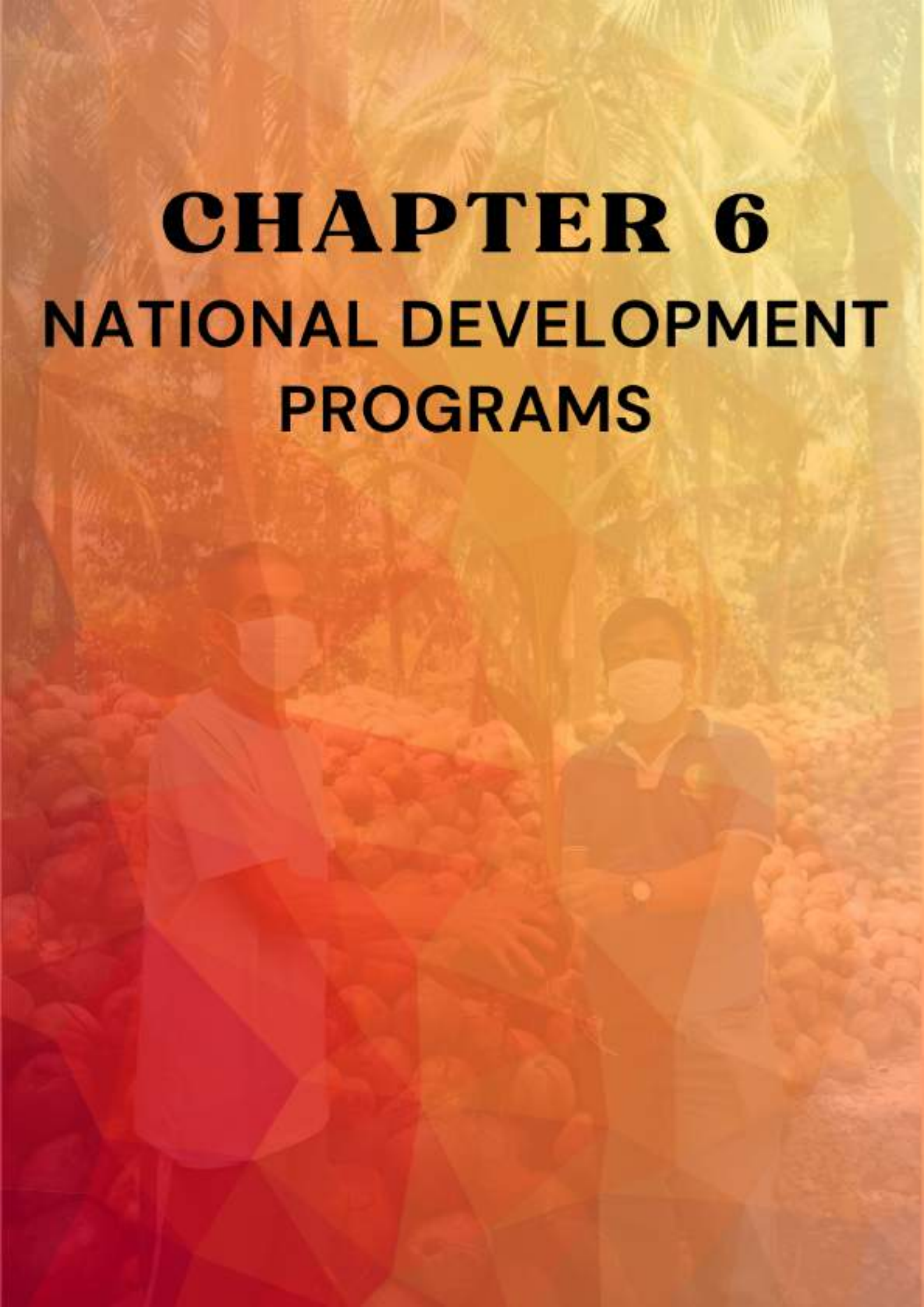
In summary, the crafting of the CFIDP followed both bottom-up and top-down approaches through a series of consultation and iterative process to harmonize and capture the complementation and convergence among the IAs and to connect to the regional plans. The CFIDP framework was conceptualized founded on the goals of the Philippine Development Plan. To be responsive to the industry challenges and needs, supply-value chain analytics was established starting from the regional industry assessment harmonized to the national perspective. From these inputs, prioritization of projects and target setting were based on agreed criteria among IAs and the regional core planners through an iterative process of consultations as illustrated in Figure 5.1b. The integration and harmonization of targets based on the indicative budget allocation per program component and per region were established in accordance with the law. As stipulated in RA 11524, the PLAN should be centered in major coconut areas with high number of NCFRS-registered coconut farmers. Apart from the series of consultations with the direct stakeholders, other entities such as the academe, civil societies, the public sector, and public-government networks inputs were consulted to have a comprehensive perspective.

As indicated in RA 11524, the CFIDP must be reviewed by the vetting agencies composed of the National Economic Development Authority (NEDA), the Department of Finance (DOF), Department of Budget and Management (DBM) and the DTI to provide their advisory opinions before the finalization of the Plan and submission to the President for approval. Guidance of these agencies was sought in the initial drafting of the PLAN to ensure that the must substance of the plan was in accordance with the requirement of RA 11524. The distribution of the annual budget allocation from the Trust Fund was examined by the vetting agencies to determine if this was in accordance with the percentage budget allocation of each IA. The strategic interventions were assessed if these were aligned to the implementation plans of the respective agencies. Also, the set of criteria in target setting was checked if these were concurred by the IAs and the PCA to ensure that the benefits will accrue to the true beneficiaries of the Coconut Levy Fund. The annual 5-year indicative funding per program implementation was provided by the respective IAs in consultation with the PCA as the coordinating agency. In addition, the CFIDP defined the mechanism for monitoring and evaluation of the different program components with the set of indicators that will be measured to warrant the attainment of the objectives of the proposed National Coconut Farmers and Industry Development Program. A Project Management Office was proposed by the PCA to perform this task of coordination with different levels of inter-agency project monitoring team and the external evaluators for objective assessment of the program implementation.

As part of the approval process, the vetting agencies provided the technical advisory and concurrence of the final PLAN as the clearing house. With these processes of strategic crafting of the CFIDP, it is expected that the final PLAN will merit the approval of the PCA Board prior to its appropriate endorsement to the office of the President.

CHAPTER 6

NATIONAL DEVELOPMENT PROGRAMS



6.1 SOCIAL PROTECTION

Republic Act 11524, Article II Sec. 4 mandates that “the Plan shall include social protection that directly benefits coconut farmers, farm workers and their families taking into consideration existing social protection programs of the government”.

The following are the sub-program components under the Social Protection component:

6.1.1 HEALTH AND MEDICAL PROGRAM FOR COCONUT FARMERS AND THEIR FAMILIES PROGRAM DESCRIPTION

The poor and the near-poor coconut farmers are most vulnerable to diverse risks such as sickness and disability because they lack the resources to prevent or mitigate the effects of any health or social shocks. Currently, most of them have limited access to social protection programs such as health and medical insurance that will enable them to deal with health risks.

Republic Act 11524, Article II Sec. 4 paragraph k mandates PCA “to implement a health and medical program for farmers and their families and create an office for the purpose.” PCA Board resolution 034-2021 authorizes the PCA Management to “focus on a universal health care package with PhilHealth, by way of enrollment with PhilHealth, and pursuant to the Health and Medical Program for farmers and their families, as provided under Republic Act 11524.” As directed by the PCA Board, the implementation of the Health and Medical Program for Coconut Farmers and their Families shall be a partnership between PCA and the Philippine Health Insurance Corporation (PhilHealth).

The main objective of the Coconut Farmers and Industry Trust Fund (CFITF) Health and Medical Program for Coconut Farmers and Their Families is to ensure that all the qualified NCFRS-registered coconut farmers who meet the selection/prioritization criteria are afforded access to the health and medical rights and benefits provided under the National Health Insurance Program (NHIP) through the following: (1) their registration in the National Health Insurance Program (NHIP); (2) provision of a PhilHealth premium subsidy; and (3) the conduct of education, orientation, and information dissemination of their rights and health and medical benefits under the Universal Health Care Act (UHCA) and the National Coconut Farmers and Industry Development Program, and the most efficient and effective means of availing of said rights and benefits.

The coconut farmer-beneficiaries of the CFITF Health and Medical Insurance Program and their dependents shall enjoy the following Unified benefit packages:

1. In-patient benefits – These include benefits for all sickness or ailments that need hospital confinement of not less than 24 hours.
2. Outpatient benefits – These cover day surgeries and treatment procedures done in accredited hospitals and free-standing clinics that don’t require hospital confinement.

Chapter 6.1.1 Social Protection : Health and Medical Program

3. KonSulTa – These include expanded primary care benefit packages, which include doctor’s consultation, laboratory and diagnostic examinations, and take-home drugs and medicines for selected illnesses.
4. Z Benefits – These consist of benefit packages for illnesses that are catastrophic and life threatening.
5. All other future benefits

IMPLEMENTATION PLAN

A. STRATEGIES

A.1 PARTNERSHIP WITH PHILHEALTH IN THE IMPLEMENTATION OF THE CFITF HEALTH AND MEDICAL PROGRAM

A.1.A Identification and Registration of Coconut Farmer-Beneficiaries Under the National Health Insurance Program

To facilitate the registration of coconut farmers and their dependents under the NHIP, an automated demographic record matching and validation between the PCA National Coconut Farmers’ Registry with the PhilHealth membership database shall be performed. This endeavor aims to identify those who are already registered as contributors to PhilHealth and determine their membership type – direct or indirect contributors. Those who are not yet registered shall be enrolled through the issuance of a PhilHealth Identification Number (PIN). The results of this electronic matching shall serve as basis for the PCA Health Services Division to decide on who among the coconut farmers will be entitled to partial or full subsidy using the coco levy fund.

A.1.B Identification of Financially Incapable from the List of Coconut Farmers Not Listed as Direct or Indirect Contributors to PhilHealth

Coconut farmers whose income is below the poverty threshold but not included in the list of indirect contributors may be endorsed to the social worker of their respective LGUs for assessment. Those who will qualify as indigents shall be issued with a Certificate of Indigency by the LGU social worker and shall be shifted to indirect contributors (i.e., tagged as “Financially Incapable”) in the PhilHealth database. Hence, they shall be delisted from the list of coconut farmers who shall be entitled to premium subsidy from PCA.

A.1.C Information and Education Campaign (IEC)/Information Dissemination

To increase the knowledge and awareness of the target beneficiaries regarding their health and medical benefit entitlement and the benefit avail process, PhilHealth and PCA Health Services Division shall develop information materials specifically for the coconut farmer-beneficiaries and jointly undertake the conduct of IEC/information dissemination within the coconut farming communities.

A.1.D Billing and Collection of Premium Contributions

Based on the committed number of coconut farmers to be subsidized, PhilHealth shall issue a billing statement to the PCA Health Services Division on an annual basis. The said billing statement shall serve as reference of the PCA Health Services Division in the preparation of the funding requirement and payment of premium contributions of the beneficiaries.

A.1.E Annual Review of Program Implementation

The PCA Health Services Division shall conduct annual review/evaluation of the implementation of the CFITF Health and Medical Program in partnership with PhilHealth. In case the coconut farmer-beneficiaries shall be dissatisfied with the medical and health services provided by PhilHealth, the PCA Health Services Division shall explore alternative plans/strategies to provide better services to the coconut farmer-beneficiaries.

A.2 PUBLIC-PRIVATE PARTNERSHIP IN THE PROVISION OF HEALTH AND MEDICAL SERVICES TO COCONUT FARMERS AND THEIR FAMILIES

A.2.A Provision of Group Health Insurance Card to Coconut Farmers' Cooperatives with Direct Partnership to Oil Mills or Desiccated Coconut Processing (DCN) Companies

The PCA Health Services Division shall facilitate direct partnership between cooperatives engaged in direct copra/nut marketing with oil mills/DCN plants. Using their Corporate Social Responsibility funds, the oil mills and DCN plants shall provide cooperatives that are directly supplying nuts/copra to them with group health insurance, thus benefitting their farmer-members as well.

Other sources of funds that may be tapped to augment the available funds from the Trust Fund may include the following: (1) interest payments to be collected by PCA from registration fee arrears of coconut processing companies; and (2) lien collection of the Department of Labor and Employment (DOLE) under the Social Amelioration Program from coconut methyl ester (CME) producers. The National Biofuel Law stipulates that this collection can be used for livelihood and other forms of assistance (e.g., social protection coverage) to be provided to the farm and company workers engaged in the production of copra and crude coconut oil as feedstock of biodiesel or CME. The PCA Health Services Division can explore the possibility of utilizing part of the lien collection by DOLE for the provision of health and medical assistance to coconut farmers (e.g., HMO group health insurance coverage and purchase of health and medical needs such as medicines, eye glasses, hearing aids, and wheel chairs, among others).

A.2.B Conduct of Dental and Medical Health Missions

In view of the limited budget allocation from the Coconut Farmers and Industry Trust Fund for the implementation of the Health and Medical Program, the PCA Health

Chapter 6.1.1 Social Protection : Health and Medical Program

Services Division shall enter into a Memorandum of Agreement (MOA) with coconut processing companies through their Coconut Industry Associations to donate funds for supporting dental and medical missions in coconut-based communities as part of their corporate social/philanthropic responsibility initiatives. Corporate social responsibility as stipulated in the MOA shall involve partnerships between coconut processing companies as buyers of raw materials and coconut communities as producers and suppliers of the raw materials.

The PCA Health Services Division shall also tap non-government organizations such as the Fair-Trade Alliance Philippines and the Rainforest Alliance, pharmaceutical companies, LGUs, and other civil societies as potential external partners/financial donors for the conduct of dental and medical missions in coconut-producing barangays/municipalities.

Assistance to be provided by the PCA Regional Administrative Officers under the PCA Health Services Division shall be as follows: (1) arranging the schedule for the conduct of the dental/medical missions with the external donors and the medical team and the venue with local government officials; (2) information dissemination on the schedule and venue for the conduct of the dental/medical missions; and (3) provision of logistical support to the medical team who will provide dental and/or medical services to coconut farmers and their families.

B. CRITERIA FOR THE SELECTION OF BENEFICIARIES

The beneficiaries of the CFITF Health and Medical Program are NCFRS-registered coconut farmers and their dependents who are not yet listed as direct or indirect contributors to PhilHealth. The priority coconut farmer-beneficiaries are those who are most incapable of raising the amounts to pay their PhilHealth premiums. The first-priority beneficiaries shall be the coconut farm workers, followed by the tenants, and lastly, the owner-operators.

The determination of priority beneficiaries shall be done by the PCA Regional Offices utilizing data gathered from the NCFRS and corroborated by the collection of additional information such as declared (and validated) land ownership for landowners and owner-operators, household income, domestic circumstances, health status, and other information, if available or provided.

The following are the qualified dependents of a principal member under the PhilHealth Insurance Program:

- (1) legal spouse who is not working;
- (2) children who are 20 years old and below (unmarried, unemployed, legitimate, illegitimate, adopted, stepchildren, and foster child);
- (3) children who are 21 years old and above but suffering from congenital disability or any disability acquired that renders them totally dependent on the member for

Chapter 6.1.1 Social Protection : Health and Medical Program

support (provided they are not included in the Department of Health registry for persons with disabilities or PWDs); and

- (4) parents with permanent disability regardless of age that renders them totally dependent on the member for subsistence.

Table 6.1.1a shows the annual insurance premium rates based on PhilHealth Circular 2020-005 from 2021 to 2025. The annual premium rate shall increase from 3.0% in year 1 (2021) to 5.0% in years 4-5 (2023-2025). Given the annual budget allocation and the annual PhilHealth insurance premium per member for a monthly income floor of PHP 10,000, the number of target coconut farmers/households with PhilHealth insurance coverage shall be 138,888 in years 1 and 2, 111,111 in year 3, 116,666 in year 4, and 166,666 in year 5.

Table 6.1.1a. Total number of coconut farmer-beneficiaries covered under the CFITF Health and Medical Program, 5 years

YEAR	INDICATIVE INVESTMENT (IN MILLIONS, PHP)	PREMIUM RATE	INCOME FLOOR (PHP)	MONTHLY PREMIUM (PHP)	ANNUAL PREMIUM (PHP)	NO. OF BENEFICIARIES
1	500	3.00%	10,000	300	3,600	138,888
2	500	4.00%	10,000	400	4,800	104,166
3	600	4.50%	10,000	450	5,400	111,111
4	700	5.00%	10,000	500	6,000	116,666
5	1,000	5.00%	10,000	500	6,000	166,666

Note: 2% is the prevailing premium rate for coconut and is subject to change upon approval of the PCIC Board

The regional distribution of the number of coconut farmer-beneficiaries under this program based on the number of NCFRS-registered coconut farmers per region is shown in Table 6.1.1b.

Table 6.1.1b. Number of coconut farmer-beneficiaries of the CFITF Health and Medical Program by region, 5 years

REGION	NUMBER OF FARMER-BENEFICIARIES				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Region I (Ilocos Region)	347	260	278	292	417
Region II (Cagayan Valley)	431	323	344	362	517
Region III (Central Luzon)	778	583	622	653	933
Region IV-A (CALABARZON)	13,167	9,875	10,533	11,060	15,800
Region IV-B (MIMAROPA)	5,833	4,375	4,667	4,900	7,000
Region V (Bicol Region)	6,514	4,885	5,211	5,472	7,817
Region VI (Western Visayas)	12,208	9,156	9,767	10,255	14,650
Region VII (Central Visayas)	16,292	12,219	13,033	13,685	19,550
Region VIII (Eastern Visayas)	19,292	14,469	15,433	16,205	23,150
Region IX (Zamboanga Peninsula)	13,292	9,969	10,633	11,165	15,950
Region X (Northern Mindanao)	8,444	6,333	6,756	7,093	10,133
Region XI (Davao Region)	14,792	11,094	11,833	12,425	17,750
Region XII (SOCCSKSARGEN)	7,694	5,771	6,156	6,463	9,233
Region XIII (Caraga)	8,472	6,354	6,778	7,117	10,167
BARRM	11,333	8,500	9,067	9,520	13,600
TOTAL	138,888	104,166	111,111	116,666	166,666

C. INDICATIVE INVESTMENT REQUIREMENT

Of the annual budget allocation from the Coconut Farmers and Industry Trust Fund, 10 percent shall be for the implementation of the Health and Medical Program for coconut farmers and their families by the Philippine Coconut Authority in partnership with PhilHealth (Table 6.1.1c). The indicative investment requirement for the implementation of the CFITF Health and Medical Program shall increase from PHP 500.0 M in year 1 to PHP 1.0 B in year 5. The total investment requirement shall be PHP 3.3 B for five years. Proportional allocation method was employed to determine the indicative regional investment requirement based on the total number of coconut farmers per region.

Table 6.1.1c. Regional and annual indicative investment requirement for the CFITF Health and Medical Program for coconut farmers and their families, 5 years

REGION	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL (%)
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	1.3	1.3	1.5	1.8	2.5	8.3	0.25
Region II (Cagayan Valley)	1.6	1.6	1.9	2.2	3.1	10.2	0.31
Region III (Central Luzon)	2.8	2.8	3.4	3.9	5.6	18.5	0.56
Region IV-A (CALABARZON)	47.4	47.4	56.9	66.4	94.8	312.8	9.48
Region IV-B (MIMAROPA)	21.0	21.0	25.2	29.4	42.0	138.6	4.20
Region V (Bicol Region)	23.5	23.5	28.1	32.8	46.9	154.8	4.69
Region VI (Western Visayas)	44.0	44.0	52.7	61.5	87.9	290.1	8.79
Region VII (Central Visayas)	58.7	58.7	70.4	82.1	117.3	387.1	11.71
Region VIII (Eastern Visayas)	69.5	69.5	83.3	97.2	138.9	458.4	13.89
Region IX (Zamboanga Peninsula)	47.9	47.9	57.4	67.0	95.7	315.8	9.57
Region X (Northern Mindanao)	30.4	30.4	36.5	42.6	60.8	200.6	6.08
Region XI (Davao Region)	53.3	53.3	63.9	74.6	106.5	351.5	10.65
Region XII (SOCCSKSARGEN)	27.7	27.7	33.2	38.8	55.4	182.8	5.54
Region XIII (Caraga)	30.5	30.5	36.6	42.7	61.0	201.3	6.10
BARMM	40.8	40.8	49.0	57.1	81.6	269.3	8.16
Total	500.00	500.00	600.00	706.00	1000.00	3300.00	100

Note: The indicative budget only includes the health and medical insurance premium for the coconut farmer beneficiaries to be paid by PCA to PhilHealth monthly per year, which is classified as a recurring cost.

6.1.2 CROP INSURANCE PROGRAM**PROGRAM DESCRIPTION**

The Philippines is vulnerable to natural disasters which cause crop devastation and miseries to agricultural producers particularly coconut farmers who are the poorest within the crops subsector. Heavy damage to coconut trees caused by natural disasters is devastating to the finances of marginal coconut farmers. Crop insurance is a risk management mechanism designed to even out agricultural risks and blunt the consequences of natural disasters to make losses, especially to the marginal farmers, more bearable. However, the inadequacy of crop insurance has been a perennial constraint for most coconut farmers.

The PCIC is the government agency mandated to provide insurance protection to the country's agricultural producers particularly the subsistence farmers, against loss of their crops and/or non-crop agricultural assets on account of natural calamities such as typhoons, floods, droughts, earthquakes and volcanic eruptions, plant pests and diseases, and/or other perils. Republic Act 11524, Article II Sec. 4 paragraph d mandates the "PCIC to implement a crop insurance program" for farmers whose coconut farms are 5.0 ha and below. The CFITF Crop Insurance Program aims to protect the coconut farmers from financial losses, reverse the risk-averse nature of coconut farmers, and encourage them to invest more in new technologies that would help increase coconut productivity. Moreover, coconut farmers can also use their insured crops and livestock as "surrogate" collateral to banks when they avail themselves of credit from these financial institutions. As such, the PCIC crop insurance shall also serve as a credit risk reduction tool.

The CFITF Crop Insurance Program shall cover coconut trees as the only insurable commodity. The Coconut Tree Mortality Insurance Product Package shall be implemented during the early years of program implementation until the Yield Insurance Product Package is fully developed. The crop insurance package shall include coverage for natural calamities and all types of pests and diseases.

Table 6.1.2a. Amount of coverage, premium rate, premium cost, and maximum eligible coconut area based on the Coconut Mortality insurance product under the CIFTF Crop Insurance Program of PCIC

COMMODITY	AMOUNT OF COVERAGE/ HA (PHP)	PREMIUM RATE (%)	PREMIUM COST (PHP)	MAXIMUM AREA (HA)
Coconut	50,000	2	1,000	1

Note: 2% is the prevailing premium rate for coconut and is subject to change upon approval of the PCIC Board

The premium subsidy shall be 100% of the premium cost (or full premium subsidy) while the amount of cover for the insurance program shall be set at PHP 50,000 per hectare with a population density of 100 trees or PHP 500 per tree. For areas where there is a considerable reduction or increase in tree population, the amount of cover shall be computed based on PHP 500 per tree. The premium rate for the insurance program shall be set at 2.0% of the amount of cover, which includes coverage for natural calamities and all types of pests and diseases. The premium rate is subject to change by the PCIC Board

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during the program implementation period. The eligible coconut farm area per farmer shall be a maximum of one (1) hectare.

Coconut farmer-beneficiaries under the CFITF Crop Insurance Program who own more than 1.0 hectare shall not be allowed by PCIC to insure their additional coconut hectare in the Registry System for Basic Sectors in Agriculture (RSBSA) Agricultural Insurance Program because of PCIC's current policy that beneficiaries registered under the RSBSA should not be insured for the same type of insurance.

Considering that only coconut trees are covered under the CFITF Crop Insurance Program, the coconut farmer-beneficiaries under this insurance program may insure their intercrops, livestock, and farm improvements in PCIC's RSBSA Agricultural Insurance Program at full (100%) insurance premium subsidy subject to the availability of funds, but they must register in the RSBSA.

Apart from protecting coconut farmers from financial losses caused by natural disasters, the Coconut Mortality Insurance package has also a built-in death benefit component amounting to PHP 10,000 provided that the coconut farmer is not more than 80 years of age at the inception of the crop insurance cover. In tenanted lands, the landowner and the tenant must agree on who will be insured to avail of the death benefit.

IMPLEMENTATION PLAN

A. CRITERIA FOR THE SELECTION OF COCONUT FARMER-BENEFICIARIES

The coconut farmer-beneficiaries of the CFITF Crop Insurance Program shall be NCFRS-registered coconut farmers who are either landowners, tenants, or owner-operators operating 5 ha and below whose coconut farms are in areas prone to natural calamities as identified by PCA. The priority coconut farmer-beneficiaries are landowners and owner-operators who are 55 years old and above residing in municipalities with high poverty incidence levels (i.e., poverty incidence level 3: 41-60% and poverty incidence level 4: 61-80%) or in 4th to 6th class municipalities.

To determine the coconut farmer-beneficiaries of the CFITF Crop Insurance Program, the PCA's National Coconut Farmers Registry System database will be cross-matched with the RSBSA database of the Department of Agriculture. The coconut farmers who are not included in the list of beneficiaries under the PCIC's RSBSA Crop Insurance Program shall be considered as potential beneficiaries of the CFITF Crop Insurance Program.

Given the annual budget allocation and the annual amount of premium per farmer as currently projected, the total number of farmer-beneficiaries shall be 200,000 in year 1 and shall gradually increase to 400,000 in year 5. Coconut farmers whose coconut crop shall not be covered under the CFITF Crop Insurance Program due to limited budget allocation can insure their coconut crop, intercrops, livestock, and farm improvements at full insurance premium subsidy in the PCIC RSBSA Crop Insurance Program, but they must register in the RSBSA.

Table 6.1.2b. Number of coconut farmer-beneficiaries per year under the CFITF Crop Insurance Program

YEAR	NO. OF FARMERS	AREA (HA)	AMOUNT OF COVER (IN BILLIONS, PHP)	PREMIUM (IN MILLIONS, PHP)
1	200,000	200,000	10	200
2	200,000	200,000	10	200
3	240,000	240,000	12	240
4	280,000	280,000	14	280
5	400,000	400,000	20	400
TOTAL	1,320,000	1,320,000	66	1,320

Table 6.1.2c shows the annual regional distribution of the coconut farmer-beneficiaries for five (5) years of implementation of the CFITF Crop Insurance Program. CALABARZON, the Bicol Region, and Eastern Visayas have the highest number of coconut farmer-beneficiaries under the CFITF Crop Insurance Program because these regions are frequently and directly hit by typhoons.

Table 6.1.2c. Number of farmer-beneficiaries of the CFITF Crop Insurance Program in natural disaster- prone regions, 5 years

REGION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Region III (Central Luzon)	80	80	96	112	160
Region IV-A (CALABARZON)	57,880	57,880	69,456	81,032	115,760
Region IV-B (MIMAROPA)	480	480	576	672	960
Region V (Bicol Region)	57,440	57,440	68,928	80,416	114,880
Region VI (Western Visayas)	8,660	8,660	10,392	12,124	17,320
Region VII (Central Visayas)	1,320	1,320	1,584	1,848	2,640
Region VIII (Eastern Visayas)	47,520	47,520	57,024	66,528	95,040
Region IX (Zamboanga Peninsula)	3,200	3,200	3,840	4,480	6,400
Region X (Northern Mindanao)	10	10	120	140	200
Region XI (Davao Region)	12,340	12,340	14,808	17,276	24,680
Region XII (SOCCSKSARGEN)	1,000	1,000	1,200	1,400	2,000
Region XIII (Caraga)	9,980	9,980	11,976	13,972	19,960
TOTAL	200,000	200,000	240,000	280,000	400,000

B. 1 UNDERWRITING PROCEDURES

1. The PCIC Regional Office (RO) shall closely coordinate with the PCA Regional Office (PCA RO) for the list of qualified beneficiary-participants or program recipients as a basis for PCIC's granting of insurance coverage.
2. The coconut farmer shall fill out and submit the insurance application form for insurance coverage, together with the required underwriting documents, to the concerned PCIC RO or the PCIC Extension Office (PEO), preferably by a group of coconut farmers. The "List of Growers form" must be used.
3. The PCIC shall review the submitted underwriting documents for completeness. If not complete, the underwriting documents shall be returned to the farmer thru the PCA for proper action/completion.

4. If it finds necessary, the PCIC with the assistance of the PCA RO shall conduct field inspection to check the farm suitability and the production management capability of the coconut farmer, among other feasibility factors, and to validate the farm's and the farmer's eligibility.
5. If the coconut farmer satisfies all the requirements, the PCIC shall issue the Certificate of Insurance Policy.

B. 2 CLAIMS PROCEDURES

1. In case of crop losses arising from the occurrence of risk(s) insured against, the insured coconut farmer or his/her household member shall file a Notice of Loss in accordance with the existing PCIC implementing rules and regulations.
2. The assured coconut farmers (i.e., farmers whose coconut crop is covered by insurance) or any immediate member of his/her family shall file the Notice of Loss in a pro forma letter or fax or email/SMS/text as prescribed by PCIC, provided that it shall at least contain the necessary information required under the PCIC claims procedure, such as the name of the assured farmer, location of the insured, insurance policy number, crop damaged, date of loss and nature/cause of loss.
3. The Notice of Loss shall be filed within ten (10) calendar days from the occurrence of loss or within the prescribed period depending on the commodity insured.
4. The Insured shall file within thirty (30) calendar days from the occurrence of the loss a formal claim in the prescribed form with the PCIC.
5. No claim shall be entertained without proof of filing of Notice of Loss or Claim for Indemnity (CI), as required in Item 3 above.
6. The claims adjustment and verification under the regular insurance-claim situation shall be conducted, as far as practicable, by two (2) PCIC authorized insurance adjusters. However, if there is insufficient number of adjusters, an individual insurance adjuster may validly conduct the claims adjustment and verification. Loss adjustment and claims settlement shall be done on an individual farmer basis.
7. In times of widespread calamity, including an extensive outbreak of disease/pest infestation, a General Assessment Team (GAT) shall be constituted immediately by the PCIC-Regional Manager and mobilized to conduct a general assessment by ocular inspection of affected areas/municipalities. The GAT shall be composed of the PCIC Regional Manager (RM), chiefs of divisions (CODs), and deputized PCIC personnel working in teams of at least two (2) members. In case the cause of loss requires technical knowledge/skills, the GAT shall be assisted by a corresponding specialist/agriculturist/PCA representative. The report of the GAT shall serve as a general indicator on the nature, extent, and effect of the cause of loss, and individual estimates of loss shall be measured against this general indicator.
8. Insurance indemnity shall be paid by the PCIC RO to the financing institution or the individual assured farmers, depending on the initial agreement and assignment of claims, if any.

C. INDICATIVE INVESTMENT REQUIREMENT

In the implementation of the CFITF Crop Insurance Program, priority shall be accorded to high-risk regions that are affected by typhoons, drought, volcanic eruptions, and coconut insect infestation. Using historical data on the regional distribution of the number of coconut trees affected by typhoons, volcanic eruption, and insect pest infestation in natural disaster-prone regions and the number of NCFRS-registered coconut farmers (excluding farm workers) who are 55 years old and above as bases, the indicative investment requirement for the implementation of the CFITF Crop Insurance Program in each region was determined by employing the proportional allocation method. However, the target regions and the regional budget allocation shall be subject to change every year upon review and assessment of the effect of climate change and the possibility of adopting the new Yield Insurance Product Package for coconut.

Table 6.1.2d. Regional and annual indicative investment requirement for the CFITF Crop Insurance Program, 5 years

REGION	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Region III (Central Luzon)	0.08	0.08	0.10	0.11	0.16	0.53
Region IVA (CALABARZON)	57.88	57.88	69.46	81.03	115.76	382.01
Region IVB (MIMAROPA)	0.48	0.48	0.58	0.67	0.96	3.17
Region V (Bicol Region)	57.44	57.44	68.93	80.42	114.88	379.10
Region VI (Western Visayas)	8.66	8.66	10.39	12.12	17.32	57.16
Region VII (Central Visayas)	1.32	1.32	1.58	1.85	2.64	8.17
Region VIII (Eastern Visayas)	47.52	47.52	57.02	66.53	95.04	313.63
Region IX (Zamboanga Peninsula)	3.20	3.20	3.84	4.48	6.40	21.12
Region X (Northern Mindanao)	0.01	0.01	0.12	0.14	0.20	0.48
Region XI (Davao Region)	12.34	12.34	14.81	17.28	24.68	81.44
Region XIII (SOCCSKSARGEN)	1.00	1.00	1.20	1.40	2.00	6.60
BARRM	9.98	9.98	11.98	13.97	19.96	65.87
TOTAL	200.00	200.00	240.00	280.00	400.00	1320.00

Note: The annual indicative budget only includes the annual crop insurance premium which is classified as a non-recurring cost.

6.1.3 SCHOLARSHIP PROGRAM FOR COCONUT FARMERS AND THEIR FAMILIES

PROGRAM DESCRIPTION

Youth education is of paramount importance in setting the succession plan with the current age range status of many coconut farmers. However, most aged, and other poor coconut farmers do not have the financial resources to send their children and/or other dependents to pursue their college education. To address this problem, Republic Act 11524, Article II Sec. 4 paragraph j mandates the Commission on Higher Education “to implement a scholarship program for coconut farmers and their families”. Through the passage of Republic Act No. 7722 or the Higher Education Act of 1994, CHED has been given the mandate to provide financial assistance through scholarships to qualified and deserving students pursuing tertiary education.

The CFITF Scholarship Program shall cover undergraduate students who will enroll or are currently enrolled in agriculture, agricultural engineering, agribusiness management, agricultural economics and other courses that will be identified by the PCA as vital to the needs of the coconut industry. The program shall also cover graduate students who are qualified for advance studies in State Universities and Colleges (SUCs) as identified in the implementation guidelines. The priority field of studies for graduate programs shall be identified by the PCA.

The scholarship program aims to raise social equity of coconut farmers and ultimately alleviate poverty through the provision of quality education to their children and/or other dependents. Moreover, the scholarship program is ultimately expected to improve agricultural productivity and modernization in the coconut industry by raising the knowledge of coconut farmers’ children and/or other dependents on scientific advances in agricultural technology and other related fields.

IMPLEMENTATION PLAN

A. STRATEGIES

The PCA shall be responsible for determining the number of scholarship slots per year and the scholarship slot allocation among regions.

A.1 Application Procedure

1. Before the start of the first semester of the Academic year, the student applicant shall submit to the PCA Regional Office (PCA-RO) all documentary requirements to secure PCA certification. Only one family member shall be allowed to apply and avail of the scholarship grant at a given time. The PCA shall transmit the master list of applicants to CHED at a designated period.
2. Together, the PCA-RO and CHED Regional Office (CHEDRO) shall evaluate and rank student applicants;
3. The CHEDROs shall submit the list of qualified beneficiaries to the CHED Office of Student Development Services (OSDS);

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4. The OSDS shall validate the rank list and approve the list of qualified beneficiaries for funding purposes

A.2 Qualifications of Applicants

A.2.1 Undergraduate Program

To avail of an undergraduate scholarship grant, a student-applicant must comply with the following qualifications:

1. Must be a Filipino citizen;
2. Must be a graduating high school student/high school graduate with a general weighted average grade (GWA) of 85% or its equivalent;
3. College student with earned academic units relevant to the degree programs identified by PCA with a GWA of 85% the previous semester) or its equivalent;
4. Must pass the entry level requirements of identified State Universities and Colleges (SUCs);
5. Must not be a recipient of any government-funded financial assistance program;
6. For qualified applicants with privately funded scholarship grant covering only tuition fees, he/she must pass the entry level requirement of the private higher education institution (HEI);
7. Must be duly certified by PCA and the barangay chairman as a child or dependent of a coconut farmer/farm worker; and
8. Must have a combined annual gross income of parents not to exceed PHP 300,000.

A.2.2 Graduate Program

To avail of a graduate scholarship grant, a student-applicant must comply with the following qualifications:

1. Must be a Filipino citizen;
2. With related undergraduate degree program as identified by PCA and must pass the admission/retention requirements of SUCs for master's degree program;
3. Must be duly certified by PCA and the barangay chairman as a child or dependent of a coconut farmer/farm worker; and
4. Must have a combined annual income of parents not to exceed PHP 300,000.

In highly exceptional cases where the family income exceeds PHP 300,000.00, the concerned CHED Regional Office (CHEDRO) shall determine the merits of the application. Meritorious cases shall include but shall not be limited to medical issues and family member with two (2) or more dependents who are enrolled in college.

Dependents of coconut farm workers and small coconut farmers include: a) the legitimate, legitimated, illegitimate and/or legally adopted children of coconut farmer workers and small coconut farmers; and b) relative of coconut farmer workers and small coconut

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farmers up to third (3rd) degree of consanguinity or affinity who are living with them at least five (5) years prior to application, subject to the certification of the barangay chairman or his authorized representative.

A.3 Selection Procedure

In the selection of beneficiaries, the following percentage distribution shall be used in ranking: academic performance, 60% and annual gross income, 40%. Equivalent points for academic performance and annual income in Tables 6.1.3a and 6.1.3b shall be assigned to provide a standard reference in the ranking of applicants, respectively. The equivalent grade for ALS and PEPT passer is 85% or 86 points or its equivalent depending on the SUC/private higher education institution as the case maybe.

Table 6.1.3a. Equivalency points for academic performance

RANGE (%)		EQUIVALENT POINTS
FROM	TO	
99	100	100
97	98	98
95	96	96
93	94	94
91	92	92
89	90	90
87	88	88
85	86	86

Additional five (5) points in the total score shall be given to applicants who are children or dependents of indigents, persons with disability, solo parents, senior citizens, Indigenous Peoples (IPs), and coconut farm workers after complying with all the documentary requirements.

Table 6.1.3b. Equivalency points for annual gross income

RANGE (PHP)		EQUIVALENT POINTS
From	To	
0	40,000	100
40,001	80,000	97
80,001	120,000	94
120,001	160,000	91
160,001	200,000	88
200,001	240,000	85
240,001	280,000	82
280,001	300,000	80

A.4 Documentary Requirements

Submission of the application letter and the documentary requirements may be submitted in person, by mail, or online to the PCA Regional Offices. The following shall be the documentary requirements:

1. Birth Certificate;
2. High school report card for incoming freshmen students eligible for college;
3. For Senior High school students, duly certified true copy of grades for Grade 11 and first semester for Grade 12;
4. For Lifelong Learners eligible for college, High School Report Card;

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5. For applicants with earned units or currently enrolled in college, duly certified true copy of grades for the latest semester/term attended;
6. For ALS applicants, duly certified copy of ALS Accreditation and Equivalency Test Passer Certificate;
7. For PEPT applicant, duly certified copy of PEPT Certificate of Advancing to the next level;
8. Certificate of good moral character from the last school attended;
9. Certification from PCA as a child or dependent of a coconut farmer duly registered with the PCA NCFRS;
10. Notice of admission from the SUC/private higher education institutions with collegiate degree offerings;
11. For the graduate scholarship program, a diploma and transcript of records of baccalaureate degree/copy of grades in the previous semester, in case of ongoing enrolled in a graduate program;
12. Proof of Income – any one of the following may be submitted: (a) latest Income Tax Return (ITR) of parents/guardians if employed; (b) Certificate of Tax Exemption from the Bureau of Internal; and
13. Revenue (BIR); (c) Certificate of No Income from BIR; (d) Certificate of Indigence from their Barangay; and (e) Certificate/Case Study from Department of Social Welfare and Development (DSWD).

A.5 Awarding Procedure

1. The CHED-OSDS shall issue the corresponding award number of slots to each concerned region based on the approved slot allocation;
2. The CHEDRO shall issue the Notice of Award (NOA) individually to the beneficiaries based on the approved list or notify the list of awardees through the SUCs;
3. If the applicant will accept the NOA, he/she must affix his/her signature on the return slip and submit the same slip to the concerned CHEDRO through hard copy or electronic form within thirty (30) working days from the date of receipt of the NOA; and
4. If the applicant will waive the NOA, he/she shall write the word “WAIVED” on the return slip and affix his/her signature on the return slip. He/she must return the slip or communicate his waiver in writing to the concerned CHEDRO within thirty (30) days.

A.6 Financial Benefits

For recipients of the Undergraduate Scholarship grants, the financial assistance shall cover monthly stipend, other school fees, book allowance, and thesis support. Under the graduate scholarship program, the financial assistance shall cover tuition fee in the SUCs where the scholar will enroll, monthly stipend and other school fees except thesis allowance. Thesis support for graduate scholars maybe sourced from DOST-PCAARRD, CHED, and PCA, among other research funding agencies. Financial assistance for the purchase of a laptop shall also be provided in the first year of enrolment of the undergraduate and graduate scholars.

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The financial assistance under this Scholarship Program shall consist of the following:

A.6.1 Undergraduate Scholarship Program

1. Regular Allowances

TYPE	UNIT COST (PHP)	TOTAL COST PER ACADEMIC YEAR (PHP)
a. Stipend (to cover the following expense items: food, educational tours, transportation, smaller projects, medical insurance, internet use, communication)	7,000/month for 10 months or 35,000/semester	70,000
b. Book allowance and other	5,000/semester	10,000
c. learning materials		
TOTAL		80,000

2. Others

TYPE	TOTAL COST PER ACADEMIC YEAR (PHP)
a. Thesis and/or OJT Allowance	75,000
b. One-time attendance in local conference/fora (should be related to the undergraduate program and to be given during the junior or senior standing. The activity should not be the same Higher Education Institution (HEI) where the beneficiary is enrolled.)	10,000
c. One-time financial assistance for the purchase of a laptop (to be given during the first year of scholarship grant)	30,000
TOTAL	115,000

Thesis of undergraduate scholars should be related to the coconut industry as a prerequisite for the release of the thesis allowance. Group thesis shall not be allowed.

Tuition and other school fees will no longer be provided in the financial benefits to align with the implementation of RA 10931 “Universal Access to Quality Tertiary Education Act” which now provides for free tuition and other school fees following the effectivity of the law.

For participating HEIs with trimester or quarter system, the total amount of financial assistance stated above shall be distributed proportionately for every semester/quarter.

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A.6.2 Graduate Scholarship Program

1. Regular Allowances

TYPE	UNIT COST (PHP)	TOTAL COST PER ACADEMIC YEAR (PHP)
a. Tuition including miscellaneous fees	20,000	40,000
b. Stipend (to cover the following expense items: subsistence, clothing, transportation allowance, educational tours, field trips, expenses for small projects and medical insurance, internet fee, communication/cellphone load and lodging)	25,000/month for 10 months	250,000
c. Book allowance and other learning materials	7,000/semester	14,000
TOTAL		304,000

2. Others

TYPE	TOTAL COST PER ACADEMIC YEAR (PHP)
a. One-time attendance in local conference	15,000
b. One-time financial assistance for the purchase of a laptop computer (to be given during the first year of scholarship grant)	30,000
TOTAL	45,000

A.7 Modes and Procedures of Payment of Financial Benefits

CHEDROs shall transfer financial benefits directly to the scholars per semester of a given academic year until the completion of the degree program by crediting it to the account of scholars through automated teller machine (ATM). The scholars shall submit the following requirements to the concerned CHEDROs:

Initial payment	<ul style="list-style-type: none">- Certified true copy of the registration form of photocopy verified against original document by the CHEDRO Student Financial Assistance Programs (StuFAPs) coordinator- Copy of ATM card from authorized government banks- Copy of school ID for current semester/term
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Succeeding payment	<ul style="list-style-type: none">- Certified true copy of the registration form and true copy of grades must be verified against original document by the CHEDRO- Copy of school ID for current semester/term
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A.8 Conditions of the Scholarship Grant Program

A beneficiary may apply for deferment of scholarship grant prior to the start of the next term of a given academic year subject to the written approval of the concerned CHEDRO. He/she may be allowed deferment for only one (1) academic year due to health reasons supported by a medical certificate.

The beneficiary must comply with the following:

1. Accept and sign the Notice of Award.
2. Enroll only the identified priority programs in the concerned SUCs or private HEIs following the conditions of the Notice of Award.
3. Carry a full load as prescribed in the curriculum of the study program of the concerned SUCs/private HEIs.
4. Pass all subjects enrolled for the continuance of the program.
5. Maintain a GWA of 80% or its equivalent for baccalaureate courses and 85% or its equivalent for graduate program.
6. Execute and conform with the Scholarship Contract of the program in consideration of the scholarship grant and acceptance of the beneficiary.
7. Transfer only to the concerned SUCs or shift to priority programs upon written approval of CHEDRO.
8. Complete the degree program enrolled within its prescribed duration, except in case of approved deferment. In case of delayed completion due to acceptable and valid reasons, one semester extension maybe granted. Any extension will no longer be given a stipend.

Financial benefits shall be terminated if the beneficiary fails to meet any of the aforementioned conditions of the scholarship program including other reasons such as dropping out, deferment of scholarship grant for more than the period granted, submission of fake or spurious documents, final conviction of an offense involving moral turpitude, and participation or involvement in a fraternity or sorority-related hazing activities as determined by the concerned SUC or private HEI. The financial grant received under this program shall be refunded to CHED if the scholarship grant has been terminated due to enrollment in non--CHED recognized programs or programs not identified in these guidelines.

Replacement of a scholar may be allowed within a given academic year, through any of the following grounds: (a) failure to confirm acceptance of the award within thirty (30) working days upon receipt of the NOA; (b) voluntary withdrawal/waiver of scholarship grant; (c) transfer or shift to a non-priority program; (d) dropping out from school without

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notice to CHEDRO; (e) termination of scholarship grant; and (f) non-completion of the degree program. A substitute must be chosen from the approved official rank list of CHEDRO. The replacing student shall avail of the benefits for the remaining duration of the scholarship grant.

A return service of one (1) year per year of scholarship within the Philippines is required after graduation prioritizing the Philippine Coconut Industry, whether in the government or private sector. In case of failure of the beneficiary to comply with the return service requirement through his/her own fault or other causes within his/her control, the beneficiary shall refund the equivalent amount of the number of years without return service rendered to CHEDRO. PCA should monitor the graduates in the conduct of return service and provide list of establishments/offices where the scholars can render return service.

B. REGIONAL DISTRIBUTION OF BENEFICIARIES UNDER THE CFITF SCHOLARSHIP GRANT

The beneficiaries of the scholarship grant shall be qualified students with high scores based on the results of the ranking system and the slot allocation per concerned region for a given academic year. In case of a tie in the ranking score, priority shall be given to children/dependents of indigents, persons with disability, solo parents, senior citizens, Indigenous Peoples, and coconut farm workers.

The total number of scholarship slots in year 1 was determined by dividing the annual budget allocation in the same year by the total annual financial benefit for an incoming scholar (PHP 110,000). For the first year of project implementation, PCA divided the total undergraduate scholarship slot into: first year, 54%; second year, 35%; and third year, 12%. This distribution will allow the acceptance of new scholars in succeeding years (Table 6.1.3c). A total of 10,720 (i.e., 10,658 undergraduate and 52 graduate) scholars shall benefit from the CIFTF Scholarship Program for five (5) years.

Table 6.1.3c. Annual distribution of scholars by type, 5 years

TYPE OF STUDENTS	NUMBER OF SCHOLARS					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Undergraduate Scholars:						
New	3,521 ¹	623	528	1,116	4,870	10,658
Continuing		2,155	2,509	1,161	1,654	
Graduating		406	1,229	1,886	623	
TOTAL	3,521	4,144	4,276	4,163	7,147	
Graduate Scholars:						
New	8	8	8	8	20	52
Graduating		8	8	8	8	
TOTAL	8	16	16	16	28	

¹Includes 1,886 first year (54%), 1,229 second year (35%), and 406 third year (12%) undergraduate scholars

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Table 6.1.3d shows the annual undergraduate and graduate scholarship slots under the CFITF Scholarship Program for five years. PCA based the regional undergraduate scholarship slot allocation on the following criteria: a) total number of coconut farmers (50%); b) coconut area (25%); and c) nut production (25%). However, the PCA Regional Managers shall be allowed to change the proposed scholarship slot allocation if the number of qualified applicants in each class standing slot shall either exceed or fall short of the allocated number of scholarship slots per class standing in each region. Within each province, priority should be accorded to municipalities with high poverty incidence level (i.e., level 3: 41-60% and level 4: 61-80%) or those residing in 4th to 6th class municipalities) owing to the limited number of scholarship slots. Regarding the annual graduate scholarship slot allocation by field of specialization, this shall be the responsibility of the PCA Central Office based on the agency's manpower requirements by field of specialization.

Table 6.1.3d. Annual scholarship slots under the CFITF Scholarship Program for coconut farmers and their families by region, 5 years

REGION/PCA CO	NUMBER OF SCHOLARS				
	Year 1	Year 2	Year 3	Year 4	Year 5
Undergraduate Scholars:					
Region 1 (Ilocos Region)	11	13	14	14	25
Region 2 (Cagayan Region)	13	15	16	15	25
Region 3 (Central Luzon)	24	28	29	29	50
Region 4A (CALABARZON)	377	444	459	447	769
Region 4B (MIMAROPA)	170	200	206	201	345
Region 5 (Bicol Region)	263	310	320	312	537
Region 6 (Western Visayas)	218	257	265	258	443
Region 7 (Central Visayas)	261	307	317	309	530
Region 8 (Eastern Visayas)	390	459	474	462	794
Region 9 (Zamboanga Peninsula)	383	451	464	452	775
Region 10 (Northern Mindanao)	293	345	356	347	596
Region 11 (Davao Region)	391	459	471	457	778
Region 12 (SOCCSKSARGEN)	220	259	268	261	450
Region 13 (CARAGA)	202	238	246	239	411
BARRM	305	359	371	360	619
Graduate Scholars:					
PCA Central Office (PCA-CO)	8	16	16	16	28
TOTAL	3,529	4,160	4,292	4,179	7,175

C. INDICATIVE INVESTMENT REQUIREMENT

Of the annual budget allocation from the Trust Fund, 8% shall be allotted to the CFITF Scholarship Program to be implemented by CHED. The indicative regional investment

Chapter 6.1.3 Social Protection : Scholarship Program

allocation was based on the following criteria: a) total number of coconut farmers (50%); b) coconut area (25%); and c) nut production (25%) in each region. The annual indicative investment requirement for the implementation of the CFITF Scholarship Program shall increase from PHP 400 M in year 1 to PHP 800 M in year 5. The total indicative investment requirement for the 5-year period shall be PHP 2.64 B.

The annual indicative investment requirement shown in Table 6.1.3e. consists of financial benefits to undergraduate and graduate scholars and the implementation and monitoring costs to be incurred by CHED/CHED ROs and PCA/PCA ROs during the 5-year program implementation period.

Table 6.1.3e. Annual and regional indicative Investment requirement for the CFITF Scholarship Program for coconut farmers and their families by region, 5 years

REGION/PCA-CO	INDICATIVE INVESTMENT (IN MILLIONS, PHP)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Financial Benefits of Scholars¹:	390.00	390.00	468.00	546.00	780.07
Region 1 (Ilocos Region)	1.22	1.19	1.52	1.80	3.68
Region 2 (Cagayan Region)	1.43	1.34	1.77	1.97	2.68
Region 3 (Central Luzon)	2.64	2.62	3.12	3.76	5.36
Region 4A (CALABARZON)	41.52	41.26	49.66	57.98	82.90
Region 4B (MIMAROPA)	18.65	18.53	22.30	26.05	37.24
Region 5 (Bicol Region)	28.93	28.76	34.62	40.49	57.94
Region 6 (Western Visayas)	23.98	23.86	28.65	33.47	47.81
Region 7 (Central Visayas)	28.71	28.49	34.30	40.18	57.14
Region 8 (Eastern Visayas)	42.90	42.62	51.28	59.95	85.61
Region 9 (Zamboanga Peninsula)	42.13	41.95	50.16	58.74	83.62
Region 10 (Northern Mindanao)	32.23	32.05	38.50	45.10	64.28
Region 11 (Davao Region)	43.01	42.67	50.98	59.49	83.92
Region 12 (SOCCSKSARGEN)	24.20	24.02	29.0	33.89	48.52
Region 13 (CARAGA)	22.22	22.08	26.64	31.04	44.34
BARRM	33.55	33.32	40.19	46.77	66.77
PCA Central Office (PCA-CO)	2.68	5.24	5.31	5.32	9.26
Implementation & Monitoring Costs	10.00	10.00	12.00	14.00	19.93
TOTAL	400.00	400.00	480.00	560.00	800.00

¹Includes regional budget allocation for undergraduate scholars and the PCA Central Office budget for graduate scholars

Note: Financial benefits of scholars include the monthly stipend of scholars which is classified as a recurring cost and non-recurring costs such as annual book allowance, thesis allowance, tuition fee of graduate scholars, and computer cost. Implementation and monitoring costs such as communication, meeting, travel, and monitoring expenses of PCA and CHED personnel, and the purchase cost of office supplies and materials, etc. are classified as recurring costs.

6.1.4 TRAINING OF COCONUT FARMERS AND THEIR FAMILIES (AGRICULTURAL TRAINING INSTITUTE)

PROJECT DESCRIPTION

Republic Act 11524, Article II Sec. 4 paragraph b mandates the “Agricultural Training Institute and the Technical Education and Skills Development Authority to provide training of farmers and their families listed in the NCFRS in farm schools to be established focusing on coconut production and processing technologies, value addition of coconut products, diversification and sustainable farming methods including organic farming, financial literacy, and farm business school programs, among others.

ATI was created through Executive Order No. 116 on January 30, 1987, from the merger of the Bureau of Agricultural Extension (BAEx), the Philippine Agricultural Training Council (PATC) and the Philippine Training Centers for Rural Development (PTC-RD). Consequently, the ATI was tasked to be responsible for the training of all agricultural extension workers and their clientele, who are mostly farmers and other agricultural workers, ensure that training programs address the real needs of the agricultural sector, and ensure that the research results are then communicated to the farmers through appropriate training and extension activities. A decade later, RA 8435 of 1997 further strengthened the role of ATI as the Department of Agriculture’s extension and training arm and overall manager of the Agriculture and Fisheries (A&F) training and extension of the country. Moreover, it expanded the scope of A&F extension to training services, farm and business advisory services, demonstration services and information, education, and communication (IEC) support services through tri-media.

ATI as the vanguard of agriculture and fisheries training and extension in the country has the privileged task to train agricultural extension workers and farmer leaders to meet the capacity building needs of the coconut farmers and, in turn, to provide grants to the extension service providers to eventually train the numerous farmer-beneficiaries. ATI statutory augmented space to use multi-media support services for farm and business advisories, school on the air, demonstration farms and certification of learning sites for agriculture will ensure their wider reach among the coconut farmers spread out to the various regions of the country.

On the other hand, TESDA was created under Republic Act 7796. The TESDA Act of 1994 mandates the agency to: promote and strengthen the quality of technical education and skills development programs to attain international competitiveness and meet the changing demands for quality middle-level manpower; encourage critical and creative thinking by disseminating the scientific and technical knowledge base of middle-level manpower development programs; recognize and encourage the complementary roles of public and private institutions in technical education and skills development and training systems; and inculcate desirable values through the development of moral character with emphasis on work ethic, self-discipline, self-reliance and nationalism.

TESDA provides free access to Technical-Vocational Education and Training (TVET) to prospective beneficiaries from the industries, communities, and special clients through its various TESDA Scholarship Programs to address the skills needs of the Filipino Workforce for social equity and poverty

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reduction as well as to respond to the diversified industry requirements and area-based skills requirements for global competitiveness and job readiness.

Among the scholarship programs being implemented by TESDA is the Program on Accelerating Farm School Establishment (PAFSE). The PAFSE was established to assist in the promotion of sustainable Agriculture and Fishery productivity and rural development by providing access to TVET at the countryside through farm schools. The general objective of the program is to accelerate the establishment of farm schools in all municipalities nationwide, and as of 31 August 2021, a total of 312 Farm Schools have been established and have registered their training programs with TESDA.

TESDA as the agency mandated to provide excellent technical-vocational training to empower people and communities to make them productive is vital to the Coconut Farmer and Industry Development Plan in terms of training coconut farmers and their families through their scholarships and standard setting and systems development. This will be through the training regulations (TR), competency standards (CS) and competency assessment tools that the agency continue to pursue in professionalizing the skilled workers.

The facilitation of relevant and effective training programs and services by ATI and TESDA is expected to professionalize, empower, and develop coconut farmers and their families to become productive, hence improving farmer's income and generating livelihood.

A. ATI's IMPLEMENTATION PLAN

A.1. IMPLEMENTATION FRAMEWORK

Figure 6.1.4a describes the problem areas of the coconut industry and its farmers as well as the extension agents in the ground in terms of capacity building and learning needs. To address these constraints of farmers, ATI endeavors to launch four major interventions. These are programs/projects/activities that relate to strategic communications and administration of e-learning courses, the training proper and related activities, certification of learning sites for agriculture and the provision of grants to other extension service providers. Finally, a monitoring and evaluation system will be in place to gather, document, and analyze the intertemporal outputs in addition to outcomes, and impact of the various interventions following the conduct of a baseline study complemented by performance assessments and result evaluation studies.

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Figure 6.1.4a. ATI Implementation Framework

A.2. STRATEGIES

The ATI implementation mechanisms for its various interventions are described below to include the strategies for prioritization and intended beneficiaries.

I. Training of Trainers (TOT) And Farmer-Level Trainings

- a) **Mode of Conduct** – The strategies to be used in the conduct of the trainings under the CFIDP will be through face-to-face, distance learning, and blended approach. Due to the current pandemic, the mode of conduct will depend on the COVID-19 situation in the different areas in the country and in compliance with the different issuances of the Inter-Agency Task Force (IATF) for the Management of Emerging Infectious Diseases following health and safety standards and protocols.
 - (i) **Face-to-Face** – This approach is conducted wherein all participants are physically present in the same place. This type of training approach will be used for topics that cannot be understood via virtual/online platforms alone. Additionally, this approach will be done for training topics that may need to assess the participants' skills which is why their physical presence is needed. However, appropriate health and safety measures should always be observed during and after the training to safeguard not only the individuals involved in the training but also the community where the training will be held.

- (ii) **Distance Learning** – This approach is done wherein the resource person and the participant/s are geographically remote from each other. This approach utilizes tri-media as well as the use of the internet for access to audio and/or video files, chat tools, and necessary application-sharing platforms. Further, distance learning may be conducted through synchronous or asynchronous manner.
 - a. **Synchronous** – This type of distance learning approach pertains to when the participants can engage with the resource person in real-time. This occurs when both the resource person and the participants are on the same online platform that enables them to interact. This type of approach allows for the exchange of knowledge and experiences between and among the participants and the resource person and get real-time feedback from the resource person.
 - b. **Asynchronous** – This refers to when the participants and the resource person are not engaged in the learning process at the same time. Thus, there is no real-time interaction among the group. This type of approach includes the provision of appropriate learning materials to be used and learned from and allows the participants to learn at their own time and pace.
 - (iii) **Blended** – This type of approach combines face-to-face and distance learning approaches. This type of approach is done to ensure the effectiveness of trainings which may require site visitations and/or actual technology demonstrations to complement distance learning activities.
- (b) **Prioritization Schemes Used** – The bases for the targeting of trainings to be implemented by the ATI are as follows:
- (i) A 1:2 ratio will be used for TOT and farmer-level trainings to be conducted.
 - (ii) Each TOT will be conducted for a total of 10 days under the blended mode of training while farmer-level trainings will be conducted for three (3) days.
 - (iii) National TOTs implemented by the Central Office will have a total of 30 participants while those conducted in the region, including the farmer-level trainings will each have a maximum of 20 participants.
 - (iv) National TOTs will be participated by the program coordinators from the ATI-Regional Training Centers (RTCs) and the Department of Agriculture – Regional Field Offices (DA-RFOs), while the Regional TOTs will be participated by Local Government Units - Agricultural Extension Workers (LGU-AEWs) and leaders of the coconut-based organized groups within the region. These LGU-AEWs and farmer leaders will conduct the farmer-level trainings with financial support from the ATI through its Grant System.

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- (v) Specified training courses/titles are based on the production support to be provided by the partner agencies. Generic title of TOT's and farmer-level trainings include the following:
- Training on Farm Business School
 - Training on Good Agricultural Practices for Coconut
 - Various Trainings on Native Animal Production and Management
 - Various Trainings on Dairy Farm Operation and Milk Processing and Management
 - Various Trainings on Coconut-Coffee/Cacao Farming System
 - Various Trainings on the Production of Coconut Products and By-products
- (vi) Consequently, the frequency of trainings to be conducted shall be based on the indicative targets contained in the proposal by partner agencies.

II. Certification of Learning Sites for Agriculture

- a) **Learning Sites for Agriculture (LSA)** refer to a farm implementing applicable agricultural technologies, employing doable farming strategies, and operating successfully. The farmer/farm family is relatively advanced in terms of practices compared to the rest of the farmers in each community. Anchored on the agriculture value chain, the LSA also covers successful agri-processing enterprises owned or operated by non-farming individuals and/or entities.
- b) **Components of LSA** – LSA serves as a model that showcases applicable agriculture technologies or agri-processing technologies that help improve the capability of small farmers and non-farming rural community members. In general, LSA should consist of technology demonstration and practicum area to complement classroom learning, a venue for practical and hands-on learning for immediate use, and an on-the-job training site.
- c) **Beneficiaries/Recipients of LSA Certification** – the certification of LSA is applicable to the following individual/institutions/organizations:
- (i) **Farming LSA.** It can be a farmer/farm family- Owned/Private Organization-Owned/Government Institution-Owned farm.
 - (ii) **Agri-Processing LSA.** It can be private individual-owned/Private Organization-Owned/Government Institution-Owned.

For the context of the Coconut Farmers and Industry Trust Fund Act, the beneficiaries for this initiative will be the coconut farmers in the registry system.

- d) **Certification of LSA** – The procedure in identifying, assessing, and certifying LSAs will be undertaken by the ATI-Central Office (CO) for LSAs in the National Capital Region (NCR); by the ATI-Regional Training Centers (ATI-RTCs) for the regional

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LSAs. The ATI-CO will issue certification to all qualified LSAs, both at national and regional levels. The certification process includes:

- i) Submission of duly accomplished documentary requirements;
- ii) Evaluation of documentary requirements;
- iii) Field validation and orientation;
- iv) Endorsement of LSA application documents to ATI-CO by the ATI-RTCs;
- v) Review and issuance of LSA Certificate by ATI-CO;
- vi) Execution of Memorandum of Agreement (MOA) and awarding of LSA Certificate and Signage.

III. School on Air (SOA) – is a form of distance learning that uses radio to address the massive information and educational needs of farmers, particularly in hard-to-reach areas. It is a series of radio programs, presenting the subject matter systematically and in a progressive manner.

a. Components of SOA – SOA comprises a series of lessons that are designed and aired successively in a radio program over a certain period. It tackles a specific subject matter with daily lessons that are usually aired for 15-20 minutes. Additionally, enrolled listeners are given quizzes after every lesson or set of lessons. A pretest is being administered before airing the lessons to determine the level of knowledge of the enrollees and a post-test is done to assess the knowledge gain of the listeners.

IV. Farm Business Advisory Services (FBAS) – The FBAS is under ATI's e-Extension Program for Agriculture and Fisheries. The FBAS uses a contact center grade software, three (3) agents who are all Licensed Agriculturists who respond to various queries on agriculture such as pest and diseases, market concerns, production technology, and e-learning concerns, among others. This activity is an additional initiative and effort of ATI to reach out and be more responsive to the needs of our coconut farmers.

a. Components of FBAS – The provision of farm business advisory services focuses on the delivery of technical assistance to farmers and AEWs in terms of making farming a profitable enterprise. This service also allows information exchange among producers, suppliers, and investors in the agriculture sector.

A.3 IMPLEMENTATION INTERVENTIONS AND PHYSICAL TARGETS

Table 6.1.4a shows that annual physical targets as envisaged by ATI in implementing the intended major interventions. As to the strategic communication and administration of e-learning courses, the projects shall include the number of e-courses to be developed and administered along with the information caravans. Outputs related to the development, enhancement, reproduction, and dissemination of knowledge products will likewise form part of the strategic communication involvement supplemented by the development of radio program materials and the documentation and publication of good agricultural practices/success stories. The training proper

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will involve largely the training of trainers at the regional level on different aspects of the production and processing of coconut and coconut by-products to include the intercrops and other land productivity improvements. Subsequently, the graduates of these trainings of trainers will conduct the farm level training on parallel topics attended by the regional trainees. The certification and enhancement of coconut learning sites will also be counted as deliverables of ATI. Lastly, the planning, monitoring and evaluation activities shall also be detailed in terms of the number of studies and planning workshops to be undertaken.

Table 6.1.4a. Annual physical targets of major programs, projects, and activities of ATI, 5 years

PPAs	UNIT OF MEASURE	PHYSICAL TARGETS					TOTAL
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
Strategic Communication and Administration of e-Learning courses							
Courseware Development of Coconut-based Farming	No. of e-courses developed	2	2	2	2	2	10
Administration of e-Learning Courses	No. of e-courses administered	2	2	2	2	2	10
Development/Enhancement of Knowledge Products	No. of KPs developed/enhanced	30	30	30	30	30	150
Reproduction/Dissemination of Knowledge Products	No. of KPs reproduced/disseminated	100,000	100,000	100,000	100,000	100,000	500,000
Information Caravans	No. of other AF related activities	81	81	81	81	81	405
Documentation and Publication of good agricultural practices/best practices/success stories	No. of success stories documented	11	11	11	11	11	55
	No. of success stories published	11	11	11	11	11	55
Development of Radio elements and program materials	No. of subject matter aired	10	10	-	-	-	20
		-	-	-	-	-	-
Training and Other Related Activities							
Inventory and Review of Training Manuals/Modules/Facilitator's Guide	No. of other AF related activities	-	-	-	-	-	-
Development of Facilitator's Guide	No. of Facilitator's guide developed	14	-	-	-	-	14
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	1,120	1,560	1,580	1,560	1,560	7,380
School on the Air	No. of SOA	16	16	27	16	27	102
	No. of graduates (farmers)	8,000	8,000	8,000	8,000	8,000	40,000
Coconut Specialist Course	No. of Trainings	17	17	17	17	17	85
	No. of Participants	350	350	350	350	350	1,750

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Continued Table 6.1.4a. Annual physical targets of major programs, projects, and activities of ATI, 5 years

PPAs	UNIT OF MEASURE	PHYSICAL TARGETS					TOTAL
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
TOT	No. of Trainings	153	154	124	174	129	734
	No. of Participants	3,450	3,470	2,610	3,810	2,690	16,030
TOT on Farm Business School	No. of Trainings	17	17	17	17	17	85
	No. of Participants	350	350	350	350	350	1,750
TOT on Good Agricultural Practices for Coconut	No. of Trainings	17	17	17	17	17	85
	No. of Participants	350	350	330	350	330	1,710
TOT on Native Chicken Production and Management	No. of Trainings	16	16	3	16	3	54
	No. of Participants	590	590	90	530	70	1,870
TOT on Native Goat Production and Management	No. of Trainings	13	13	2	13	2	43
	No. of Participants	270	270	50	270	50	910
TOT on Native Cattle Production and Management	No. of Trainings	12	12	2	12	2	40
	No. of Participants	250	250	50	250	50	850
TOT on Native Pig Production and Management	No. of Trainings	4	4	1	4	1	14
	No. of Participants	90	90	30	90	30	330
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	6	7	8	14	6	41
	No. of Participants	130	150	170	290	130	870
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	6	7	8	14	6	41
	No. of Participants	130	150	170	290	130	870
TOT on Milk Processing and Management (Goat)	No. of Trainings	6	6	8	9	12	41
	No. of Participants	130	130	170	190	250	870
TOT on Milk Processing and Management (Cattle)	No. of Trainings	6	6	8	8	13	41
	No. of Participants	130	130	170	170	270	870
TOT on Coconut-Cacao Farming System	No. of Trainings	17	17	17	17	17	85
	No. of Participants	350	350	350	350	350	1,750
TOT on Coconut-Coffee Farming System	No. of Trainings	17	17	17	17	17	85
	No. of Participants	350	350	350	350	350	1,750
TOT on Production of Coconut Products and By-products	No. of Trainings	16	15	16	16	16	79
	No. of Participants	330	310	330	330	330	1,630
Farmer-level Trainings (to be implemented by Regional TOT graduates)	No. of extension activities funded	267	265	290	291	329	1,442
	No. of farmers trained	6,140	6,100	6,700	6,640	6,680	32,260
Training on Farm Business School	No. of extension activities funded	31	31	31	31	31	155
	No. of farmers trained	620	620	620	620	620	3,100
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	31	31	31	31	31	155
	No. of farmers trained	620	620	620	620	620	3,100
Training on Native Chicken Production and Management	No. of extension activities funded	24	24	28	28	26	130
	No. of farmers trained	1,280	1,280	1,440	1,380	600	5,980
Training on Native Goat Production and Management	No. of extension activities funded	21	21	24	24	25	115
	No. of farmers trained	420	420	480	480	500	2,300
Training on Native Cattle Production and Management	No. of extension activities funded	22	22	22	22	22	110
	No. of farmers trained	440	440	460	440	460	2,240
Training on Native Pig Production and Management	No. of extension activities funded	6	6	6	6	6	30
	No. of farmers trained	120	120	120	120	120	600

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Continued Table 6.1.4a. Annual physical targets of major programs, projects, and activities of ATI, 5 years

PPAs	UNIT OF MEASURE	PHYSICAL TARGETS					TOTAL
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	10	10	14	14	24	72
	No. of farmers trained	200	200	280	280	480	1,440
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	10	10	14	14	24	72
	No. of farmers trained	200	200	280	280	480	1,440
Training on Milk Processing and Management (Goat)	No. of extension activities funded	10	10	14	14	24	72
	No. of farmers trained	200	200	280	280	480	1,440
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	10	10	14	14	24	72
	No. of farmers trained	200	200	280	280	480	1,440
Training on Coconut-Cacao Farming System	No. of extension activities funded	32	32	32	32	32	160
	No. of farmers trained	640	640	640	640	640	3,200
Training on Coconut-Coffee Farming System	No. of extension activities funded	32	32	32	32	32	160
	No. of farmers trained	640	640	640	640	640	3,200
Training on Production of Coconut Products and By-products	No. of extension activities funded	28	26	28	29	28	139
	No. of farmers trained	560	520	560	580	560	2,780
Certification of Learning Sites for Agriculture and Provision of Grants to ESPs							
Certification of coconut-based LSA/FS	No. of LSA	95	49	49	30	30	253
Enhancement of Coconut-Based LSA/FS	No. of LSA	-	75	39	39	36	189
Planning, Monitoring and Evaluation Activities							
Baseline study on the AEWs', farmers leaders', and other extension service providers' level of knowledge on coconut	No. of studies	1	-	-	-	-	1
Result Evaluation Study	No. of studies	-	-	-	-	1	1
Formulation of Annual, Mid-term, and Long-term Plans	No. of planning workshops	2	2	2	2	2	10
Performance Assessments	No. of internal assessments	2	2	2	2	2	10

B. SELECTION OF ATI TRAINING BENEFICIARIES

The types of target beneficiaries of ATI training interventions vary. The participants in the National TOTs shall be selected program coordinators from the ATI-Regional Training Centers (RTCs) and the Department of Agriculture – Regional Field Offices (DA-RFOs), while the participants in the Regional TOTs shall be selected by LGU-AEWs and leaders of coconut-based organized groups within the region. The training of beneficiaries registered in the NCFRS by ATI is expected to be complemented by the capability enhancement of the scholars trained through TESDA.

The beneficiaries/recipients of LSA certification are the following individuals, institutions, or organizations:

- (a) Farming LSA. It can be a farmer/farm family-owned/private organization-owned/government institution-owned farm.

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(b) Agri-Processing LSA. It can be private individual-owned/private organization-owned/government institution-owned.

For the school on the air program, the target beneficiaries are coconut farmers particularly in hard-to-reach areas to address their information and educational needs. Moreover, students, agricultural extension workers, and other stakeholders are also targeted as the secondary audience of the program.

Since the modality used in Farm Business Advisory Services is via an online platform, the program is expected to benefit the wide scope of the agriculture sector primarily the following: a) Agricultural Extension Workers; b) coconut farmers including the young farmers; c) LGUs; d) agricultural market players (producers and suppliers) and business organizations; e) private extension service providers; and f) other stakeholders who would like to venture into an agriculture business.

C. INDICATIVE INVESTMENT REQUIREMENT

C.1 Indicative Annual Budget Allocation by Major Program, Projects, and Activities of ATI

Table 6.1.4c shows the yearly budgetary requirements of the various interventions of ATI corresponding to their annual physical targets in million pesos including the total figures for the next five years. The figures are based on the prior appraisals of ATI for analogous projects undertaken in the past and described in detail the engagement with the partner implementing agencies as indicated in the remarks column

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Table 6.1.4c. Annual indicative funding requirements per program, projects, and activities to be implemented by ATI, 5 years

PPAs	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					TOTAL	REMARKS
	YEAR 2	YEAR 3	YEAR 4	YEAR 5			
Strategic Communication and Administration of e-Learning courses							
Courseware Development of Coconut-based Farming	0.2	0.2	0.2	0.2	0.2	1.0	
Administration of e-Learning Courses	0.1	0.1	0.1	0.1	0.1	0.5	
Development/Enhancement of Knowledge Products	4.5	4.5	4.5	4.5	4.5	22.5	Videos of farming system and coconut production technologies
Reproduction/Dissemination of Knowledge Products	4.9	4.9	4.9	4.9	4.9	24.5	
Information Caravans	3.8	3.8	3.8	3.8	3.5	18.5	
Documentation and Publication of good agricultural practices/best practices/success stories	3.3	3.3	3.3	3.3	3.3	16.5	Videos/print materials of success stories and best practices
Development of Radio elements and program materials	0.4	0.4	-	-	-	0.8	Radio plugs, stingers, OBB, CBB, commercials, etc
Training and Other-related Activities							
Inventory and Review of Training Manuals/ Modules/Facilitator's Guide	-	-	-	-	-	-	This will be conducted virtually, hence, no cost
Reproduction and Dissemination of Facilitator's Guide	1.7	2.3	2.4	2.3	2.3	11.1	
School on the Air	12.0	12.0	20.8	12.0	20.8	77.6	
Coconut Specialist Course	8.1	7.6	8.1	7.6	7.6	39.1	For selected AEWs, ATI and RFO personnel
TOT							
TOT on Farm Business School	8.1	8.1	8.1	8.1	8.1	40.6	
TOT on Good Agricultural Practices for Coconut	8.1	8.1	8.1	8.1	8.1	40.6	
TOT on Native Chicken Production and Management	7.6	7.6	2.1	7.6	2.1	27.1	Under diversified farming systems/farm improvement; (With BAI)

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Table 6.1.4c. Annual indicative funding requirements per program, projects, and activities to be implemented by ATI, 5 years

PPAs	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					TOTAL	REMARKS	
	YEAR 2	YEAR 3	YEAR 4	YEAR 5				
TOT on Native Goat Production and Management	6.62	6.62	2.12	6.62	2.12	24.10	Under diversified farming systems/farm improvement (With BAI)	
TOT on Native Cattle Production and Management	6.12	6.12	1.62	6.12	1.62	21.60		
TOT on Native Pig Production and Management	2.12	2.12	0.62	2.12	0.62	7.60		
TOT on Dairy Farm Operation and Management (Goat)	3.12	3.62	3.62	7.12	3.12	20.60		
TOT on Dairy Farm Operation and Management (Catle)	3.12	3.62	3.62	7.12	3.12	20.60		
TOT on Milk Processing and Management (Goat)	3.12	3.12	3.62	4.62	6.12	20.60		
TOT on Milk Processing and Management (Cattle)	3.12	3.12	3.62	4.12	6.62	20.60		
TOT on Coconut-Cacao Farming System	8.12	8.12	8.12	8.12	8.12	40.60		
TOT on Coconut-Coffee Farming System	8.12	8.12	8.12	8.12	8.12	40.60		
TOT on Production of Coconut Products and By-products	8.12	7.62	8.12	8.12	8.12	40.10	(With PhilMech)	
Farmer-level Trainings (to be implemented by Regional TOT graduates)								
Training on Farm Business School	6.00	6.00	6.00	6.00	6.00	30.00	to be implemented by the RTCs	
Training on Good Agricultural Practices for Coconut	6.00	6.00	6.00	6.00	6.00	30.00		
Training on Native Chicken Production and Management	4.80	4.80	5.60	5.60	5.20	26.00		
Training on Native Goat Production and Management	4.20	4.20	4.80	4.80	5.00	23.00		
Training on Native Cattle Production and Management	4.40	4.40	4.40	4.40	4.40	22.00		
Training on Native Pig Production and Management	1.20	1.20	1.20	1.20	1.20	6.00		
Training on Dairy Farm Operation and Management (Goat)	2.00	2.00	2.40	2.80	4.80	14.00		
Training on Dairy Farm Operation and Management (Catle)	2.00	2.00	2.40	2.80	4.80	14.00		
Training on Milk Processing and Management (Goat)	2.00	2.00	2.40	2.80	4.80	14.00		
Training on Milk Processing and Management (Cattle)	2.00	2.00	2.40	2.80	4.80	14.00		
Training on Coconut-Cacao Farming System	6.00	6.00	6.00	6.00	6.00	30.00		
Training on Coconut-Coffee Farming System	6.00	6.00	6.00	6.00	6.00	30.00		
Training on Production of Coconut Products and By-products	5.60	5.20	5.60	5.80	5.60	27.80		
Certification of Learning Sites for Agriculture and Provision of Grants to ESPs								
Certification of coconut-based LSA/FS	16.45	8.40	8.40	5.08	5.08	43.40		
Enhancement of Coconut-Based LSA/FS	-	10.03	5.00	5.00	4.63	24.65		
Provision of Grants								
Provision of Grants to other ESPs thru the AFE Grant System	12.48	11.66	58.87	85.83	207.56	376.39		
Planning, Monitoring and Evaluation Activities								
Baseline study on the AEWs', farmers leaders', and other extension service providers' level of knowledge on coconut	2.10	-	-	-	-	2.10		
Result Evaluation Study	-	-	-	-	2.50	2.50		
Formulation of Annual, Mid-term, and Long-term Plans	1.13	1.47	1.48	1.16	1.16	6.38		
Performance Assessments	1.13	1.47	1.48	1.16	1.16	6.39		
TOTAL	200.00	200.00	240.00	280.00	400.00	1,320.00		

C.2 Indicative Annual Budget Allocation of ATI at the National and Regional Levels

Of the annual budget allocation from the Coconut Farmers and Industry Trust Fund, 8% shall be for the implementation of the Training for coconut farmers and their families sub-program component, to be equally shared by ATI and TESDA. The indicative investment requirement for the implementation of this sub-program component shall increase from PHP 400.0 M in year 1 to PHP 800 M in year 5. The total indicative investment requirement for the training component shall be PHP 2.64 B for five years. Proportional allocation method was employed to determine the indicative regional investment requirement for the training component based on the total number of the number of cooperatives and farmers' organizations (25%) and NCFRS registered farmers (25%), while taking into consideration the budget for the Community-Based Farm Improvements program component (25%) and the Shared Facilities program component (25%). This indicative annual budget allocation is subject to an Annual Review to reflect the varying needs of the program and changing field conditions.

Table 6.1.4d presents the annual national and regional indicative budget allocation (in million pesos) to be conducted by ATI in collaboration with other partner implementing agencies of the CFIDP. This includes an allocation for a nationwide set of activities that will complement the regional activities. The totals vary in each year with the highest requirement at Year 4 alongside the totals for the other years which are not far behind (Annex Table 6.1.4.1 - Table 6.1.4.1.16) for the detailed programs and budget for each region).

Table 6.1.4d. Annual and regional indicative investment requirement for the Training Sub-project Component under ATI, 5 years

REGIONS	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Nationwide	39.00	36.80	83.60	109.90	234.20	503.50
Region I (Ilocos Region)	8.70	12.30	7.40	12.70	7.60	48.70
Region II (Cagayan Valley)	12.40	8.00	12.50	8.90	12.50	54.40
Region III (Central Luzon)	9.10	8.80	8.70	12.80	12.10	51.70
Region IV-A (CALABARZON)	8.10	11.80	8.10	9.30	10.70	48.10
Region IV-B (MIMAROPA)	8.50	9.60	11.90	11.90	10.50	52.50
Region V (Bicol Region)	12.30	8.70	12.30	9.00	10.30	52.50
Region VI (Western Visayas)	12.50	8.90	8.70	12.10	11.80	54.00
Region VII (Central Visayas)	10.10	10.30	12.70	11.10	11.50	55.50
Region VIII (Eastern Visayas)	9.80	13.80	9.10	13.00	12.20	57.80
Region IX (Zamboanga Peninsula)	13.50	10.10	9.60	13.40	9.10	55.70
Region X (Northern Mindanao)	11.10	11.30	13.80	11.50	12.20	59.90
Region XI (Davao Region)	11.50	15.30	10.30	11.50	12.40	61.10
Region XII (SOCCSKSARGEN)	13.30	9.80	11.60	10.50	10.10	55.30
Region XIII (Caraga)	8.70	12.50	8.50	11.90	11.70	53.30
BARMM	11.40	11.90	11.30	10.30	11.10	56.00
TOTAL	200.00	200.00	240.00	280.00	400.00	1320.00

6.1.4.3 TESDA's IMPLEMENTATION PLAN

A.1 TESDA's Implementation Framework

To meet the capacity building and learning needs of coconut farmers and their families, TESDA is envisioning various interventions through its programs, projects, and activities such as the provision of TESDA scholarships to identified farmer beneficiaries, development of training regulations and competency standards for new and emerging coconut training programs and facilitating the conduct of skills training and assessment for the recognized beneficiaries (Figure 6.1.4b). Like ATI, TESDA will adopt a monitoring and evaluation system to gather, document, and probe the intertemporal outputs, outcomes, and impact of the various interventions.

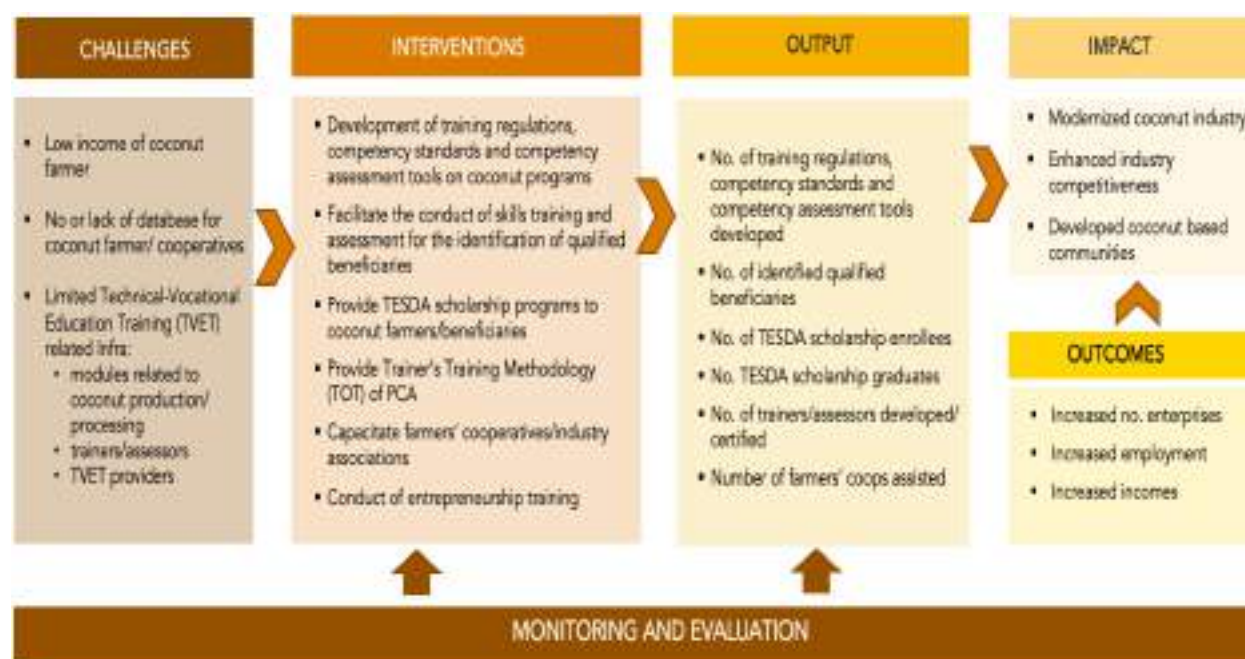


Figure 6.1.4b. TESDA's project implementation framework

A.2 STRATEGIES

TESDA is mainly adopting the Seek-Find-Train-Assess-Certify-Employ Framework as its overall strategy in the upskilling and retooling of Filipino Workers.

SEEK – This means seek the job opportunities in the global market, as well as in the national and the local levels. For this, TESDA is adopting the Area-Based and Demand-Driven Technical-Vocational Education Training (TVET) in responding to the skills priorities of the industries and emerging skills needs in the area through Skills Mapping, Competency Standards and Competency-Based-Curriculum (CBC) Development, Capability Building Program for Trainers, and Program Registration/Recognition.

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FIND – TESDA is actively searching for qualified and deserving individuals among its target clients to find those who have the right aptitude and attitude to complete the required training as TESDA scholars.

TRAIN – In addition to the traditional delivery modes of Institution-Based Training (IBT), Enterprise-based Training (EBT), Community-Based Training (CBT), TESDA has also adopted Flexible Learning such as full-online, blended, and distance learning in the delivery of TVET through its network of public and private Technical Vocational Institutions (TVIs) which include farm schools.

ASSESS & CERTIFY – Graduates of the training programs or skilled workers with the relevant industry experience are assessed and those who shall pass the competency assessment will be issued with a National Certificate (NC) or Certificate of Competency (COC) from TESDA. TESDA also adopts flexible modes in the conduct of assessment such as online/virtual assessment and portfolio assessment.

EMPLOY – TESDA is exerting all efforts to ensure that its TESDA Scholarship Program will result in employment or livelihood after the training. This is done through employment facilitation efforts and other forms of post-training assistance (e.g., provision of starter toolkits, entrepreneurship training) in coordination with partner National Government Agencies, LGUs, Industry Chambers & Associations, and other partners as well as through Job Linkaging and Networking Services (JoLiNS) and World Cafe of Opportunities (WCO).

A.3 Implementation Mechanism

1. Program Registration/Recognition/Accreditation

As a general policy, all public and private TVIs must register their training programs with TESDA especially if this is going to be funded by the TESDA Scholarship Programs. The registration process is governed by the Unified TVET Program Registration and Accreditation Systems (UTPRAS).

2. Application for Scholarship Allocation

The following are the general procedures involved in the submission, processing, and approval of scholarship allocation:

- a. TVIs (including farm schools) with registered programs should submit qualification maps/project proposals to the TESDA Provincial Offices (POs) to apply for scholarship funding for a particular program/qualification that the TVI intends to provide.
- b. The TESDA POs/ROs evaluate and forward these documents to the TESDA Central Office through the Scholarship Management Division (ROMO-SMD) for processing and endorsement to the Director General for approval.
- c. Scholarship Grant Certificates (SGCs) shall be released from the ROMO-SMD to the TESDA ROs/POs for issuance to the beneficiaries.

3. Conduct of the Training and Assessment

The following are the general procedures involved in the implementation of a program/qualification under the TESDA Scholarship Programs:

- a. TVIs with approved qualification maps/project proposals in collaboration with the TESDA shall conduct a Training Induction Program (TIP) to orient the scholars prior to undergoing training.
- b. The learners' profile, enrollment report, and results of the training/assessment shall be encoded to the TESDA's database (T2MIS) for monitoring and reporting.
- c. After the training, scholars shall undergo the mandatory assessment for programs/qualifications with Competency Assessment Tools (CATs). These are usually programs/qualifications with Training Regulations such as Agricultural Crops Production NC III wherein if the learner passes the assessment, he/she will be issued with a corresponding National Certificate for that qualification.
- d. The payment to the TVIs and Assessment Centers shall be released upon completion of the training program/competency assessment and submission of requirements and supporting documents.

A.4 Training Capacity of TVIs

Currently, the annual training capacity of the TVIs with registered programs for these selected qualifications is shown in Table 6.1.4e.

Table 6.1.4e. Absorptive capacity based on submitted TVI capacity inventory

QUALIFICATION	NO. OF PARTICIPATING TVIs	ANNUAL CAPACITY (NO. OF TRAINING SEATS)
Agricultural Crops Production NC I	70	6,870
Agricultural Crops Production NC II	162	16,740
Agricultural Crops Production NC III	59	4,702
Animal Production (Ruminants) NC II	25	3,090
Animal Production (Poultry-Chicken) NC II	77	9,376
Organic Agriculture Production NC II	404	56,492
Agro-entrepreneurship NC II	47	2,764
Coffee Production Level II	3	850
TOTAL	847	100,884

B. CRITERIA FOR THE SELECTION OF BENEFICIARIES

The target beneficiaries for this program shall be coconut farmers and their relatives up to the 4th level of consanguinity, as well as members of the community where the farm schools are located.

Scholars under this program must be at least 18 years of age at the time that the individual would finish the training program. For qualifications with Training Regulations, the scholars wishing to enter these training programs should possess the Trainee Entry Requirements as defined in the corresponding training regulations promulgated by TESDA, such as, but not limited to the following: a) able to read and write; b) can communicate either orally or written; c) physically and mentally fit; d) with good moral character; and e) can perform basic mathematical computation.

Beneficiaries under this program may be entitled to the following benefits: a) free Skills Training; b) free Entrepreneurship Training (3 days); c) free National Competency Assessment; d) training support fund/training allowance (P160/day); e) new normal assistance for Internet and/or H/PPE (P1000/scholar); and f) accident insurance coverage.

Table 6.1.4f shows the annual target for each training component that incorporated the implementation plan of partner agencies such as the NDA, BAI, HVCDP, PHilMech and PCA. The distribution is based on the identified skills requirements in the regional plan proposal: 70% for crops, 13% livestock, 13% processing, and 4% for entrepreneurship. Trainings on crop production include Agricultural Crops National Certificate I, II and III, Organic Agriculture, and coffee production. Livestock trainings cover animal production such as ruminants and poultry. On the other hand, trainings on processing fall into the category of new and emerging skills while the training on entrepreneurship is the Agroentrepreneurship National Certificate.

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Table 6.1.4f. Number of target beneficiaries - training component, TESDA, 5 years

PPAS (IMPLEMENTATION OF TESDA SCHOLARSHIP PROGRAMS FOR SELECTED QUALIFICATIONS)		KEY PERFORMANCE INDICATORS	PHYSICAL TARGET					TOTAL
			YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
A. TRAINING COMPONENT								
Agriculture Crops Production NC I	No. of enrollees (Coconut)	817	812	976	1,139	1,630	5,374	
	No. of enrollees (High Value Crops Development Program)	679	675	811	947	1,354	4,466	
	Total enrollees	1,497	1,487	1,787	2,086	2,984	9,841	
	No. of graduates	1,347	1,339	1,608	1,878	2,686	8,858	
Agriculture Crops Production NC II	No. of enrollees (Coconut)	1,680	1,670	2,006	2,342	3,350	11,048	
	No. of enrollees (High Value Crops Development Program)	1,655	1,645	1,977	2,308	3,301	10,886	
	Total enrollees	3,335	3,316	3,983	4,650	6,651	21,935	
	No. of graduates	3,002	2,984	3,585	4,185	5,986	19,742	
Agriculture Crops Production NC III	No. of enrollees	1,516	1,507	1,810	2,113	3,023	9,969	
	No. of graduates	1,364	1,356	1,629	1,902	2,721	8,972	
Coffee Production Level II	No. of enrollees	128	127	153	179	256	843	
	No. of graduates	115	115	138	161	230	759	
Animal Production (Ruminants) NC II	No. of enrollees	211	210	252	294	421	1,388	
	No. of graduates	190	189	227	265	379	1,250	
Animal Production (Poultry-Chicken) NC II	No. of enrollees	998	992	1,192	1,391	1,990	6,563	
	No. of graduates	898	893	1,072	1,252	1,791	5,906	
Organic Agriculture Production NC II	No. of enrollees	1,690	689	827	966	1,382	5,554	
	No. of graduates	1,521	620	745	869	1,244	4,999	
Agroentrepreneurship NC II	No. of enrollees	497	494	593	693	991	3,268	
	No. of graduates	447	444	534	623	892	2,940	
New and Emerging Skills	No. of enrollees		1,242	1,492	1,742	2,492	6,968	
	No. of graduates		1,118	1,343	1,568	2,243	6,272	
Sub-total, Training Component	No. of enrollees	9,871	10,063	12,089	14,114	20,190	66,327	
	No. of graduates	8,884	9,058	10,881	12,703	18,172	59,698	
B. DEVELOPMENT OF PROGRAMS/QUALIFICATIONS RELATED TO COCONUT PRODUCTION AND PROCESSING								
Development of Training Regulations/Competency Standards	No. TR/CS Developed		1	1	1	1	4	
Competency-Based Curriculum (CBC) Development	No. of CBC Developed		1	1	1	1	4	
Development of Competency Assessment Tools (CATs)	No. of CATs Developed		1	1	1	1	4	
Formulation of Assessment Fees	No. of Promulgated Assessment Fees (AF)		1	1	1	1	4	
Sub-total, Program Development Component			4	4	4	4	16	
GRAND TOTAL	No. of enrollees	9,871	10,063	12,089	14,114	20,190	66,327	
	No. of graduates	8,884	9,058	10,881	12,703	18,172	59,698	
	No. of TR/CS/CBC/ CAT Developed/ Promulgated AF		4	4	4	4	16	

C. INDICATIVE FUNDING REQUIREMENT FOR PROGRAM IMPLEMENTATION

C.1 Indicative Annual Allocation Per TESDA Training Component

The indicative annual budget allocation per training component is proportionally based on the target beneficiaries identified in the previous table. Detailed description and specific bases for the computation are contained in the Remarks section (Table 6.1.4g).

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Table 6.1.4g. Annual budget allocation, Training Component, TESDA, 5 years

PPAS (IMPLEMENTATION OF TESDA SCHOLARSHIP PROGRAMS FOR SELECTED QUALIFICATIONS)	BUDGET ALLOCATION (IN MILLIONS, PHP)					TOTAL	REMARKS
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5		
A. TRAINING COMPONENT							
Agriculture Crops Production NC I	24.37	24.23	29.11	33.98	48.60	160.30	This qualification involves competencies for farm laborers in the production of crops (coffee, coconuts). Workers at this level would be working without previous experience. They would be undertaking a small range of skills and they would be under constant supervision or working alongside a more competent worker with some supervisory skills.
							Physical targets are based on a per capita cost (PCC) of 16,280.80 per scholar under the Program on Accelerating Farm School Establishment (PAFSE) (Benefits under PAFSE include free training and assessment, P160/day training allowance, new normal assistance of P1,000/scholar for health/PPE allowance and internet/communication allowance, accident insurance coverage, and entrepreneurship training)
Agriculture Crops Production NC II	64.40	64.02	76.90	89.78	128.42	423.53	This qualification involves competencies for farmers/growers, farm workers/caretakers in the production of various crops (coconut, coffee, cacao). This includes performing nursery operations, planting, caring, and maintaining of crops and carrying-out harvest and postharvest operations.
							Physical targets are based on a PCC of Php19,305.80 per scholar under the PAFSE
Agriculture Crops Production NC III	29.20	29.03	34.87	40.71	58.23	192.05	This qualification involves competencies for farm owners/operators and leading hands in making decisions and carrying out competencies involving the establishment, maintenance, and harvesting of agronomic crops such as coconuts, coffee, cotton, sugar cane, coarse grains, grain legumes, soya beans, and peanuts.
							Physical targets are based on a PCC of Php19,260.80 per scholar under the PAFSE
Coffee Production Level II	1.65	1.64	1.97	2.30	3.28	10.83	Competencies focus on production, from planting to harvesting and marketing of the coffee beans.
							Physical targets are based on a PCC of Php12,800.80 per scholar under the PAFSE
Animal Production (Ruminants) NC II	5.99	5.95	7.15	8.35	11.94	39.38	This qualification consists of competencies which involve breeding and raising ruminants for production of milk and meat. Ruminants include both the large (cattle and buffalo) and small (goat and sheep) ruminants.
							Physical targets are based on a PCC of Php28,310.80 per scholar under the PAFSE
Animal Production (Poultry- Chicken) NC II	18.17	18.06	21.69	25.33	36.23	119.48	This qualification involves competencies needed to maintain poultry housing, brood and grow chicks, perform pre-lay and lay activities, and trim beaks. These functions are required for individuals who will work in a poultry farm (broiler and layers).
							Physical targets are based on a PCC of Php18,199.80 per scholar under the PAFSE
Organic Agriculture Production NC II	50.87	20.75	24.92	29.10	41.62	167.25	This qualification consists of competencies that a person must achieve to produce organic farm products such as chicken and vegetables including producing of organic supplements such as fertilizer, concoctions and extracts. It has two (2) elective competencies which are on raising organic hogs and raising organic small ruminants.
							Physical targets are based on a PCC of Php30,099.80 per scholar under the PAFSE
Agroentrepreneurship NC II	5.36	5.32	6.40	7.47	10.68	35.22	Assess market opportunities, establish farm production plan, handle finances, and market produce
							Physical targets are based on a PCC of Php10,774.40 per scholar under the PAFSE
New and Emerging Skills		29.83	35.83	41.83	59.83	167.30	New and emerging skills refer to skill requirements that are the results of expansion of new markets and technological changes. This may include qualifications related to coconut production and processing technologies, and value addition of coconut products which are not yet covered by TESDA's existing training regulations. Includes Training Modules from NDA (e.g. Intro to GMP, SSOP and Milk Processing, AI/PD Training for SCFO AI technician)
							Physical targets are based on an average PCC of Php24,000.00 per scholar under the TESDA Scholarship Programs. The approval of the funding per project will be based on the proposal of the project proponent.
Sub-total, Training Component	200,000.00	198,835.00	238,835.00	278,835.00	398,835.00	1,315,340.00	

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Continuation of Table 6.1.4g. Annual budget allocation, Training Component, TESDA, 5 years

PPAS (IMPLEMENTATION OF TESDA SCHOLARSHIP PROGRAMS FOR SELECTED QUALIFICATIONS)	BUDGET ALLOCATION (IN MILLIONS, PHP)					TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
B. DEVELOPMENT OF PROGRAMS/QUALIFICATIONS RELATED TO COCONUT PRODUCTION AND PROCESSING						
Development of Training Regulations/Competency Standards		700	700	700	700	2,800
Competency-Based Curriculum (CBC) Development		75	75	75	75	300
Development of Competency Assessment Tools (CATs)		300	300	300	300	1,200
Formulation of Assessment Fees		90	90	90	90	360
Sub-total, Program Development Component		1,165	1,165	1,165	1,165	4,660
Grand Total	200,000	200,000	240,000	280,000	400,000	1,320,000

Table 6.1.4h shows the indicative regional budget allocation for the Training subproject component under TESDA.

Table 6.1.4h. Estimated regional budget allocation for the Training Sub-project Component under TESDA, 5 years

CFIDP PROGRAMS (Training of Coconut Farmers and their Families)	REGIONAL INDICATIVE BUDGET ALLOCATION (IN MILLIONS, PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	0.47	0.48	0.57	0.65	0.93	3.11
Region II (Cagayan Valley)	0.63	0.65	0.77	0.90	1.29	4.24
Region III (Central Luzon)	1.16	1.15	1.38	1.61	2.29	7.58
Region IV-A (CALABARZON)	19.52	19.47	23.36	27.26	38.88	128.49
Region IV-B (MIMAROPA)	8.35	8.35	10.01	11.69	16.67	55.07
Region V (Bicol Region)	9.59	9.59	11.54	13.45	19.33	63.51
Region VI (Western Visayas)	18.22	18.26	21.90	25.55	36.49	120.42
Region VII (Central Visayas)	23.26	23.24	27.91	32.55	46.46	153.42
Region VIII (Eastern Visayas)	27.50	27.50	33.01	38.52	55.06	181.59
Region IX (Zamboanga Peninsula)	18.90	18.90	22.65	26.41	37.71	124.56
Region X (Northern Mindanao)	12.07	12.08	14.49	16.91	24.13	79.68
Region XI (Davao Region)	21.10	21.08	25.31	29.52	42.15	139.16
Region XII (SOCCSKSARGEN)	10.95	10.96	13.15	15.36	21.95	72.36
Region XIII (Caraga)	12.08	12.09	14.51	16.93	24.22	79.83
BARMM	16.20	16.21	19.45	22.69	32.43	106.98
TOTAL	200.00	200.00	240.00	280.00	400.00	1,320.00

6.2 COCONUT FARMERS ORGANIZATION AND EMPOWERMENT THROUGH COOPERATIVES

6.2.1 PROJECT DESCRIPTION

The value of organizing individual coconut farmers is indisputably immense in improving the welfare of the primary stakeholders in the coconut industry. However, majority of the coconut farmers are unorganized and likely living in the margins and if organized need further assistance in developing their capabilities in managing their organizations and enterprises. The organization and development of coconut farmers into mature and viable cooperatives particularly the cooperative-beneficiaries under the Community-based Farm Development program components of CFIDP becomes a requisite in furthering the modernization of the industry and making it globally competitive.

RA 11524 stipulates that the CDA shall be responsible for organizing and empowerment of coconut farmer organizations and their cooperatives. The law provides that five (5%) of the annual budget allocation from the Trust Fund shall be utilized by CDA for farmers' cooperatives and LGUs for coconut farmers' organizations. LGUs shall create local small farmers councils to provide mechanisms for consultation and participation.

Meanwhile, under RA 11364 (An Act Reorganizing and Strengthening the Cooperative Development Authority), it is stipulated that it is the policy of the State to promote the viability and growth of cooperatives as instruments of equity, social justice, and economic development and to create an agency, in fulfillment of the mandate in Section 15, Article XII of the 1987 Constitution. Furthermore, the State recognizes cooperatives as associations organized for the economic and social betterment of their members, operating business enterprises based on mutual aid, and founded upon internationally accepted cooperative principles and practices. It is in this regard that the State recognizes the CDA as primarily responsible for the institutional development and regulation of cooperatives through partnership with the cooperative sectors and the academe.

The general objective of the Coconut Farmers Organization and Empowerment through Cooperatives program component is to organize strong and self-sufficient coconut farmers cooperatives operating viable agribusiness enterprise/s, providing tangible economic opportunities and benefits to its member-coconut farmers, and adhering to the principles of cooperativism. The specific objectives of this program component are: 1) assist in increasing the productivity and income of coconut farmers cooperatives and its members through providing livelihood opportunities and integrate supply and value chain process in their business operation; 2) enhance the entrepreneurial skills, managerial expertise, and technical skills required for the efficient operation of their cooperatives; 3) to be a competent and responsive member of the cooperative and instill patriotism in every heart of the farmers to synergize in the mandate of the authority implying that their productivity to uplift the standards of their cooperative is mandated to sustain our overall integrity; 4) upgrade technical skills of coconut farmers on coconut production and processing; 5) encourage and assist coconut farmers groups/organizations to organize into cooperatives or join existing cooperatives; and 6) assist in marketing their produce through online market platforms and digital technologies.

6.2.2 IMPLEMENTATION PLAN

A.1 IMPLEMENTATION FRAMEWORK

Figure 6.2a shows the project implementation framework with the problem areas predicated on the premise that coconut farmers are largely unorganized, existing cooperatives are not fully capable of managing cooperatives and coco-based enterprises, there are inadequate market and livelihood opportunities, and available logistics, processing, and other post-harvest facilities, are in the main, lacking. Thus, the set of interventions are distinguished by the status of organization or the lack of it.

There are packages of intervention for existing coconut farmers' cooperatives, a separate array for coconut farmers' organizations and another set for autonomous individual coconut farmers. For capability enhancement, the activities will entail the Cooperative Organizational training such as Cooperative Management and Governance, Fundamentals of Cooperatives, and Financial Management. Enterprise Development training consists of starting or improving the business operations and expanding the business from micro- to medium scale. Training on coconut production will involve the value chain of coconut, marketing strategies and feasibility study preparation.

Orientations will be given to unorganized farmers either to form their own organization or join an existing farmers' organization or cooperative. For existing coconut farmers' organizations, social preparation will be undertaken through orientations on cooperatives, the conduct of pre-registration seminar and technical assistance on the preparation of registration requirement.

Other interventions pertain to support mechanisms, market matching, financial assistance, networking, project documentation and capability building for CDA personnel, among others. These interventions are intended to produce the desired outputs that will be continuously monitored by the implementing agencies to achieve the yearned outcomes. These outcomes entail cooperatives operating as viable agribusiness enterprises, farmers' skills are enhanced, markets are established, common facilities are instituted and utilized as well as new products and strategies developed. In the long term, the program seeks to accomplish increased income for the small farmers, employment opportunities are generated and the coconut industry as well as the cooperatives become competitive in the local and international markets.

Chapter 6.2 Coconut Farmers Organization and Empowerment Through Cooperatives



Figure 6.2a. CDA's project implementation framework

For Monitoring and Evaluation, the intent is for the project to be monitored quarterly by the CDA Head Office together with the Project Management Team and CDA Extension Offices. The Joint Project Management Team shall assess the implementation of the project and shall recommend appropriate action to further the implementation of the project.

A.2 STRATEGIES

CDA will develop a needs assessment tool to be able to conduct the assessment of the beneficiaries and firm up a baseline database of the intended beneficiaries. The output will be evaluated by the number of tools developed, number of organizations assessed, and the number of reports prepared. As to the capability enhancement of existing cooperatives, training will be provided for the cooperative officers and members on organizational development, cooperative

management and governance, and financial management, among others with the number of cooperatives and farmer-members trained as the verifiable indicators. Trainings on enterprise development and on coconut production and marketing are likewise planned to provide the needed value addition to coconut farms and precipitate the increase in income as envisioned by the program.

In reference to the conversion of organizations into cooperatives, CDA is tasked to provide social preparation through orientation on cooperatives and pre-registration seminars. Technical assistance as well as cost subsidies will be provided by CDA for the eventual registration into cooperatives. Corollary, the identifiable indicators will be the number of orientations and pre-registration seminars conducted as well as the number of assisted organizations and their members together with the amount of subsidies provided for the registration of cooperatives.

The various trainings will prompt the development of information and learning materials which will be measured in terms of the number of materials developed, number of success stories and audio-visual materials produced including the development of training standards. An accompanying support system and mechanism is vital for the success of cooperatives which will be in the form of providing assistance and subsidies in the preparation of financial and audit statements, deployment of on-line accounting systems and formation of cooperative primaries into federations. Innovative initiatives of CDA are in the offing for registered cooperatives through the provision of start-up capital and seed capital for businesses of existing cooperatives.

A.3 IMPLEMENTATION MECHANISM

In terms of prioritization in the implementation of the Plan, the following strategies will be undertaken:

1. The clustering of regions approach will be observed to consolidate resources and achieve more impact;
2. The concentration of interventions or activities will be based on the number of existing cooperatives, coconut farmers' organizations and registered coconut farmers under the NCFRS;
3. Interventions will be pilot-tested in the initial priority cluster/s or regions;
4. Experiences and best practices will then be enhanced for implementation in the ensuing cluster of regions; and
5. Development Management Teams will be created or organized per cluster of regions to identify and implement appropriate inventions.

A.4 CREATION OF LOCAL SMALL COUNCILS

Concomitant with this plan for the organization and empowerment of the coconut farmers as mandated to CDA, the LGUs are likewise directed to do the same to coconut farmers' organizations and are enjoined to create local small farmer councils, through an ordinance, to provide mechanisms for consultation and participation during the Plan implementation. These

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small farmer councils at the municipal level will be composed of farm workers, tenants, and small farm owners to be elected, with a term of three years, from the members of coconut farmers' organizations in the municipality and to be chaired by the local chief executive and the municipal cooperative development officer as vice-chair. The PCA and CDA representatives in the locality will serve as ex-officio members of the small farmer councils. PCA will validate if the coconut farmer-representatives in local councils are NCFRS-registered.

B. TARGET BENEFICIARIES AND ORGANIZATIONS

Based on the 2020 and 2021 figures provided by the PCA on the number of active coconut farmers' organizations (CFCs) and coconut farmers' cooperatives (CFOs) per region and the number of NCFRS-registered coconut farmers, respectively, the target beneficiaries of this program sum up with the following data as exhibited in Table 6.2.1a:

1. 2.5 M registered coconut farmers nationwide;
2. 8,819 active and 1,942 inactive coconut farmer organizations nationwide; and
3. 783 active and 145 inactive coconut farmer cooperatives.

Table 6.2.1a. Number of NCFRS-registered farmers, active and inactive CFCs and CFOs in major producing regions

REGION	NUMBER OF ACTIVE CFCs	NUMBER OF ACTIVE CFOs	TOTAL NUMBER OF CFCs AND CFOs	NUMBER OF NCFRS- REGISTERED FARMERS IN	NUMBER OF INACTIVE CFCs	TOTAL INACTIVE CFCs AND CFOs
Region I (Ilocos Region)	10	11	21	5,734	-	-
Region II (Cagayan Valley)	6	26	32	7,784	1	-
Region III (Central Luzon)	8	64	72	14,386	-	12
Region IV-A (CALABARZON)	42	252	294	248,269	23	6
Region IV-B (MIMAROPA)	85	317	402	105,802	-	13
Region V (Bicol Region)	57	712	769	120,449	63	402
Region VI (Western Visayas)	69	928	997	231,786	9	62
Region VII (Central Visayas)	34	664	698	294,486	21	1,050
Region VIII (Eastern Visayas)	99	1,653	1,752	349,473	20	317
Region IX (Zamboanga Peninsula)	55	1,056	1,111	239,736	-	-
Region X (Northern Mindanao)	130	612	742	153,050	-	-
Region XI (Davao Region)	38	754	792	267,781	4	30
Region XII (SOCCSKSARGEN)	50	662	712	138,721	4	31
Region XIII (Caraga)	66	982	1,048	153,303	-	19
BARMM	34	126	160	206,393	-	-
TOTAL	783	8,819	9,602	2,537,153	145	1,942

Source: Number of Active CFCs and CFOs are from PCA as of December 2020
Number of NCFRS-registered farmers is from PCA as of August 28, 2021

Based on the absorptive capacity of CDA, the regional targets set by the PCA regional planners were adjusted. The annual targets for the organization development of individual coconut farmers and existing organizations/cooperatives are shown in Table 6.2.1b.

Table 6.2.1b. Annual target beneficiaries for the Coconut Farmers Organization and Empowerment through Cooperatives program component based on the absorptive capacity of CDA

NUMBER	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
CFCs served	893	1,021	1,247	1,376	1,745	6,282
CFOs organized into CFCs	266	373	378	450	450	1,917
Farmers formed into a new CFCs	303	247	231	230	241	1,252
Trainings	482	570	569	701	943	3,265
Municipal council created	34	34	42	42	42	194
TOTAL	1,978	2,245	2,467	2,799	3,421	12,910

*Regional target multiplied by 0.93

C. INDICATIVE FUNDING REQUIREMENT FOR PROGRAM IMPLEMENTATION

C.1 PROGRAM, PROJECTS, ACTIVITIES (PPAs) AND TARGETS FOR YEAR 1 IMPLEMENTATION

In the first year of program implementation the following targets, activities and indicative funding are shown in Table 6.2.1c. Thus, for the strengthening of the coconut farmers' cooperatives through capacity building, such activity is allocated a budget of PHP 6.0 M while social preparation and training of coconut farmers' organizations including the formation of collectives shall be granted PHP 12 M in addition to the provision of registration cost subsidies costing PHP 2.0 M. The lion's share of the budget which is PHP 214 M is intended for carrying out support mechanisms such as enterprise development, market matching, financial assistance, networking, and organization of cooperative federation, among others. The balance of PHP 250 M shall be intended for the conduct of meetings, consultation and planning activities, formation of development management teams as well as for monitoring and evaluation. Altogether, the program, projects and activities proposed by the CDA are consistent with its mandate, drawn-out experience, and a holistic view of the requisites of cooperative development in the country

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Table 6.2.3c. Program, projects, activities, and targets of CDA for Year 1

ACTIVITIES	TARGETS	BUDGET ALLOCATION (IN MILLIONS, PHP)
Strengthening of coconut farmer cooperatives through capacity building program		
✓ Cooperative Organizational Development Training:		
○ Cooperative Management and Governance;		
○ Fundamentals of Cooperatives		
○ Accounting		
○ Financial Management		8.00
Social Preparation and Training of Coconut Farmer Organizations and Organizing of Individual Coconut Farmers		
Conduct of social preparation through orientations on cooperatives;	100% of the CFOs willing to convert into cooperatives (88 CFOs estimate)	
Conduct of Pre-Registration Seminar (PRS)	100% of the CFOs willing to convert into cooperatives (88 CFOs estimate)	12.00
Provide technical assistance on the preparation of registration requirements	100% of the CFOs willing to convert into cooperatives (88 CFOs estimate)	
Provision of registration cost subsidies	100% of the CFOs willing to convert into cooperatives (88 CFOs estimate)	2.00
Implementation of Support Mechanisms such as Enterprise Development, Value Chain, Market Matching, Registration and Audit Subsidies, Financial Assistance, Research and Development, Networking and Linking, Organization of Cooperative Federation, and other appropriate interventions		
Provision of Financial Assistance to existing and newly registered cooperatives which include:		
✓ Audit Subsidies		
✓ Seed capital for new business or livelihood venture of existing coops based on feasibility study;		
✓ Computers for business operation		
✓ Livelihood business and training		
✓ Seed Capital for newly registered cooperative		214.50
Hiring of Development Management Team	3 C/O hired for the initial year	0.50
Conduct of meetings/consultations and planning activities	80 meetings nationwide	13.00
Monitoring and evaluation		2.00
TOTAL		258.00

C.2 PROGRAM, PROJECTS, ACTIVITIES AND TARGETS FOR YEARS 2-5 IMPLEMENTATION

After the initial year of program execution, the succeeding four years of the program will see the effecting of the activities, funding and its regional distribution as presented in Table 6.2.4d and as ratified by the CDA Board of Directors. Hence, for Year 2, the plan for cooperative development will be the establishment of a processing plant in Region IX and the sowing of the seeds of a cooperative federation in the same region. Capacity building programs will be undertaken in all regions with PHP 12.0 M, the amount involved coming from the Coconut Farmers Industry Trust Fund and complemented by the existing funds under CDA that shall be used for this purpose. A development management team will be created to handle research, planning, documentation and the internal monitoring and evaluation. An almost analogous pattern of activities will be implemented in the ensuing years but will center in other regions based on the clustering approach.

Table 6.2.4d. Major program, projects, activities, and targets of CDA for years 2-5

PROGRAMS, PROJECTS ACTIVITIES	AMOUNT INVOLVED (IN MILLIONS, PHP)	REGIONS INVOLVED
YEAR 2		
Establishment of processing plant	200.00	Region IX
Seed capital for the federation	25.00	Region IX
Meetings, consultations with the cooperatives and organizations	8.00	All regions
Monitoring and evaluation	2.00	Head Office
Capacity building programs:		
- Operation and Physical Plant Management		
- Accounting		
- Skills training		
- Value chain		
- Warehousing management	12.00	All regions
- Sales & marketing		
- Transportation & maintenance management		
- Inventory management		
- Organizational Development training		
Social Preparation for CFOs		
Hiring of Development Management Team	3.00	Region IX
TOTAL	250.00	
YEAR 3		
Establishment of processing plant	200.00	Region VIII
Seed capital for the federation	25.00	Region VIII
Meetings, consultations with the cooperatives and organizations	8.00	All regions
Monitoring and evaluation	2.00	Head Office
Capacity building programs:		
- Operation and Physical Plant Management		
- Accounting		
- Skills training		
- Value chain		
- Warehousing management	12.00	All regions
- Sales & marketing		
- Transportation & maintenance management		
- Inventory management		
- Organizational Development training		
Social Preparation for CFOs		
Team Hiring of Development Management Team (Research, Planning, Documentation, and M&E)	3.00	Region VIII
Financial Assistance to cooperatives	37.50	All regions
Capacity Building for next priority regions	12.50	Regions VI, X, XI, XII, CARAGA
TOTAL	300.00	

Continued Table 6.2.4d. Major program, projects, activities, and targets of CDA for years 2-5

PROGRAMS, PROJECTS ACTIVITIES	AMOUNT INVOLVED (IN MILLIONS, PHP)	REGIONS INVOLVED
YEAR 4		
Establishment of processing plant	200.00	Region VI
Seed capital for the federation	25.00	Region VI
Meetings, consultations with the cooperatives and organizations	8.00	All regions
Expansion of selected regions with existing plants	100.00	Regions with existing processing plant
Monitoring and evaluation	2.00	Head Office
Capacity building programs:		
- Operation and Physical Plant Management		
- Accounting		
- Skills training		
- Value chain		
- Warehousing management	12.00	All regions
- Sales & marketing		
- Transportation & maintenance management		
- Inventory management		
- Organizational Development training		
Social Preparation for CFOs		
Hiring of Development Management Team (Research, Planning, Documentation, and M&E)	3.00	Region VI
TOTAL	350.00	
YEAR 5		
Establishment of processing plant	400.00	Regions X & XIII Regions XI & XII
Seed capital for the federation	50.00	Regions X & XIII Regions XI & XII
Meetings, consultations with the cooperatives and organizations	16.00	All regions
Monitoring and evaluation	4.00	Head Office
Capacity building programs:		
- Operation and Physical Plant Management		
- Accounting		
- Skills training		
- Value chain		
- Warehousing management	24.00	All regions
- Sales & marketing		
- Transportation & maintenance management		
- Inventory management		
- Organizational Development training		
Social Preparation for CFOs		
Hiring of Development Management Team (Research, Planning, Documentation, and M&E)	6.00	Regions X & XIII Regions XI & XII
TOTAL	500.00	

Table 6.2.4e. shows the regional budget allocation proposed by CDA. The rationale for the first year of allocation is to harvest the low hanging fruits to engender immediate results and create maximum impact given the concentration of coconut farmers. Region VIII has the highest allocation followed by Region IX and Region VI due to the establishment of processing

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plant. Region X to XIII come next while the regions (I, II, and III) above the National Capital Region had the lowest allocation.

Table 6.2.4e. Regional indicative budget allocation, CFIDP programs - Coconut Farmers Organization and Development, CDA, 5 years

CFIDP PROGRAMS (Coconut Farmers Organization)	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	3.07	1.33	3.83	1.33	2.67	12.23
Region II (Cagayan Valley)	2.41	1.33	3.83	1.33	2.67	11.58
Region III (Central Luzon)	2.42	1.33	3.83	1.33	2.67	11.59
Region IV-A (CALABARZON)	12.46	1.33	3.83	1.33	2.67	21.63
Region IV-B (MIMAROPA)	23.56	1.33	3.83	1.33	2.67	32.72
Region V (Bicol Region)	18.21	1.33	3.83	1.33	2.67	27.38
Region VI (Western Visayas)	22.07	1.33	6.33	229.33	2.67	261.74
Region VII (Central Visayas)	12.02	1.33	3.83	1.33	2.67	21.19
Region VIII (Eastern Visayas)	32.65	1.33	231.83	51.33	2.67	319.82
Region IX (Zamboanga Peninsula)	18.94	229.33	3.83	51.33	2.67	306.11
Region X (Northern Mindanao)	36.67	1.33	6.33	1.33	116.67	162.34
Region XI (Davao Region)	13.46	1.33	6.33	1.33	116.67	139.13
Region XII (SOCCSKSARGEN)	16.26	1.33	6.33	1.33	116.67	141.93
Region XIII (Caraga)	21.42	1.33	6.33	1.33	116.67	147.08
BARMM	9.27	1.33	3.83	1.33	2.67	18.43
Head Office	5.10	2.00	2.00	2.00	4.00	15.10
TOTAL	250.00	250.00	300.00	350.00	500.00	1,650.00

6.3 COCONUT HYBRIDIZATION PROGRAM

RATIONALE

The development and implementation of this Coconut Hybridization Program (CHP) is a provision in RA 11524 under Article II Section 4 par. 7(a). As stated in the law, the development of hybrid coconut seed farms, and nursery for planting and replanting shall be allocated 20% annually to be implemented by the PCA (15%) for operations, and the DOST-PCAARRD (5%) for research, respectively, in accordance with the approved Coconut Farmers and Industry Development Plan.

The country needs to sustainably increase coconut production. The present yield of 44 nuts/palms/year is only 50% of the yield potential of local varieties (Talls) and 30% of the potential yield of local hybrids. Almost 97% of the existing palms in the country are tall type, hybrids make up less than 1%, the rest are dwarfs. By age of palms, 17% are over 50 years old, and 32% are young (below 10 years). Hence, only half of the total palm population in the country are more or less in the peak productive stage (11-50 years) (NCFRS, 2018).

Accelerating the hybridization program is a key strategy to increase palm productivity and the volume of nuts available to address the lingering supply-demand gap and ensure the sustainable growth of the industry. The hybridization program is expected to contribute to increasing the country's nut production targets of producing 20 B by 2030 and 30 B by 2040 (COCOFIRM, 2021).

The need for a long-term development and rehabilitation program for the coconut industry has long been recognized. However, government support for coconut development through the years is largely disproportionate to the magnitude of the industry. The predominantly impoverished smallholders who make up the majority of the industry's stakeholders have been unable to invest in high yielding measures on their own. Without an inclusive program that will incentivize and benefit the farmers and their families directly, shifting towards hybrids planting and replanting and employing good management practices will remain a challenge.

Thus, the implementation of the hybridization program will help address the urgent need to reverse the increasing trend towards senility and decline of coconut productivity in the country's production. Both issues endanger the country's international competitiveness, undermine the local coconut processing sector capacities, and hinder further the growth of the traditional and non-traditional markets for coconut worldwide. From the standpoint of poverty alleviation, the hybridization program complemented by farm value addition enterprises offers one of the most replicable means of intensifying land use, increasing total farm productivity and increasing farmers income.

Chapter 6.3 Coconut Hybridization Program

Current Situation

The total hybrid planting is only about 1% of the existing coconuts in the country. The Philippine Coconut Authority- Research and Development Branch (PCA-RDB) has developed 15 single cross hybrids that are early bearing and can yield an average of 114-150 nuts/palm/year. The precocity, high productivity and suitability of hybrids for production and processing of new and emerging high value coconut-based products like sap sugar, virgin coconut oil, young tender coconut and fiber, among others, make its increased cultivation highly relevant in revitalizing the industry by replacing old coconut stands and expanding planted areas in suitable locations.

In the next ten years, the country needs nearly 112 M planting materials (hybrid seednuts) to replace unproductive and senile palms, and expand hybrid populations in suitable areas as planned by the PCA based on the targets of regional offices (Figure 6.3b)

This situation calls for a sustained and increased supply of certified hybrid planting materials for the strategic and massive planting and replanting program with nutrient and necessary technical support. Innovative and collaborative researches are needed to provide science-based recommendations to address knowledge, technology and adoption concerns on seednut production, nursery management, planting/replanting and rehabilitation strategies thru the hybridization program. A pool of technical professionals and skilled personnel shall be trained to oversee and implement, respectively, the hybrid production operations in the field.

6.3.1 COCONUT HYBRIDIZATION PROGRAM - OPERATIONS

OBJECTIVES

General Objectives

The project primarily aims to mass produce single cross high quality coconut hybrids following standard hybridization protocols and Good Agricultural Practices for distribution to the farmers and other coconut industry stakeholders to complement the PCA's Accelerated Planting and Replanting Program.

Similarly, this project aims to serve as platform towards the eventual transfer and possible commercialization of the coconut hybridization technology by the farmers.

The specific objectives are the following:

- a. Continuous production, distribution and planting of quality hybrid planting materials produced thru hybridization using NSIC registered parental materials with potential traits;
- b. Establishment of NSIC-accredited farms and nurseries as source of planting materials both hybrids and parent materials for On-Farm Hybridization;
- c. Mapping of existing outstanding parentals for utilization in the On-Farm Hybridization adopting the Assisted Pollination Technique to produce single-cross hybrids;
- d. Expansion, upgrading and rehabilitation of existing PCA-managed seed farms to maximize the potential production capacity;
- e. Establishment of new seed farms thru planting of outstanding parentals for hybridization in government lands in collaboration with SCUs and LGUs to augment the current production and address the increasing demand for quality planting materials (Hybrids and Outstanding Open Pollinated Dwarf and Tall Varieties);
- f. Protection and conservation of coconut genetic resources through the establishment and maintenance of germplasm duplicates in SUCs primarily for production, breeding and research purposes;
- g. Utilization of developed technologies to increase and ensure stable supply of hybrids and OPVs for the massive planting and replanting (i.e. APT, IPM, GAP);
- h. Capacity building of PCA's technical, field staff, extension workers and farmers thru advanced degree programs, certificate skills training, and appropriate technology delivery system; and
- i. Development of innovative technologies to support the hybridization program and the improvement of the existing seed farms to produce quality planting materials.

Chapter 6.3.1 Coconut Hybridization Program - Operations

The hybridization program framework shows that while PCA is entrusted with the hybridization program, convergence of support from other implementing agencies. Specifically, the training to professionalize the coconut workforce and provision of credit facilities would be provided by ATI or TESDA and banking institutions, respectively. Other agencies will certainly be involved as indicated in the figure of convergence below (Figure 6.3a).

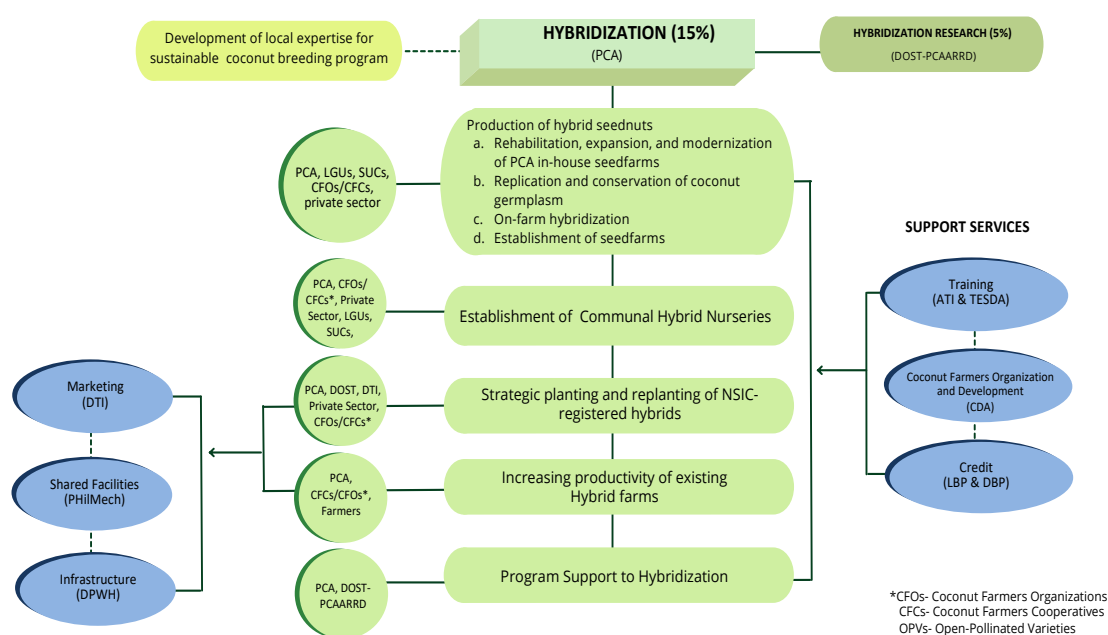


Figure 6.3a. Hybridization convergence framework

Supporting the hybridization program of PCA will be continuing the basic, applied/developmental or on-farm innovative and demand-driven research that will provide science-based solutions to hybridization program to be implemented by DOST-PCAARRD.

There is a need to continuously develop core competencies and expertise in coconut breeding and allied sciences through sustained staff development. This will ensure continuous coconut crop improvement program, developing new high yielding hybrids and improved varieties with outstanding qualities suited for particular uses, locations and with resistance/tolerance to biotic and abiotic stresses. Local researchers and scientists need to be trained in the best universities and research centers to be able to apply modern technologies for breeding, mass propagation, production and development of new coconut products and uses. This critical support will be sourced and requested to be included in the staff development of GAA budget of PCA and from providers of local and international scholarships and fellowships for specialized trainings, such as CHED, DOST agencies- PCCAARRD, PCIEERD, DA-BAR and SEARCA, among others.

STRATEGIES

The increase in palm productivity and consequent increase in total nut production of the country is expected to be realized using a combination of strategies proposed under the CFIDP. In the next ten

Chapter 6.3.1 Coconut Hybridization Program - Operations

years, the country needs nearly 112 M planting materials (seednuts) inclusive of 27% culling rate to replace unproductive and senile palms and expand hybrid population in suitable areas (Figure 6.3b).



Figure 6.3b. Hybrid seednuts' requirement for replacement of senile palms and area expansion the next 10 years.

Note: Numbers include the 27% additional seednuts to cover culling rate in the seed farm (7%) and nursery (15%), and mortality in the field (5%).

The total seednut requirements of the regions within 5 years is 24.3 M, but the actual seedling need is 19 M. For the replacement of senile palms, 69 M seedlings will be needed, but actual seednuts to be produced will be 87.4 M.

The PCA's key strategies under the hybridization program are as follows:

A.1. Production of Hybrid Seednuts

Four complementing programs for increasing hybrid seednut production are projected to provide the estimated yearly requirements of 11.2 M hybrid seednuts. (Annex Table 6.3.1.14)



Additionally, the Coconut Somatic Embryogenesis Technology (CSEt) tissue culture will be adopted and supported when the technology is ready for use for mass propagation of true-to-type hybrids through this tissue culture protocol. Based on the status of technology report (Cueto, 2021), the project needs another five years of research support before the CSEt can be ready for transfer and commercialization.

A.1.1. Rehabilitation, Expansion, and Modernization of PCA in-House Seedfarms

PCA is presently producing hybrid planting materials in seven (7) PCA Research/Seed Production Centers (R/SPC) strategically located in Luzon, Visayas and Mindanao (Figure 6.3c). From the current 25,000 mother palms, these are projected to increase to over 32,000 mother palms producing a total of 8.6 M hybrid seednuts by year 5 of the program.

While these R/SPC are planted to recommended parental palms, a number of these are already low yielding and need replanting. The initial program implementation of the CHP will involve conditioning of palms in the PCA R/SPCs through rehabilitation, rejuvenation or replacement of senile and unproductive palms and modernization, upgrading of facilities and expansion of the seed farms' capacity to increase and sustain the in-house capacity of PCA to produce quality hybrid seed nuts. To maximize hybrid and selected OPV seed nut production, rehabilitation of mother palms thru irrigation and fertilization of existing sources and replacement of senile mother palms need to be undertaken. Parental palms will be also be fertilized with organic soil amendments including but not limited to coconut husk chips, composted coco peat, coco peat-based bio-fertilizer, MYKOVAM®, humic acid, and salt in the initial three years.

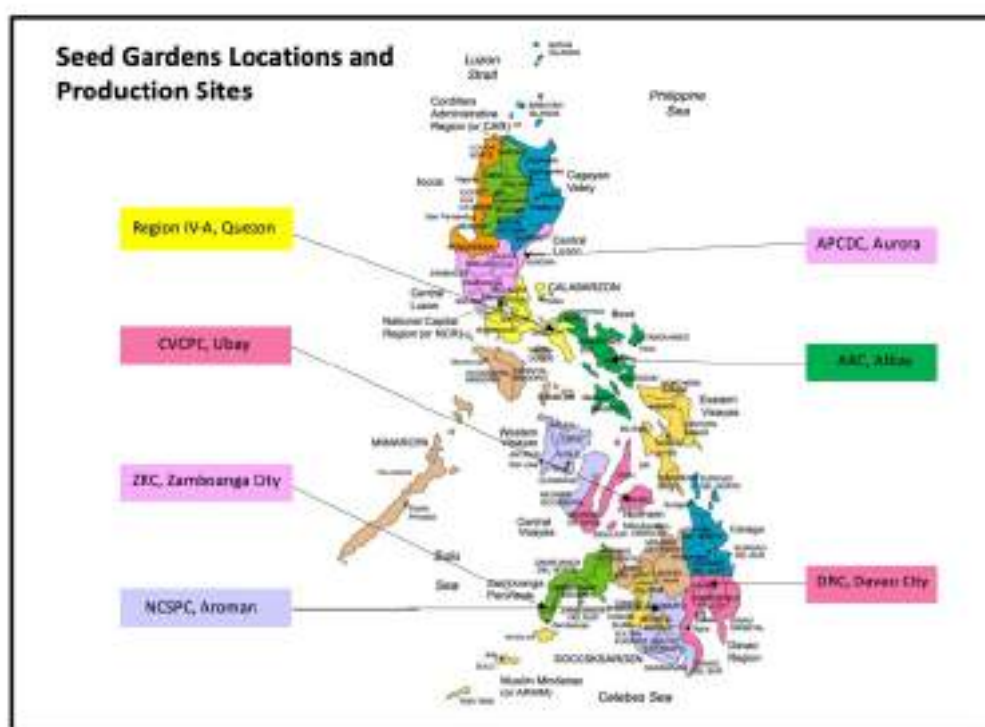


Figure 6.3c. Location of seed gardens and production sites

Investments on roads, fencing, irrigation, and provision of trucks for handling of seednuts/seedlings are necessary and are recommended to be provided to the seedgardens subject to the availability of additional funds. Laboratories and storage facilities shall also be properly equipped. The establishment of pollen processing facilities and the maintenance and

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replanting of selected Talls to supply the pollen requirement for hybridization of mother palms will also be supported and prioritized under the CFIDP.

A.1.2. On-Farm Hybrid Seednut Production

Hybridization in farms already planted with selected dwarfs and pollen from selected talls will augment the limited capability of PCA to provide planting materials in the short- to medium-term. The successful production of hybrids in two farmers' fields through Assisted Pollination Technique in Quezon Province with existing dwarf varieties (a 3-year PCA-RDB project titled "Performance Evaluation of the Two-Pronged Coconut Hybridization Scheme in CALABARZON" funded by DOST-PCAARRD) is one quick-fix solution to augment the limited mother palms for an accelerated hybridization program.

Massive outsourcing thru On-Farm Hybrid Seed Nut Production Sites (OFHSPS) will be prioritized to augment and fast track the production and distribution of hybrid seednuts, while waiting for the new seedfarms to be in full production which will take five years. OFHSPS will be a stop-gap measure to immediately provide the additional 11.2 M hybrid seednut requirements of the regions by year 5. Around 124,000 mother palms will be rented out for hybridization to meet the yearly requirements of the Regions.

PCA will partner (through a MOA) with the private sector, farmers and coconut farmers' organizations with areas planted to suitable/recommended dwarf mother palms and outstanding tall palms for the hybridization activities. Suitable areas will be selected using the criteria provided by the RDB.

PCA will oversee or manage the hybridization activities following the standard hybridization protocol and GAP for a maximum of three years. This will be done with hired local field personnel who will undergo capacity building through skills training on the APT and other relevant codes of practices. This is to ensure that workers have the necessary knowledge and skills to perform coconut hybridization. The farmer-partner will likewise be trained in the preparation for eventual transfer of the APT to them. It is expected that after some time, the farmer-partner will be able to run the hybrid farm facility as an economic enterprise.

Pollen Production and Processing

Pollen processing facilities are required in both on-farm hybridization and seed farm establishment. Each region will establish a pollen processing facility to augment the pollen production from the existing pollen processing laboratories of the PCA. This is to ensure the availability of pollen for the various OFHPS in the regions.

Developmental activity focusing on identification, profiling and sourcing of outstanding tall populations in the farmers' fields in strategic areas will be pursued. These outstanding tall populations will be used as male parent materials or sources of pollen. The profiled palms will be submitted for certification with the National Seed Industry Council (NSIC) as direct pollen

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sources. The plant breeders of RDB shall commence the identification and tagging of outstanding tall populations in the regions with high potential to become sources of pollen. Pollen sourced palms must be regularly fertilized to ensure regular production of inflorescences and good quality pollen.

A.1.3 Seed Farm Establishment

Establishment of about 400 ha of seed farms strategically located in the regions will be pursued to produce sufficient hybrid seednuts for regional needs to sustain the program. Selection of new seed gardens should consider an expanded site suitability criteria to include source of irrigation, year-round accessibility, peace and order, security, exposure to climate-related hazards to ensure that the seed and hybridization gardens will be serviceable for the long-term. Seed farms need to be provided the best growing conditions to maximize potential production. These will be planted to outstanding OPV dwarf and tall varieties which will serve primarily as hybrid parentals and can also be sources of seednuts of selected OPVs.

To ensure the continuity of the project, arrangement with SUCs will be prioritized. The use of lands in military installations and even the area reservation in the CARAGA region will be considered. Those established seed gardens under the project shall be negotiated so that PCA can use the property for not less than 20 years.

A.1.4 Conservation, Characterization and Utilization of Coconut Germplasm for Developing New Hybrids and Other Research (to be funded by DOST-PCAARRD)

The PCA's germplasm has the largest coconut collection in the world. It is a repository of rich coconut genetic diversity of local and exotic dwarf and tall varieties which can be used as hybrid parent materials with important economic qualities, health benefits and tolerance/resistance to various abiotic and biotic stresses.

To protect and conserve these valuable genetic resources currently housed in Zamboanga Research Center in Mindanao, the establishment and maintenance of germplasm duplicate in Luzon for production, breeding and research purposes will be established in UPLB land grant. Initial establishment will be supported by DOST-PCAARRD, to be sustainably maintained by PCA and UPLB starting in the 6th year.

A.2. Establishment of Communal Coconut Nurseries

The PCA will partner with coconut farmers' organizations, the private sector, LGUs and SUCs in the establishment and management of NSIC-registered Communal Hybrid Nurseries. Hybrid seednuts from the production sites must be properly cared for in these nurseries prior to distribution and field planting. The nurseries should be located in areas that are within the zone for planting /replanting following the principle of land consolidation and/or planting in contiguous or near contiguous areas.

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The operation of the nurseries will be directly under the supervision PCA Extension Staff. Fertilizer materials, and polybags, as well as incentives for the use of coconut husks as potting medium shall be provided by PCA. Given the total area to be planted or replanted in a given locality, 180 seednuts would be set in the nursery for every hectare to be planted or replanted in such locality (25% allowance for culling).

A.3. Strategic Planting/Replanting of High Yielding Hybrids

Hybrids will be planted in suitable to highly suitable contiguous areas, preferably around the processing plants and will be provided with support towards certification for GAP or Organic Production Systems. Precision hybrid farming will be promoted and incentivized. For proper growth of the planted hybrid seedlings, provision of the required amount of nutrients coming from a combination of inorganic and organic fertilizers is vital in the initial year of planting and will be supported and incentivized in the first year. The next years of fertilizer application shall be the counterpart contribution of the farmers.

Farmers will be trained on the production of organic fertilizers using available local materials including the use of coconut husks as soil amendment. Assurance will be obtained from the program implementers of the technical and managerial capability necessary to support the operations of the farms. Farmers will be assisted in accessing available loan facilities under the CFIDP to ensure the sustainability of the program.

Hybridization R&D activities will be undertaken by PCA's Research and Development Branch with funding support from DOST-PCAARRD.

A.4. Increasing Productivity of Existing Hybrid Palms

In order to ensure increased productivity, Precision Hybrid Farming must be pursued. Fertilization, including incentives for incorporation of coconut husks/peat as mulch and use of other farm-sourced organic soil amendments will be supported as part of the campaign for zero farm waste production system.

Technical services will be provided to growers for the use and adoption of other yield enhancing technologies like moisture conservation practices, planting with leguminous cover crops in expansion areas as well as compliance to organic farming or GAP certification. Supplemental irrigation and Integrated Pest Management will likewise be promoted for adoption especially in replanted areas.

A.5. Support System to Hybridization

This includes strategic communication and feedback among all stakeholders, coordination, monitoring and evaluation of the hybridization program using remote sensing and modern information communication technologies. This is to strengthen PCA institutional structures and systems and sustain a long-term coconut breeding, crop improvement and coconut

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planting/replanting program. The PCA will closely coordinate with DOST-PCAARRD to continuously develop and apply improved technologies and procedures on-farm.

A.6. Professionalization of Coconut Hybridization Workforce

A comprehensive training program will be developed to upgrade the knowledge and performance of the coconut farmers on hybridization. Professionalization of the workforce thru skills training on hybridization like the APT, pollen collection and processing and other relevant Codes of Practices will be pursued. To ensure that the desired competency of the workforce is achieved, assessment and certification by TESDA is necessary. PCA personnel will likewise undergo training under the ATI or TESDA on hybridization to enhance the monitoring and delivery of services to the farmer-partners. PCA's hybridization program will support the 1st year's hybridization trainings but succeeding years' budget will be requested from the allocation of TESDA and ATI.

DISTRIBUTION AND PLANTING OF HYBRIDS

The process flow from production of hybrid seednuts to their distribution (Figure 6.3d). Preferably, the distribution and planting of high yielding hybrids in the regions will be in areas not vulnerable to extreme weather disturbances.

Coconut planting will also be prioritized based on suitability, presence of processing plants and high demand for raw materials. The updated coconut suitability map commissioned by DOST-PCAARRD will be used once completed.

Likewise, identified and mapped coconut farms with palms which are senile or damaged by pest and diseases will be prioritized for replacement. As outlined in the Manual for Coconut Hybridization (RDB, 2020) and other earlier directives, the protocol for handling and distribution of planting materials, must be strictly observed to ensure that only the best quality materials are provided to the farmers and other interested parties.

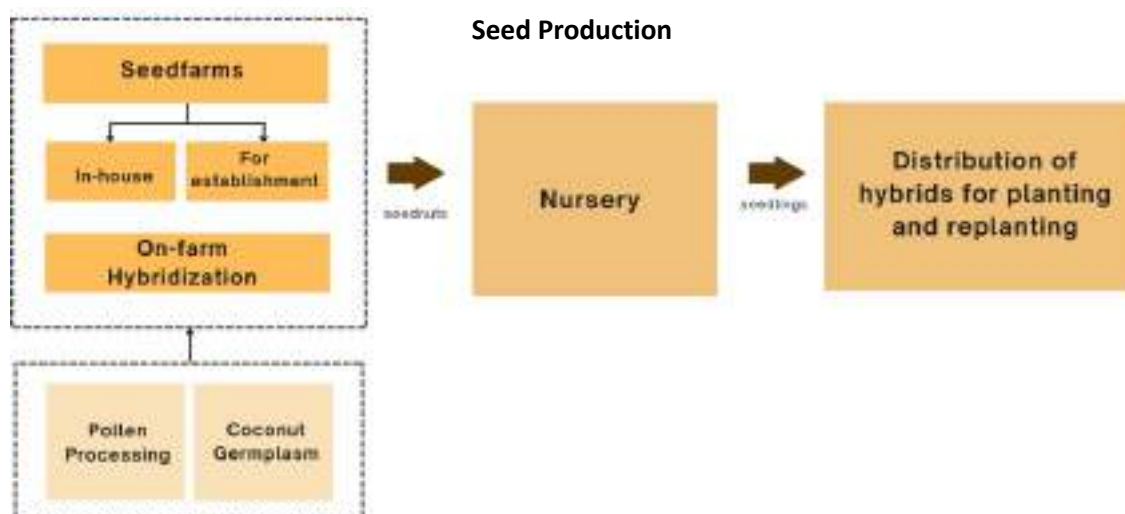


Figure 6.3d. Process flow from seednut production to distribution

MONITORING AFTER DISPERSAL OF PLANTING MATERIALS

Strict monitoring of the seednuts and seedlings will be undertaken by the Provincial Focal Persons monthly from the time of sowing up to one month after field planting. The Nursery Operations Report and Field Planting Report templates used for the Accelerated Planting and Replanting Project (ACPRP) shall be utilized for reporting. Pest and disease monitoring will be done every three (3) months by the IPM regional focal person. In case of any obscure abnormalities and/or symptoms, immediate assistance shall be requested from the Crop Protection Division to avoid severe infestation that might lead to outbreak.

FARMER BENEFICIARIES OF THE PROGRAM

The target recipients for the hybrid planting materials must pass the eligibility criteria as participants and shall be equipped/trained on the basic requirements of the crop and undergo social preparation. This is to ensure that the planting materials will be properly cared and managed for optimum performance. Beneficiaries must pass the following criteria:

- Smallholder farmer registered in the NCFRS with less than 5 hectares farm
- Preferably, a member of a farmers' organization or cooperative

A package of assistance will be provided to beneficiaries of hybrid planting materials including the following: 1) hybrid planting materials for a maximum of three hectares and 2) technical assistance in terms of (a) technical guidance on proper establishment of the farm, (b) guidance on nutrient and water management for the hybrids, (c) guidance on sustainable best practices in coconut growing and (d) guidance on farm diversification.

POTENTIAL CONTRIBUTIONS OF THE HYBRIDIZATION PROGRAM

The annual seednut production from hybrid production farms (PCA-managed and On-farms) is presented in Annex Table 6.3.1.14. Five years from the start of the program (2022 to 2026), it is expected that 19.12 M hybrid seednuts will be produced. This amounts to 34% of the total target of 56 M hybrid nuts for the first five years (at 11.2 M/year). This is also equivalent to approximately 79% of the five-year regional hybrid seednut requirements (24.3 M). By 2027 and beyond, however, at least 10 M seednuts of the annual seednut production target of 11.2 M can be produced (Annex Table 6.3.1.14).

Annex Table 6.3.1.14 shows that the total area that could be planted with the hybrids by 2026 will be 111,890 ha. This is only 38% of the 5-year total target of 293,705 ha. However, in terms of the annual planting targets, the Hybridization Program is expected to plant more than 100% of the target starting from 2027 and beyond.

Figure 6.3e shows the projected nut production from the planted hybrids under the Hybridization Program starting from 2022. By the 10th year (2031), hybrid nut production is expected to reach about

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1.54 B nuts which contributes 8% to the total nut production of (20 B nuts) and increasing average palm productivity by 19% from 44 in 2019 to 52 nuts/palm/year.

By 2040, the contribution of the hybrids to the total yield of nuts in the country will potentially increase to 28%. This amounts to 8.45 B nuts (hybrid's nut yield) out of the expected total nut production of 30 B. Estimation of the average nut yield per palm per year by 2040 will be 65 nuts, an increase of 48% from the 2019 average of 44 nuts/palm/year.

This yield projection is a clear indication of the potential success of the CFIDP Hybridization Program in elevating the status of the industry to a higher level of productivity. No doubt that this can be achieved with the strong and dedicated commitment of the various agencies involved in the implementation of CFIDP.




		NATIONAL TARGETS	CFIDP HYBRIDIZATION CONTRIBUTION	
NUMBER OF SEEDNUTS PRODUCED		YEAR 5	56 M seednuts	19 M seednuts (34%)
		YEAR 10	112 M seednuts	73 M seednuts (65%)
AREA PLANTED TO HYBRIDS		YEAR 5	293,705 ha	111,890 ha (38%)
		YEAR 10	587,410 ha	422,775 ha (72%)
NUTS PRODUCED		YEAR 5	16.75 B nuts	0.05 B nuts (0.3%)
		YEAR 10	20 B nuts	1.54 B nuts (7.7%)
		YEAR 20	30 B nuts	8.45 B nuts (28%)

Figure 6.3e. National coconut production targets and contribution of CFIDP hybridization program

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C. INDICATIVE INVESTMENT REQUIREMENT

The following table presents the physical targets by program component and the corresponding indicative budget for the next five years.

Table 6.3a. Annual regional indicative investment requirement for Hybridization (Operations), 5 years

REGION/CENTERS	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	7.64	2.90	3.99	4.14	7.88	26.56	0.54%
Region II (Cagayan Valley)	2.92	3.78	5.27	5.61	6.68	24.27	0.49%
Region III (Central Luzon)	7.99	5.59	8.25	9.29	14.66	45.77	0.92%
ACPD	4.77	3.07	3.09	3.10	3.06	17.10	0.35%
Region IV-A (CALABARZON)	112.99	151.24	202.80	243.08	300.18	1,010.30	20.41%
Region IV-B (MIMAROPA)	28.17	36.70	49.53	63.33	81.40	259.13	5.23%
Region V (Bicol Region)	19.56	32.61	46.99	56.03	61.90	217.09	4.39%
ARC	2.05	0.71	0.72	0.79	0.95	5.22	0.11%
Region VI (Western Visayas)	31.05	27.88	32.95	39.52	65.99	197.40	3.99%
Region VII (Central Visayas)	30.56	28.14	34.70	40.71	70.47	204.58	4.13%
CVCSPC	32.14	29.19	29.44	29.78	31.73	152.28	2.82%
LSF	1.07	1.02	1.03	1.03	1.02	5.18	0.10%
Region VIII (Eastern Visayas)	22.35	27.41	37.24	44.27	63.16	194.43	3.93%
Region IX (Zamboanga Peninsula)	49.08	53.69	65.87	79.86	112.03	360.54	7.28%
ZRC	31.78	29.57	29.81	29.98	44.33	165.46	3.95%
Region X (Northern Mindanao)	41.22	37.92	44.18	53.38	86.53	263.23	5.32%
Region XI (Davao Region)	37.23	33.57	38.61	46.81	70.52	226.73	4.58%
DRC	5.15	4.55	4.59	4.67	19.06	38.02	1.04%
Region XII (SOCCSKSARGEN)	127.29	114.95	122.53	151.54	206.45	722.77	14.60%
NCSPC	73.22	68.35	68.89	69.24	73.50	353.21	6.55%
Region XIII (Caraga)	41.82	31.48	35.74	41.86	115.19	266.07	5.38%
BARMM	24.40	16.58	18.19	21.67	44.47	125.30	2.53%
CENTRAL OFFICE	15.53	9.10	15.58	10.33	17.13	67.67	1.37%
TOTAL	750.00	750.00	900.00	1,050.00	1,498.30	4,948.30	100.00%

Note: ACPDC, ARC, CVCSPC, LSF, ZRC, DRC, AND NCSPC are PCA-in-house seed gardens;

Farm labor, utilities & communications, farm inputs such as seed nuts, fertilizers, crop protection, irrigation water, repair & maintenance of vehicles, equipment and farm tools are considered as recurring costs. Land rent is considered as non-recurring cost.

6.3.2 COCONUT HYBRIDIZATION PROGRAM - RESEARCH

PROGRAM DESCRIPTION

The Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development of the Department of Science and Technology is among the identified agencies tasked to implement programs under the Coconut Farmers and Industry Development Plan. As mentioned earlier, five percent (5%) of the 20% annual allocation from the Trust Fund for the implementation of the Coconut Hybridization Program shall be disbursed to the DOST-PCAARRD for research.

The Coconut Hybridization Program aims to increase the productivity level from an average of 45 hybrid nuts/palm/year to at least a minimum projected average production of 80 hybrid nuts/palm/year. This can be realized through the adoption of appropriate technologies and provision of research support on hybridization. Moreover, as more hybrids and outstanding varieties will be planted, an increase in coconut productivity to about 150 nuts/palm/year can likewise be achieved thereby increasing farmers' income. The coconut farmers' organizations/cooperatives will benefit by engaging in communal nurseries to be established in strategic locations of the country, and coconut workers by skills capacitation as members of the farm service and hybridization professionalized workforce.

Specifically, DOST-PCAARRD is tasked to allocate funds for research and development (R&D) programs and projects on coconut hybridization, hybrid coconut seed farms, and nurseries, and related activities such as but not limited to technical capacity building, facilities upgrading, and infrastructure development as deemed necessary and agreed upon with PCA. The DOST-PCAARRD shall provide the mechanism for the review and evaluation of research program and project proposals on both technical and financial requirements that will be funded under the CHP.

IMPLEMENTATION PLAN

A. RESEARCH THEMES

The thematic researches aim to continuously improve, strengthen and develop innovations towards a modernized, efficient, and technologically advanced coconut hybridization program. This research program is aligned with the overall vision of secure, resilient, globally competitive coconut industry with empowered and prosperous farmers.

The thematic researches support the strategies of the hybridization program of PCA.

A.1 Production of quality hybrid planting materials

Projects under this strategy include the following topics and other new techniques and protocols that may enhance coconut hybrid production such as (a) application of precision hybridization using molecular techniques; (b) characterization and utilization of the coconut germplasm for breeding; (c) regional selection, geo-tagging of outstanding local tall populations as sources of pollen and quality planting materials; (d) development

of single crosses among the outstanding cultivars (DxD/TxT/DxT) and progeny evaluation (multi-location); (e) selection and breeding of cultivars for special qualities and stress tolerance; (f) on-farm trials to improve the hybridity and fruit setting of hybrids; (g) precision hybrid nursery management protocols; and (h) increasing the efficiency of plantlet regeneration through coconut somatic embryogenesis technology (CSet) towards its full utilization for hybrid breeding and mass propagation.

Brief status of CSet and why it needs sustained support for the next five years

Somatic embryogenesis is a breakthrough technology, raising expectations that it could be a “pole-vaulting solution to mass propagate coconuts” by producing hundreds of true to type plantlets from a single plumule through tissue culture. The traditional method of coconut mass production is through seednut raised in nursery and seedbeds, or through embryo culture which produce only one plantlet per seednut or embryo. The program started in 2014 with funding from DOST-PCAARRD and implemented by seven (7) laboratories nationwide. By 2021, the CSet protocol of PCA-ARC is still a “work in progress”. While repeatability is attained, the number of regenerants and plantlets remains low. The potential of the secondary somatic embryogenesis (SSE) pathway is envisioned to significantly increase the number of plumule-derived plantlets produced, but this is still under research. Response to somatic embryogenesis among varieties varied. Among the 12 varieties tested, the most responsive to CSet were Baybay Tall (BAYT), Laguna Tall (LAGT) and Malayan Red Dwarf x Tagnanan Tall (MRDxTAGT) with regenerated *in vitro* plantlets of around 200-300 per plumule. Regardless of variety, performance across laboratories differs and the number of regenerants produced varies from one to over 900 per plumule. The whole process of development from plumule preparation to *in vitro* hardening of plantlets takes 3.5 to 4 years and *ex vitro* establishment to field planting takes another 8-10 months at the minimum. As of September 2021, there are about 2,050 regenerants produced, 4% are field planted, 7% in the screenhouse, while the rest are still in the laboratory. Additionally, about 55,000 somatic embryos and 195,000 calloids have been produced by the project. Overcoming the physical, manpower, technical and financial viability constraints is estimated to take another five (5) years of research before the technology will be ready for transfer and utilization for mass propagation of hybrids (PCA, 2021).

A.2 Achieving the expected high yields from newly planted hybrid palms and overall farm productivity and farmers’ income

Projects such as the following will be funded: (a) suitability mapping and mitigating impact of climate change; (b) crop production and physiology including precision water and nutrient (conventional, organic and its combination) management; (c) crop protection; (d) coconut-based farming systems; and (e) product diversification and processing for increased utilization of hybrids and specialty types such as health products and identification of coconut varieties and hybrids with high medium-chain fatty

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acid (MFCA) contents, among other market driven and problem solving projects that may arise.

A.3 Increasing productivity of existing hybrid farms

The following projects may be funded: (a) establishment of a network for long-term phenological monitoring among coconut seed farms of PCA, LGUs, SUCs to better understand how coconut growth and bunch development are influenced by bio-physical, climate and management factors, thus providing the needed database for yield prediction models across environments; (b) development of site-specific water and nutrient management for precision production for small coconut farms; (c) yield gap assessment and on-farm research to reduce yield gaps; (d) on-farm adaptability trials and multi-location demonstration of viable coconut-based farming systems; and (e) pest and disease monitoring and early warning system, among other researchable areas that may arise in hybrid farms.

A.4 Technology transfer and promotion

- a) Strategic communication on coconut hybrids and hybridization research;
- b) Assessment of existing communication/extension strategies on coconut hybrid farming; and
- c) Development of information, education and communication (IEC) materials and training modules for various stakeholders and players in the coconut hybridization program, among other researchable concerns that may arise in the implementation of the hybridization program.

There is a need for regular technology development updates through various platforms and the need for sustained information campaign about the hybrids.

A.5 Socio-economic and policy

- a) Farmers' perspectives and acceptability of hybrids;
- b) Economic evaluation of on-farm hybridization model farms, assisted pollination technique, CSet and other technologies under the hybridization program;
- c) Documentation and assessment of the production and operations of parental and hybrid farms; and
- d) Corporative development program, among other researchable concerns that may arise in the implementation of the hybridization program.
- e)

A.6 Capacity building

- a) Manpower development in support of the long-term sustainability of the coconut breeding and hybridization program e.g., Plant Breeding

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and Genetics, Farming Systems/Agronomy/Physiology, Chemistry and Biochemistry, Agricultural Engineering, Socio-Economic, Bioinformatics; and

- b) Infrastructure development including the upgrading and construction of facilities and provision for equipment outlay for research institutions and centers.

A.7 Knowledge management and monitoring and evaluation (M&E) system dedicated to the coconut hybridization research program

The coconut R&D hybridization roadmap to be implemented through close collaboration with PCA, national and regional SUCs, including the University of the Philippines Los Baños (UPLB), Visayas State University (VSU), and University of Southern Mindanao (USM), and other research institutions and NGOs, will provide innovative and demand-driven research in support to the hybridization targets of the industry for the benefit of the coconut farmers. These targets include the following: increasing the productivity of hybrid seeds gardens from a baseline of 45 to 80 nuts/palm/year, improve the quality of coconut planting materials, demonstrate appropriate hybrid production systems, develop new coconut hybrids for selected qualities and uses, and increase income of coconut farmers from hybrid coconut production systems. The proposed timeline and key milestones for the hybridization research from Y1-Y5 is presented in Figure 6.3.2a.

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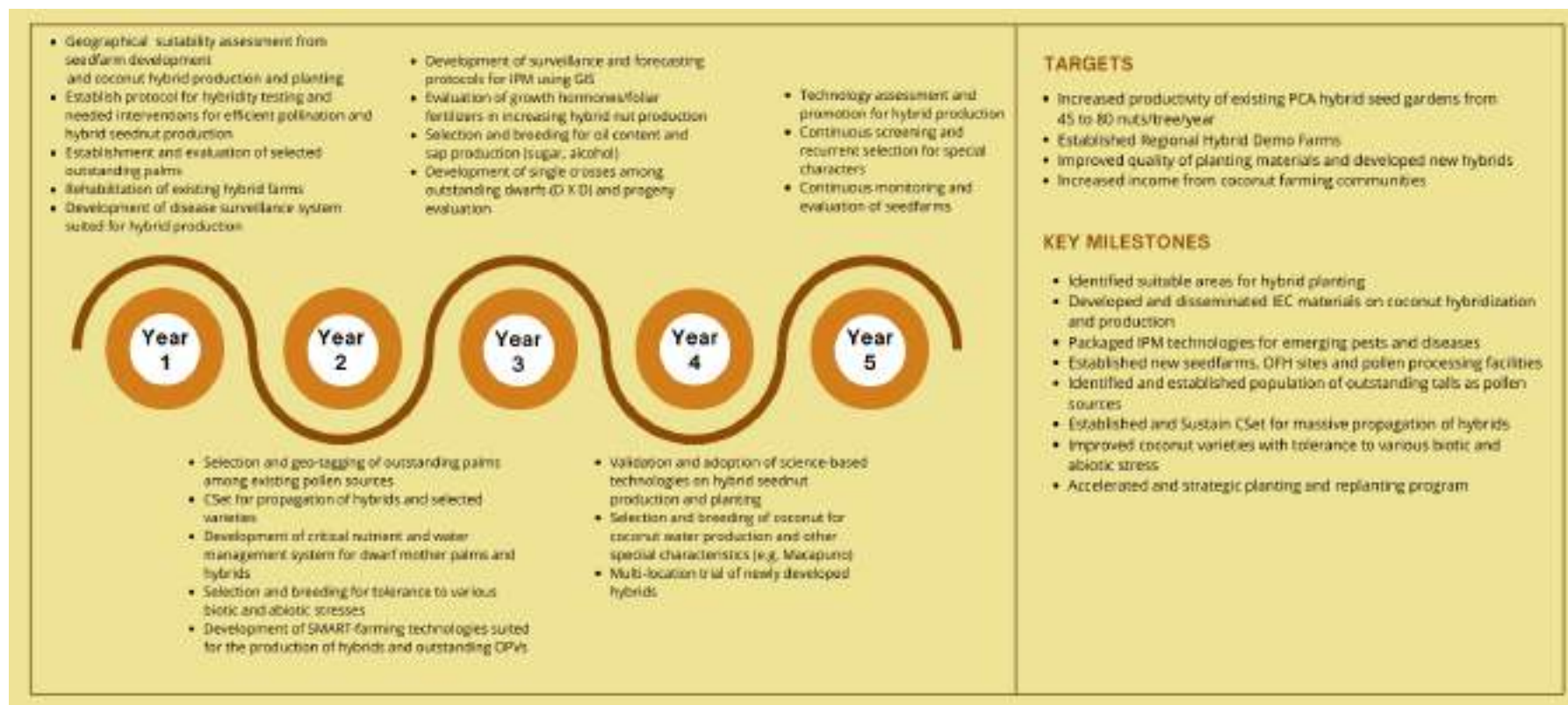


Figure 6.3.2a Coconut Hybridization Research and Development Program, Y1-Y5

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Table 6.3.2b. Number of hybridization research projects (new, on-going, and completed) per component, 5 years

Component	Implementing Agency	No. of Target Programs/Projects*															
		Year 1			Year 2			Year 3			Year 4			Year 5			Total
		N	O	C	N	O	C	N	O	C	N	O	C	N	O	C	N
A. R&D																	
1. Improve Production of Hybrid Coconut Planting Materials	PCA Research Centers, UPLB, VSU, USM	10	-	-	6	8	2	9	7	7	6	13	3	-	4	15	31
2. Achieve the Expected High Yield of Hybrids to be Planted	PCA Research Centers and Regional Offices, UPLB, VSU, USM	4	-	-	1	3	1	10	-	4	6	6	4	4	1	11	25
3. Increase Productivity of Existing Hybrids	PCA Research Centers and Regional Offices, UPLB, VSU, USM	7	-	-	-	-	-	4	1	6	-	5	-	-	-	5	11
B. Technology Transfer and Promotion	PCA Research Centers and Regional Offices, UPLB, VSU, USM	1	-	-	1	-	1	2	-	1	2	2	2	2	2	2	8
C. Socio-Economic and Policy	PCA Research Centers and Regional Offices, UPLB	1	-	-	1	-	1	1	-	1	2	-	1	2	2	-	7
D. Capacity Building	PCA Research Centers and Regional Offices, UPLB, VSU, USM	1	-	-	1	-	1	1	-	1	1	-	1	1	-	1	5
E. Knowledge Management and M&E***	DOST-PCAARRD	1	-	-	-	1	-	-	1	-	-	1	-	-	-	1	1
TOTAL		25	-	-	10	12	6	27	9	20	17	27	11	9	9	35	88

*No. of Target Programs/Projects classified as follows: (N) New; (O) On-going; and (C) Completed.

**Based on the annual budget allocation to DOST-PCAARRD which is 5% of the Trust Fund.

***Allotment for Component E is 5% of the total Trust Fund allocation to DOST-PCAARRD; Will be made part of Component B.

B. INDICATIVE INVESTMENT REQUIREMENT

The proposals to be considered shall be aligned with the Harmonized National Research and Development Agenda (HNRDA) and support the CHP under the Coconut Farmers and Industry Development Plan of Republic Act No. 11524. Research proposals shall be evaluated based on the following criteria: technical feasibility and financial viability of the proposal, and eligibility of the proponent.

Process flow diagram with estimated timelines from proposal submission to completion is presented in Annex Figure 6.3.2.1. DOST's prescribed duration to complete the proposal evaluation is within 40 working days.

Proposals duly endorsed by their agency head are to be inputted by proponents to the DOST Project Management Information System (DPMIS). The DPMIS forwards the proposals to the Online System for Submission and Evaluation of R&D Proposals (OSEP). Proposals with complete documentary requirements are given a system-generated project code. Within five (5) working days, the proposal is forwarded to the concerned Technical Research Division (TRD) for evaluation.

Proposals are evaluated within 17 working days by the TRD. Proposals recommended for revision are given seven (7) working days upon receipt to re-submit. If the revised proposal is found acceptable, endorsement to approving bodies is done within six (6) working days.

Presentation, review and approval of program/project will be through the DOST-PCAARRD's Governing Council (GC) except for projects amounting to five million pesos (PHP 5,000,000.00) and below which will be approved by the DOST-PCAARRD's Directors' Council (DC). The project is either approved, conditionally approved, or disapproved. The agency head of the implementing agency is informed of the final decision of the approving bodies within ten (10) working days after the meeting.

Within 28 working days upon approval of the program/project for funding, requisite documents for fund processing are prepared including the signing and notarization of the MOA. The TRD endorses these documents to the Office of the Executive Director for Research and Development (OED-RD) before approval of the Executive Director. The OED-RD subsequently forwards the documents to the Finance and Administrative Division (FAD) Accounting Department for processing and release of funds.

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Table 6.3.2c. Indicative investment requirement per component, 5 years

COMPONENT	INDICATIVE BUDGET (IN MILLIONS, PHP)**					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
A. R&D						
1. Improve Production of Hybrid Coconut Planting Materials	135.5	136.5	145.0	145.0	181.0	743.0
2. Achieve the Expected High Yield of Hybrids to be Planted	42.0	42.0	58.0	95.5	164.0	401.5
3. Increase Productivity of Existing Hybrids	40.0	30.0	30.0	22.0	50.0	172.0
B. Technology Transfer and Promotion	5.0	7.0	15.0	20.0	30.0	77.0
C. Socio-Economic and Policy	5.0	7.0	7.0	20.0	20.0	59.0
D. Capacity Building	10.0	15.0	30.0	30.0	30.0	115.0
E. Knowledge Management and M&E***	12.5	12.5	15.0	17.5	25.0	82.5
TOTAL	250.0	250.0	300.0	350.0	500.0	1,650.0

*No. of Target Programs/Projects classified as follows: (N) New; (O) Ongoing; and (C) Completed.

**Based on the annual budget allocation to DOST-PCAARRD which is 5% of the Trust Fund.

***Allotment for Component E is 5% of the total Trust Fund allocation to DOST-PCAARRD; Will be made part of Component B.

The indicative targets and budget for these research components are presented in Table 6.3.2c. A total of 80 projects are initially proposed to be funded by CFIDP, subject to submission of acceptable full proposal that still need to undergo the review, evaluation and approval process of DOST-PCAARRD as discussed in the implementation plan and Annex 6.3.2. Eighteen (18) projects will commence in the first year covering all research themes. Additional projects will start each year thereafter. From Year 2 to Year 5, there will a combination of new, on-going and completed projects. Research outputs are expected to directly support the operations component of the hybridization program handled by PCA, and prime the farmers and other stakeholders to adopting the recommendations for a diversified, modern hybrid coconut production systems towards Good Agricultural Practices or organic certification.

Table 6.3.2d. Indicative budget allocation per thematic research, 5 years

COMPONENT	INDICATIVE BUDGET (IN MILLIONS, PHP)						SHARE
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
A. R&D	217.5	208.5	233	262.5	395	1316.5	79.8%
B. Technology Transfer and Promotion	5	7	15	20	30	77	4.7%
C. Socio-Economic and Policy	5	7	7	20	20	59	3.6%
D. Capacity Building	10	15	30	30	30	115	7.0%
E. Knowledge Management and M&E	12.5	12.5	15	17.5	25	82.5	5.0%
TOTAL	250	250	300	350	500	1,650	100%

6.4 COMMUNITY-BASED FARM ENTERPRISE DEVELOPMENT: FARM REHABILITATION AND IMPROVEMENT

6.4.1 INTERCROPPING (COFFEE AND CACAO)

PROJECT DESCRIPTION

Intercropping is an important strategy to increase and diversify the income source of smallholder coconut farmers. With 80% of the 3.65 M ha of coconut areas still monocropped, the potential contribution of intercrops to increasing agricultural production without opening new lands is huge.

There are many success stories attesting to the significant contribution of intercrops to increasing coconut farmers income and total farm productivity (*“Ani” at “Kita”*). Random samples of 61 farmers practicing intercropping from early 2021 NCFRS registrants in 10 regions reported increases in income from intercrops ranged from 57% (Region 11) to up 600% (Region 6) (COCOFIRM, 2021).

Coffee and cacao are priority high value crops of the Department of Agriculture, and are suitable intercrops under coconuts. Figure 6.4.1a presents examples of farmers’ income derived from coconut + coffee (left) and coconut + cacao (right) intercropping systems.

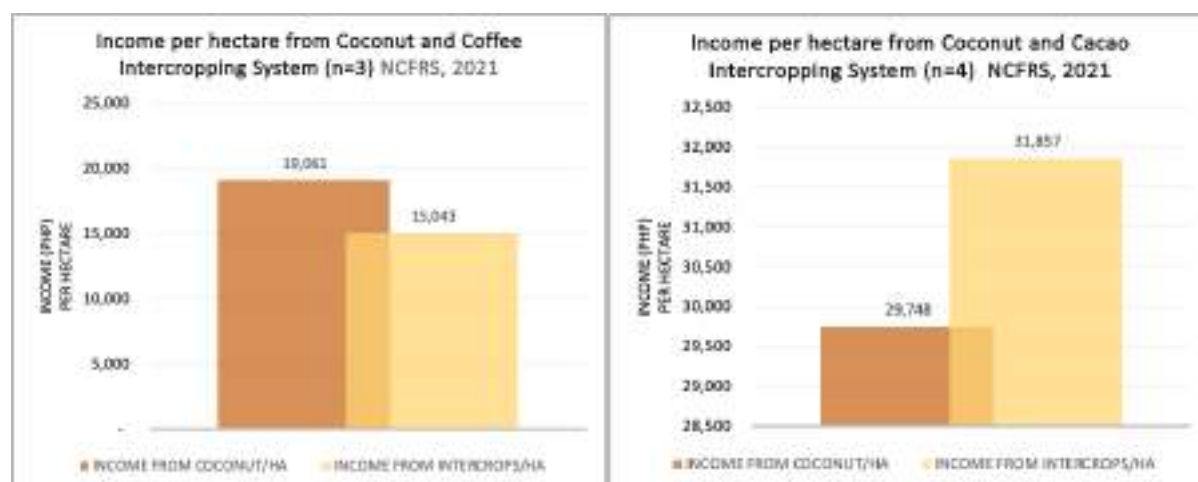


Figure 6.4.1a. Farmers’ Income per hectare from Coconut with Coffee (left) and Cacao (right) as intercrops

Source: NCFRS, 2021

Coffee. Coffee is grown in 50 countries along the equatorial zone called “the green belt”, and the country lies within that zone. Coffee has a long history of cultivation in the Philippines, with 26 provinces as major coffee producers. Despite this, the local coffee production at about 62,000 MT in 2019 is still unable to meet local demand of 100,000 MT (Philippine Coffee Board Inc., www.philcoffeeboard.com.) The yearly deficit is filled by imports.

Chapter 6.4.1 Intercropping (Coffee and Cacao)

The Department of Agriculture's Coffee Roadmap 2017-2022 aims to increase coffee production seven-fold by 2022 by targeting a total coffee area of 140,552 ha in 2017 to 213,788 ha by 2022.

Majority of the target areas for coffee production will be in Mindanao particularly SOCCSKSARGEN and Davao. PCA through its KANIB Enterprise Development Program (KEDP) has planted almost 3,500 ha on these regions in addition to another 14,200 ha in other suitable coconut areas of the country from 2013, 2015-2019.

Despite the projects supporting its expansion, Robusta coffee hectareage and volume of production have been on a downward trend from 91,000 ha and 69,500 MT dried berries in 2009 to 85,000 ha and 41,500 MT in 2019, respectively (PSA, 2019).

Coffee is a profitable intercrop under coconuts, even for smallholder farmers. In the Coffee+ project involving 1,500 farmers in Bukidnon and Sultan Kudarat in 2018. Participating farmers reported an increase in their net income from PHP 30,000 in 2018 to PHP 90,000 in 2019 with yield increase from 235 kg/ha to 477 kg/ha by adopting profitable and best integrated farming systems and with NESTLE as a ready market (<https://www.nestle.com.ph/local-initiatives/nescafe-plan/leo-zembrano>).

Cacao. Global cacao supply shortfall is expected to be at one million metric tons (MMT) by 2020. The Philippines is a net importer of cacao, consuming 50,000 MT annually while the local supply is only a about 10,000-15,000 MT (DA Investment Guide for Cacao, da.gov.ph) Figure 6.4.1b presents the area planted and volume of production of cacao in the Philippines. While planted all over the country, commercial production is concentrated in Mindanao, notably in Davao Region, the chocolate center of the country, occupying 64% of area planted and producing 80% of the country's cacao volume of production (PSA, 2021). Other top producing regions include Central Luzon (Region III), Northern Mindanao (Region X), Zamboanga Peninsula (Region IX), and SOCCSKSARGEN (Region XII).

The Philippine Cacao Industry Roadmap is anchored on the Value Chain Approach and is aligned with the 2022 Cacao Challenge targets to produce 100,000 MT of dried fermented beans by 2022. DOST-PCAARRD under its industry Strategic Science and Technology plans seeks to use science-based technologies to increase yield from 500 kg to 800 kg/ha, a 60% increase.

Properly laid out and cared for intercrops also benefit the coconut, increasing yield. *Barangay Coletto* Coconut Farmers Association (BCCFA) in Surigao del Sur, a KANIB awardee in 2019, had one member who testified that from his 3.0-ha coconut area before (no intercrop), he can only harvest 2,700 nuts every 3 months. However, when he intercropped his coconut farm with cacao, he noted a remarkable increase from his harvest to as much as 9,000 nuts owing it to the result of applying fertilizers on his cacao trees. The farmer produces 15 to 25 kg of dried beans per month from 500, five-year old cacao trees. Dried beans sold to local traders get paid PHP 100.00-140.00/kg all-in and to Kennermer Foods International (KFI) at PHP 160.00/kg of fermented dried beans. When processed into *tablea*, one (1) kg of fermented dried beans is sold at PHP 300-350.00 which is three times higher in value than selling dried cacao beans. Additionally, intercropping provides employment to farm workers. One hectare requires hired 2-3 laborers paid a daily wage of PHP 300.00 for the maintenance of cacao trees, while a skilled "Cacao Doctor" can be hired daily for pruning trees (PCA, 2019). Another KANIB awardee,

Chapter 6.4.1 Intercropping (Coffee and Cacao)

the ALABAT KANIB Federation was granted cacao seedlings by PCA, with the same number of seedlings provided as counterpart of the LGU, covering 114 ha in 2015. By 2019, the beneficiaries of the program have been reaping the rewards from their intercrop with 40% of their trees already productive and a monthly harvest of 800 kg of dried beans, earning a total monthly income of PHP 21,600. The equivalent cacao harvest is 430 kg/ha/year. The farmers also observed increased productivity of their coconut palms with cacao intercropping. In Alabat, the cacao pods are being consolidated at the processing center for fermentation, drying, roasting, winnowing, grinding prior to processing of *tablea* which is sold at PHP 10.00 per piece for local consumption (PCA, 2019).

The Coconut-Coffee/Cacao-Based Enterprise Development Project to be implemented by the Department of Agriculture-High Value Crops Development Program with 3.33% share of the Farm Improvements program allocation of 10% of the CFIDP yearly budget intends to achieve the following:

1. Support smallholder coconut farmers and their families to gain sustainable employment and income through intercropping of cacao and coffee;
2. Maximize utilization of coconut lands for increased productivity;
3. Increase level of local sufficiency for coffee and cacao;
4. Develop community-based enterprises through complementation from other components under R.A. No. 11524; and
5. Capacitate farmers to conserve and protect the natural resources that support their livelihoods.

TARGETS

HVCDP will implement the following key three strategies under the CFIDP, extending support to qualified coconut farmers and organizations:

- 1) Rehabilitate/rejuvenate (Technology demonstration) existing coffee and cacao trees already intercropped under coconuts is a low hanging fruit strategy. Farmers and coconut farmers' organization will be trained, provided inputs and small tools/ equipment to increase yield and income. A total of about 2.0 M coffee and 3.0 M cacao trees will be rehabilitated over 5 years.
- 2) Expansion of intercropping to engage more coconut farmers to be active participants in the coffee and cacao agri-business corridors. Expansion sites for CFIDP will be prioritized in coconut areas with active farmers' organizations in HVCDP priority areas and will cover 5000 ha of coffee and 7,300 ha of cacao over 5 years.
- 3) Establishment of cacao and coffee nurseries, each with capacity to produce 10,000 seedlings per year will be established over 5 years. Over 80,500 coconut farmers will be provided the needed trainings to be skilled in cacao and coffee production and/or post-harvest and processing.
- 4) Establishment of 140 ATI certified learning sites and 109 post-harvest and processing facilities.

Chapter 6.4.1 Intercropping (Coffee and Cacao)

Table 6.4.1a. Summary of physical targets for coffee and cacao, 5 years

PHYSICAL TARGETS	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
COFFEE							
Coffee area for planting	hectares	883	879	868	1,117	1,257	5,003
Beneficiaries	group	142	148	66	65	92	513
Coffee trees for rehabilitation	number	310,787	279,588	379,513	385,063	501,700	1,856,651
CACAO							
Cacao area for planting	hectares	1,197	930	1,540	1,417	2,517	7,601
Beneficiaries	group	100	106	133	135	177	651
Cacao trees for rehabilitation	number	655,067	663,141	419,271	535,460	709,737	2,982,676
ESTABLISHMENT OF FACILITIES							
Nurseries establishment	number	30	15	41	51	86	223
Learning sites establishment	number	4	7	35	48	49	143
Post-harvest/processing facilities	number	4	15	25	26	39	109

These strategies are projected to contribute to the attainment of national targets for the coffee and cacao industries (Source: Coffee and cacao roadmaps as of 27 October, 2021).

Table 6.4.1b. Contribution of Coffee and Cacao Intercropping Programs in Achieving Roadmap and PDP Targets

COFFEE INTERCROPPING			
YEAR	TARGETS BASED ON PDP (2021) /COFFEE ROADMAP* 2022-2026 (METRIC TONS)	YIELD CONTRIBUTION OF INTERCROPPING PROJECT (METRIC TONS)	% CONTRIBUTION OF COFFEE INTERCROPPING PROJECT IN ACHIEVING THE ROADMAP TARGETS
2021	20,760		
2022	30,019	311	1.04
2023	45,029	590	1.31
2024	63,414	970	1.53
2025	82,989	1796	2.16
2026	86,932	2737	3.15
2027		3171	
2028		3730	
2029		4358	
CACAO INTERCROPPING			
YEAR	TARGETS BASED ON PDP (2021) /CACAO ROADMAP* (2022-2026) (METRIC TONS)	YIELD CONTRIBUTION OF INTERCROPPING PROJECT (METRIC TONS)	% CONTRIBUTION OF CACAO INTERCROPPING PROJECT IN ACHIEVING THE ROADMAP TARGETS
2021	10,687		
2022	13,077	328	2.50
2023	18,308	659	3.60
2024	25,632	1,028	4.01
2025	35,884	2,031	5.66
2026	50,238	3,793	7.55
2027		5,568	
2028		7,372	
2029		10,362	

Notes:

2021 Coffee and Cacao Targets are based in Philippine Development Plan (PDP 2017-2022);

Average yield /tree are as follows coffee: 1 kg dried berries/tree/yr; cacao: 0.5 kg dried beans/tree/year (1000 trees/ha).

2022 Targets by the Coffee and Cacao Industry Roadmaps* are higher than the PDP 2022 targets of 23,064 MT (dried cherries) for coffee and 11,990 MT (dried beans) for cacao.

*Roadmap targets are as of October 27, 2021 and may still be subject to change as the crafting of the roadmaps are still on-going (DA).; The targets for the coffee industry roadmap were calculated based on the projected yield increase from 0.8 kg/tree dried cherries in 2022 to 2 kg /tree in 2026. This was then multiplied to existing trees, (for new plantings, starting at 3 years after planting). Yield increase from rehabilitation (1 kg /tree/year) is also included in the calculation. Coffee planting targets include number of trees to be provided by DA, DENR, and DA-PCA.

Chapter 6.4.1 Intercropping (Coffee and Cacao)

The targets for Cacao Industry roadmap were calculated based on the impact of newly planted (after 3 years) and rehabilitated trees, assuming a yield of 0.5kg/tree in 2022 and 2.5 kg/tree in 2026.

The yield and area expansion of coffee and cacao from 2017-2020 did not meet the annual targets in PDP due to the decrease in budget allocation of DA-HVCDP, calamities (Taal eruption, typhoons), low buying price, land conversion, among others.

IMPLEMENTATION PLAN

Through the interventions of the Department of Agriculture-High Value Crop Development Program (DA-HVCDP), the Philippine Coconut Authority and other partner agencies, smallholder coconut farmers' groups will be strengthened to undertake coconut-coffee or coconut-cacao production, value-adding, and income-generating enterprises and marketing activities. The Project will help organize farmers into clusters and provide trainings and other support services to improve coconut farm productivity, create sustainable jobs, and conserve natural resources. The infusion of enterprise development activities will facilitate synchronized production and systematic linkage to the markets. In addition, the Project will facilitate the strengthening of existing farmers' organizations and/or cooperatives, savings capital mobilization and scaling-up of enterprises. Farmers-owners will be the direct beneficiaries of the program while tenants, caretakers and workers will benefit as skilled farm and processing service provider/worker. The site suitability based on the established criteria of the coffee and cacao roadmaps, the available coconut areas for intercropping (coconut area-coffee and cacao area) identified the indicative priority areas for coffee and cacao intercropping (Figure 6.4.1b).

A. KEY STRATEGIES TOWARDS DEVELOPING COFFEE AND CACAO AGRI-CORRIDORS

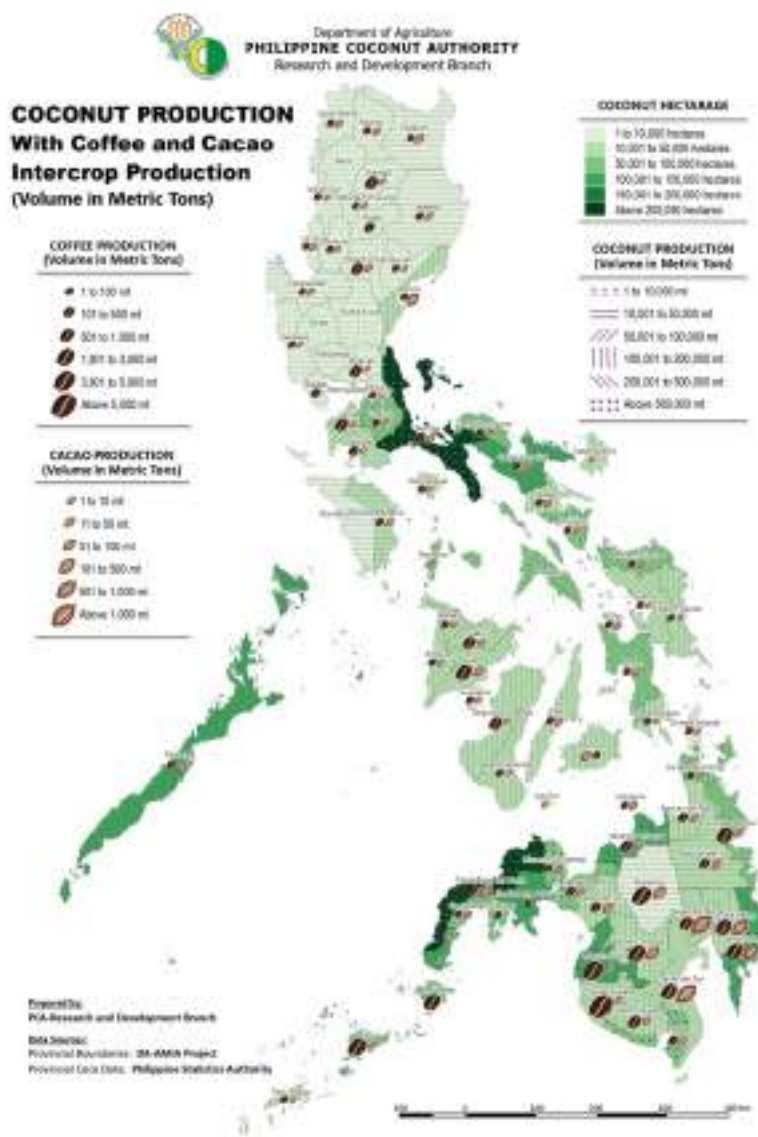


Figure 6.4.1b. Coconut production (MT) with coffee and cacao intercrop production

Chapter 6.4.1 Intercropping (Coffee and Cacao)

HVCDP with other implementing agencies and complementing programs will implement strategies to increase farm productivity and farmers' income through coffee and cacao intercropping particular to the needs of the sites, based on established selection criteria.

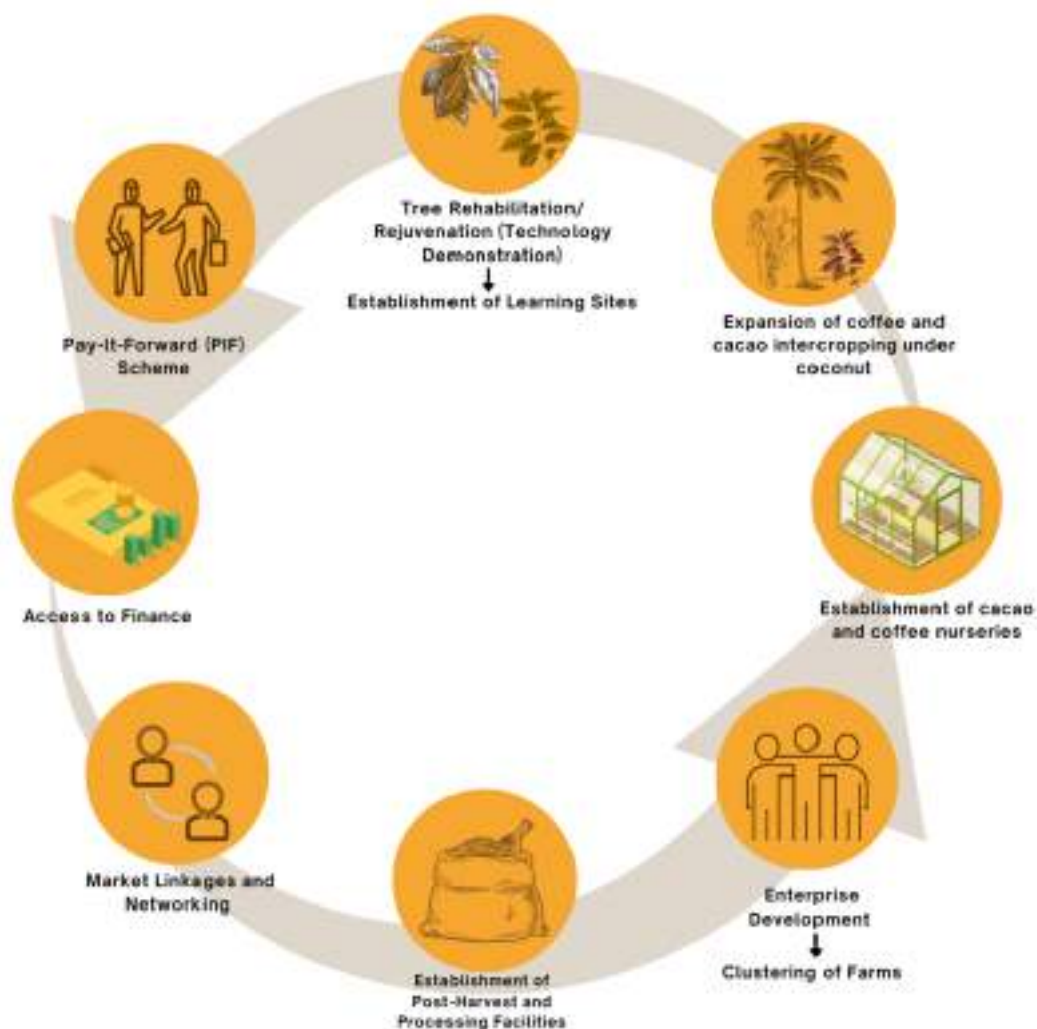


Figure 6.4.1c. Summary of key strategies under the Intercropping Program

A.1 Tree Rehabilitation/Rejuvenation (Technology Demonstration)

The tree rehabilitation/rejuvenation of existing coffee and cacao in coconut areas (technology demonstration) is the low hanging fruit strategy that will rehabilitate/rejuvenate existing coffee and cacao trees intercropped under coconut. Individual coconut farmers and coconut farmers' organizations will be trained, provided inputs and small tools/ equipment to increase yield and income.

For existing trees with coffee or cacao trees with age 3 and above, which requires proper tree management and fertilization the following interventions may be conducted/ provided:

- a. Provision of pole pruners, pruning saw and shear may be subject to evaluation of the needs of the organization. The distribution should be of the following ratio:
 - i. One (1) unit pruning saw and one (1) unit of pruning shear for every coconut farmer with at least 100 cacao/ coffee trees; or
 - ii. One (1) unit of mechanic pole pruners per ten (10) members of the organization or 5,000 trees.
- b. Fertilizer application and pruning shall be conducted regularly, preferably every 6 months or depending on the soil analysis and tree growth. The recommended rates per fertilization are as follows:
 - i. 250-270 grams of complete fertilizer, 900 grams of Urea and 600 grams of Muriate of Potash; or
 - ii. 4 kilograms of organic fertilizer; or
 - iii. Or mixture of organic and inorganic fertilizer

Foliar fertilizer may also be used to promote vigorous growth. Proper removal of dead and unwanted branches will be demonstrated. The estimated amount of major nutrients (N, P and K) supplied by coconut coir dust and coconut husk when used as mulch is presented in Annex Table 6.4.1.3. The use of these materials can be alternative fertilizer sources in coconut farms especially in organic production systems.

A.1.1 Establishment of Learning Sites

Potential model farms can be developed as Learning Sites by ATI based on their existing criteria and guidelines. These sites will showcase good practices and appropriate technologies in coffee/cacao intercropping in coconut areas. It will also serve as training ground for the coconut farmers engaged in this project for actual demonstration. Every Region should establish at least one learning site in every top coconut producing provinces to facilitate promotion of farm diversification in each area by year 2025.

Chapter 6.4.1 Intercropping (Coffee and Cacao)

Table 6.4.1c. Regional targets for coffee trees rehabilitation/rejuvenation (technology demonstration), 5 years

REGIONAL PHYSICAL TARGETS	NUMBER OF TREES FOR REHABILITATION						SHARE OF TOTAL
	COFFEE						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	-	-	-	-	-	-	0.00%
Region II (Cagayan Valley)	-	-	-	31,000	44,000	75,000	4.04%
Region III (Central Luzon)	-	-	-	-	-	-	0.00%
Region IV-A (CALABARZON)	59,920	52,000	35,813	35,813	50,000	233,546	12.58%
Region IV-B (MIMAROPA)	41,667	38,888	-	-	-	80,555	4.34%
Region V (Bicol Region)	42,500	42,500	42,500	42,500	42,500	212,500	11.45%
Region VI (Western Visayas)	23,000	15,500	-	15,550	46,000	100,050	5.39%
Region VII (Central Visayas)	17,000	24,000	21,000	24,000	24,000	110,000	5.92%
Region VIII (Eastern Visayas)	10,000	-	4,000	1,000	-	15,000	0.81%
Region IX (Zamboanga Peninsula)	41,700	41,700	41,700	41,700	41,700	208,500	11.23%
Region X (Northern Mindanao)	35,000	30,000	30,000	30,000	30,000	155,000	8.35%
Region XI (Davao Region)	-	-	138,500	138,500	138,500	415,500	22.38%
Region XII (SOCCSKSARGEN)	25,000	25,000	25,000	25,000	35,000	135,000	7.27%
Region XIII (Caraga)	15,000	10,000	11,000	-	-	36,000	1.94%
BARMM	-	-	30,000	-	50,000	80,000	4.31%
TOTAL	310,787	279,588	379,513	385,063	501,700	1,856,651	100%

Table 6.4.1d. Regional targets for cacao trees rehabilitation/rejuvenation (technology demonstration), 5 years

REGIONAL PHYSICAL TARGETS	NUMBER OF TREES FOR REHABILITATION						SHARE OF TOTAL
	CACAO						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	-	-	-	-	-	-	0.00%
Region II (Cagayan Valley)	-	-	-	31,000	44,000	75,000	2.51%
Region III (Central Luzon)	-	-	-	-	-	-	0.00%
Region IV-A (CALABARZON)	89,880	90,000	53,960	53,960	155,737	443,537	14.87%
Region IV-B (MIMAROPA)	41,667	61,111	73,611	-	-	176,389	5.91%
Region V (Bicol Region)	42,500	42,500	37,500	37,500	42,500	202,500	6.79%
Region VI (Western Visayas)	15,070	24,450	7,700	39,500	47,500	134,220	4.50%
Region VII (Central Visayas)	28,000	44,500	37,000	45,000	52,000	206,500	6.92%
Region VIII (Eastern Visayas)	44,450	2,080	-	3,000	24,000	73,530	2.47%
Region IX (Zamboanga Peninsula)	45,000	45,000	45,000	45,000	45,000	225,000	7.54%
Region X (Northern Mindanao)	20,000	20,000	20,000	20,000	20,000	100,000	3.35%
Region XI (Davao Region)	268,500	268,500	85,000	160,000	160,000	942,000	31.58%
Region XII (SOCCSKSARGEN)	25,000	25,000	25,000	25,000	35,000	135,000	4.53%
Region XIII (Caraga)	35,000	40,000	34,500	75,500	84,000	269,000	9.02%
BARMM	-	-	-	-	-	-	0.00%
TOTAL	655,067	663,141	419,271	535,460	709,737	2,982,676	100%

A.2 Expansion of coffee and cacao intercropping under coconut

This will expand coffee and cacao production areas under coconut and engage more coconut farmers to be active participants in the coffee and cacao agri-business corridors. The HVCDP coffee and cacao roadmaps (currently being updated) have identified suitable priority areas for coffee and cacao production. Expansion sites for CFIDP will be prioritized in coconut areas with active farmers' organizations in HVCDP priority areas for coffee and cacao.

Prior to the distribution of coffee seedlings and/or fertilizer to the partner CBO and farmer-participants, the LGU and PCA Agriculture Extension Workers assigned to the CFIDP, in coordination with the Regional Agriculture and Fishery Council thru the DA RFO must ensure that the farmers' coconut farm is ready for transplanting of coffee seedlings which means necessary land preparation, plowing and harrowing, lay-outing, staking, and holing have been undertaken by the farmers. As such, the following recommended agricultural practices are prescribed:

- a. Clear the sites of all existing shrubs and grasses.
- b. Plow and harrow the land twice one month before planting to improve the soil tilth.
- c. Layout and stake the field with proper distance and alignment to attain the required appropriate density of seedlings per hectare.
- d. Dig holes (measuring 40 x 40 x 40 cm) on the staked portions one month before field planting. There should be a distance of 3 meters between rows and 2 meters between plants.
- e. Before planting, ring-weed about 100 cm. around the mouth of the hole.
- f. Transplanting should be done at the onset of the rainy season for good vegetative growth and development. In areas with uniform rainfall year round, planting can be done any time of the year.
- g. Plant 6-month old coffee or cacao seedlings at the center of the previously prepared planting hole. Cut the bottom of the plastic bag to trim bent roots, remove the plastic bag and bury the ball of earth. Make sure the root collar is at the same level as the ground to prevent rotting.
- h. Compact the base around the seedlings. Basal fertilization is recommended using 200 grams of organic fertilizer per seedling.
- i. The participants must perform necessary care and maintenance of the seedlings such as: ring weeding at least every three (3) months depending on the growth of the weeds; and control of pests and diseases using the integrated pest management, among others.
- j. The identified farmer beneficiaries for the coffee and cacao intercropping expansion will be supported with fertilizers (organic or inorganic) for the 2nd and 3rd year (subject to availability of funds) to ensure adequate supply of nutrients and achieve optimum yield as it goes thru its productive stage. They may also seek assistance for proper soil analysis to determine the appropriate fertilizer requirement.

Chapter 6.4.1 Intercropping (Coffee and Cacao)

The regional targets for area expansion are presented below:

Table 6.4.1e. Regional targets for coffee area (hectares) for intercropping, 5 years

REGIONAL PHYSICAL TARGETS	AREA FOR INTERCROPPING (HECTARES)						SHARE OF TOTAL
	COFFEE						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	58	58	20	-	-	135	2.70%
Region II (Cagayan Valley)	50	56	30	-	60	196	3.91%
Region III (Central Luzon)	50	50	96	120	150	466	9.31%
Region IV-A (CALABARZON)	-	-	175	285	170	630	12.59%
Region IV-B (MIMAROPA)	20	-	6	55	137	218	4.36%
Region V (Bicol Region)	-	-	-	-	-	-	0.00%
Region VI (Western Visayas)	30	67	155	85	110	447	8.93%
Region VII (Central Visayas)	-	10	10	10	40	70	1.40%
Region VIII (Eastern Visayas)	20	10	10	10	30	80	1.60%
Region IX (Zamboanga Peninsula)	25	-	-	-	-	25	0.50%
Region X (Northern Mindanao)	50	50	50	50	50	250	5.00%
Region XI (Davao Region)	-	-	-	190	-	190	3.80%
Region XII (SOCCSKSARGEN)	50	60	60	80	110	360	7.20%
Region XIII (Caraga)	30	18	16	-	-	64	1.28%
BARMM	500	500	240	232	400	1,872	37.42%
TOTAL	883	879	868	1,117	1,257	5,003	100%

Table 6.4.1f. Regional targets for cacao area (hectares) for intercropping, 5 years

REGIONAL PHYSICAL TARGETS	AREA FOR INTERCROPPING (HECTARES)						SHARE OF TOTAL
	CACAO						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	58	58	20	-	-	135	1.78%
Region II (Cagayan Valley)	104	14	40	-	48	206	2.71%
Region III (Central Luzon)	160	160	160	160	160	800	10.52%
Region IV-A (CALABARZON)	-	87	200	200	270	757	9.96%
Region IV-B (MIMAROPA)	70	37	20	135	175	437	5.75%
Region V (Bicol Region)	170	170	165	105	170	780	10.26%
Region VI (Western Visayas)	84	68	120	95	105	472	6.21%
Region VII (Central Visayas)	90	10	50	60	107	317	4.17%
Region VIII (Eastern Visayas)	110	130	378	201	373	1,192	15.68%
Region IX (Zamboanga Peninsula)	25	-	-	-	-	25	0.33%
Region X (Northern Mindanao)	60	90	87	98	98	432	5.68%
Region XI (Davao Region)	147	-	-	170	520	837	11.01%
Region XII (SOCCSKSARGEN)	50	40	60	60	90	300	3.95%
Region XIII (Caraga)	70	67	80	88	201	506	6.65%
BARMM	-	-	160	46	200	406	5.34%
TOTAL	1,197	930	1,540	1,417	2,517	7,601	100%

Chapter 6.4.1 Intercropping (Coffee and Cacao)

A.3 Establishment of cacao and coffee nurseries

To ensure accessibility of coffee/cacao planting materials in the community and to decrease mortality rates of the seedlings to support rehabilitation and expansion strategies, the coconut farmers' organizations with existing mother trees will be supported to manage nurseries in strategic areas.

CBOs with existing coffee/cacao mother trees and with capacity to operate nurseries may be provided with the production facility. The BPI shall ensure that the mother trees are tagged and viable sources of scion. HVCDP RFOs in coordination with BPI shall conduct trainings for proper nursery operation and management.

A minimum of 10,000 trees must be produced per nursery once it starts its regular operation. CBOs may operate it as a business by selling these seedlings to their members or other interested clients.

Table 6.4.1g. Regional targets for nursery establishment, 5 years

REGIONAL PHYSICAL TARGETS	NURSERY ESTABLISHMENT					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	-	-	-	-	4	4
Region II (Cagayan Valley)	-	-	2	3	5	10
Region III (Central Luzon)	-	-	-	2	5	7
Region IV-A (CALABARZON)	-	-	-	-	-	-
Region IV-B (MIMAROPA)	3	3	10	10	10	36
Region V (Bicol Region)	3	-	1	5	2	11
Region VI (Western Visayas)	3	1	4	3	3	14
Region VII (Central Visayas)	3	-	2	2	4	11
Region VIII (Eastern Visayas)	4	-	1	2	8	15
Region IX (Zamboanga Peninsula)	6	8	11	14	22	61
Region X (Northern Mindanao)	2	2	3	2	6	15
Region XI (Davao Region)	-	-	-	-	-	-
Region XII (SOCCSKSARGEN)	3	-	-	-	3	6
Region XIII (Caraga)	3	1	-	-	1	5
BARMM	-	-	7	10	11	28
TOTAL	30	15	41	53	84	223

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Table 6.4.1h. Regional targets for post-harvest and processing facilities, 5 years

REGIONAL PHYSICAL TARGETS	POST-HARVEST & PROCESSING FACILITIES					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	-	-	-	-	-	-
Region II (Cagayan Valley)	-	-	2	2	4	8
Region III (Central Luzon)	-	-	-	-	-	-
Region IV-A (CALABARZON)	-	-	-	-	-	-
Region IV-B (MIMAROPA)	-	-	-	-	-	-
Region V (Bicol Region)	-	1	1	4	-	6
Region VI (Western Visayas)	-	6	4	2	8	20
Region VII (Central Visayas)	-	-	-	-	-	-
Region VIII (Eastern Visayas)	-	2	6	-	6	14
Region IX (Zamboanga Peninsula)	-	-	-	-	-	-
Region X (Northern Mindanao)	-	-	-	-	-	-
Region XI (Davao Region)	-	-	-	-	5	5
Region XII (SOCCSKSARGEN)	-	-	5	6	6	17
Region XIII (Caraga)	4	6	6	10	8	34
BARMM	-	-	1	2	2	5
TOTAL	4	15	25	26	39	109

The detailed project activities proposed are presented in their respective regional coconut farmers and industry development plans.

A.4 Enterprise Development

The implementation of the coconut-coffee/cacao intercropping system shall be anchored on enterprise development. Coconut-coffee/cacao based enterprises shall be promoted for increased income and employment generation. Farms shall be consolidated into clusters and linked to markets with the CBO as the basic production unit. The CBO shall be assisted in the capacity building to undertake business planning and organized marketing activities.

A.4.1 Clustering of Farms

Clustering of farms shall be implemented in areas identified as suitable for coconut-coffee/cacao intercropping to gain economies of scale. A cluster of coconut farms should preferably be a contiguous area. It could also, however, be a non-contiguous area depending on the geographical condition and size of the area. The size of one (1) cluster of coconut-coffee/cacao intercropping is at the minimum 50 to 100 hectares and shall comprise one (1) coconut coffee/cacao site.

Farm clustering will enable small coconut farm holders to take advantage of communal inputs and services as well as scale economies of mechanized farming technologies. Modern technology systems and good agricultural practices will be introduced into farm clusters to enhance productivity and reduce production costs. It would also facilitate marketing arrangements with agribusiness groups through

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various modes that include purchase orders, contract growing or processing arrangements and joint ventures.

A.5 Establishment of Post-Harvest and Processing Facilities

Once the CBOs have adequate volume for post-harvest and processing facilities, PHilMech should provide the following:

- Fermentation boxes
- Solar dryers
- Post-harvest facilities for sorting, cleaning, fermentation and drying (for CBOs with annual harvest volume of 50 mt and up)
- Coffee/Cacao Processing Facilities compliant in GMP and FDA standards
- Hauling equipment/trucks for CBOs venturing in consolidation and trading
- Training on proper post-harvest handling and processing

PCA and HVCDP RFOs should evaluate the needs of the CBOs and must endorse the request for such facilities to PHilMech. HVCDP RFOs may request the assistance of Regional Agricultural Engineering Divisions for the preparation of designs and evaluation of the project. The DTI and other government agencies may also provide support in value adding activities of the CBOs.

A.6 Market Linkages and Networking

Linkages with the LGUs and other agencies such as the DA-Agricultural and Marketing Assistance Division, DTI, and organizations providing support services and marketing assistance to small enterprises and cooperatives shall be strengthened and intensified. The CBO and the farmer-producers shall be linked to buyers and trained to forge marketing agreements and/or contracts for the supply of coffee and cacao beans and other products. Other marketing channels such as the traditional outlets and the formal markets in the area and nearby areas will be explored to ensure marketing of farm produce.

A.7 Access to Finance

Eligible farmers and farmers' groups in need of budget for upgrading farming operations or operating capital may apply for loan offered by credit programs of the Department of Agriculture such as the ACPC, ACEF and other financing institutions such as Land Bank and Development Bank of the Philippines. Applicants will be assisted by the DA - Regional Loan Facilitation Teams for the technical requirements, preparation of documents and business plans.

A.8 Pay-It-Forward (PIF) Scheme

To reach a greater number of households and develop a critical mass, the CBO shall be encouraged to adopt a recouping mechanism in the form of PIF scheme. Original participating farmers who are recipients of resources like seedlings and fertilizers will be required to return either in-cash or in-kind the equivalent amount of resources received (or whatever prescribed by the CBO), after three years or when the coconut- coffee farms have reached its economic threshold. The proceeds shall be passed on to the next qualified households. Likewise, the knowledge, skills and technologies learned will be passed on as well. In this regard, the PCA and partner CBO shall execute a Deed of Undertaking (DOU) upon receipt of the gifts. It should also be coordinated with DA – HVCDP RFOs.

B. CRITERIA FOR SELECTION OF SITES AND BENEFICIARIES

PCA and HVCDP RFOs shall identify the priority beneficiaries based on the identified criteria and facilitate the promotion, sourcing, procurement and distribution of coffee and cacao seedlings and related agricultural inputs, equipment and facilities to qualified coconut farmer beneficiaries in complementation with pertinent rules and regulations.

Pre-conditions for participation in the intercropping subprogram:

1. The proponents i.e. smallholders coconut farmers and Community-Based Organizations (CBOS) must have land that is highly suitable for coconut-coffee or coconut-cacao production.
2. The land must be free from liens and/or encumbrances. Otherwise, the proponent must submit a written consent from the bank to allow the use of the land or portion thereof for participation in this Project.
3. The beneficiaries must ensure that any land-related issues are settled properly prior to the implementation of the Project.
4. The beneficiaries must be committed to provide counterpart in the form of labor, cost of transport and handling of seedlings, and other supplies and materials.
5. The beneficiaries identified must undergo a skills training on coconut- coffee/cacao intercropping to be conducted by the ATI and TESDA, in coordination with HVCDP and the Local Government Units (LGUs) or CBOs.

Identification and Selection of Priority Areas and Participants

1. The following criteria must be followed in selecting and prioritizing project sites:

- Suitability for coconut-coffee/cacao production
- Available area for intercropping
- Priority areas for development of coffee and cacao industries as provided in the commodity industry roadmaps
- With presence of active CBOs and registered coconut farmers

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- Contiguity of farms to form into clusters
- Accessibility for easy monitoring and evaluation

2. Technical considerations in selecting CBOs:

- Must be a registered coconut farmers' organization or cooperative
- With at least 50 active members
- At least 80% of the members are small coconut farmers
- Good organizational structure and governance
- Have been in operation and with good track record of managing business operations for at least two (2) years

3. Selection of beneficiaries shall abide by the following set of criteria:

- Must be a Filipino citizen of legal age
- Farmers registered to the Coconut Farmer Registry and/or RSBSA
- Small landholders regardless of tenure, provided that, if any working arrangement exists, the consent of the owner is obtained
- Must be registered in the NCFRS for migration to the RSBSA with less than or equal to 5 hectares of land
- Must be residing within the barangay where the farm is located
- Preferably a member of any farmers' organization recognized by the DA/PCA and in good standing in their respective organizations
- Preferably in good standing with PCA as exemplified by his good performance in implementing previous and/or existing DA/PCA programs/projects
- Willing and committed to participate in the different trainings and activities of the Project
- Committed to pass on the gifts to other families
- With available labor and access to land and other natural resource

4. Farm Suitability Survey and Master Listing of Participants

- The LGU, along with HVCDP and PCA Regional Office, shall conduct suitability assessment of coconut lands based on approved target and in accordance with the agro-climatic requirements of growing coffee and the degree of interest (commitment) of would-be beneficiaries of the Project. They may also refer to the available suitability maps from the Bureau of Soil and Water Management (BSWM).
- The result of the evaluation must be made known to the proponents for their consideration.

A Master list of Approved Participants (MAP) shall be prepared in consultation with the partner CBO and farmers. It must contain the following basic information:

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- Name of the Participants or Beneficiaries (Family Name, Given Name, M.I.)
- Address (Barangay, Municipality, Province)
- Farm Location (Barangay, Municipality, Province)
- Gender (Male, Female)
- Age and Tenorial Status (Landowner, Tenant, Administrator, etc.)
- Area applied

The MAP shall be properly reviewed and endorsed by the LGU and PCA fieldmen to the PCDM to the Regional Office for review and endorsement by the Regional Managers (RMs) and shall be submitted to the HVCDP Regional Office and Central Office copy furnished the PCA Central Office.

5. Hectarage Entitlement and Package of Assistance and Incentives

Farmer-participants are entitled to the following:

- Minimum and maximum area of 0.5 to 5.0 hectares of coconut land
- 500 + 10% (allowance for replacement) of good quality coffee or cacao seedlings per hectare
- 2 bags (200 grams/tree) of organic fertilizer per hectare (first year)
- 18.5 kg. Urea; 5 kg. Di-Ammonium Phosphate; and 11.5 kg. Muriate of Potash per hectare (second year) 23 kg. Urea; 8 kg. Di-Ammonium Phosphate; and 26 kg. Muriate of Potash per hectare (third year), subject to availability of funds
- Post-harvest and processing support services
- Production technology and marketing assistance
- Training on production technology and marketing assistance (TESDA and DTI)
- Loan and insurance coverage (subject to policies and guidelines of PCIC, LBP and DBP)
- Farm improvement activities such as tree rehabilitation and equipment

Package of assistance is subject to the prioritization of activities and availability of funds.

6. Conduct of Training and Provision of Technical Assistance

Prior to the start of the implementation of the Project, all qualified participants shall be invited for a 1-2 days training on coconut-coffee/cacao production system. The objective of the training is to provide the participants with the knowledge and skills on coconut- coffee or cacao intercropping and also to familiarize them with the guidelines of the project implementation. Trainings should be conducted by DA-ATI or TESDA in close coordination with DA-HVCDP and PCA Field Offices.

At the minimum, the training will include the following aspects:

- Overview of the Coffee/Cacao Industry

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- The Coffee/Cacao Plant
- Establishment and Management of Coffee/Cacao Plantation under Coconut
- Coffee/Cacao Pests and Diseases Management
- Good Agricultural Practices
- Post-Harvest and Primary Processing
- Product Value Addition
- Agri-Entrepreneurship
- Duties and Responsibilities of the Participants

As part of their extension activities, the LGU AEWs must extend necessary technical assistance and guidance to the participants to ensure that the knowledge and skills gained in the training are adopted and practiced properly by them.

As a guide in the conduct of suitability assessment, the agro-climatic requirements for growth and development of coffee are provided in Annex Table 6.4.1.1-Table 6.4.1.2.

C. INDICATIVE INVESTMENT REQUIREMENT

The production support services (PSS) for procurement and distribution of planting materials and fertilizers for the expansion of coffee and cacao intercropping under coconut and the rehabilitation /rejuvenation of existing coffee and cacao plantings under coconuts (demo/model farms) get 40%, the extension support, education and Training 34% of the budget allocation for intercropping. Support for machinery, equipment and facilities (AMEFS) and farm-production related machinery and equipment (FPMA) compose about 26% of the five year allocation.

Table 6.4.1i. Budget Allocation per component for Coffee and Cacao Intercropping

INTERCROPPING (COFFEE AND CACAO)	BUDGET ALLOCATION PER COMPONENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Production Support Services (PSS)	56.16	68.74	92.56	99.16	126.53	443.15	40.3%
Extension Support, Education and Training Services (ESETS)	77.37	73.19	60.46	69.93	91.31	372.26	33.8%
Agricultural Machinery, Equipment and Facilities Support Services (AMEFS)	24.01	15.62	37.25	51.95	100.22	229.05	20.8%
Farm Production-related Machinery and Equipment Distribution (FPMA)	9.13	9.11	9.73	12.30	15.27	55.54	5.0%
TOTAL	166.67	166.67	200.00	233.33	333.33	1,100.00	100.0%

The following was used as basis for the regional budget allocation for the intercropping program:

- (a) Area planted to coconut (ha) – Area planted to coffee and cacao (ha) = Potential coconut area for intercropping (ha)- 65%;
- (b) number of NCFRS-registered farmers -20%; and

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(c) number of active coconut-based farmers organizations - 15%.

The computation was based on the 2020 PSA data on cacao, coffee, and coconut area planted/harvested (hectares) while the number of farmers and active coconut-based farmers' organizations were based on NCFRS and PCA data, respectively.

Three regions, Zamboanga Peninsula, CALABARZON and Bicol Regions are allocated 10-12% over 5 years. Regions 1-3 get less than 5% while the other regions get between 5.4- 8.8% of the five-year indicative investments. The yearly regional indicative investment for coffee and cacao program is presented in Table 6.4.1j.

Table 6.4.1j. Annual and regional indicative investment requirement for Intercropping (Coffee and Cacao), 5 years

INTERCROPPING (COFFEE AND CACAO)	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	3.00	3.00	3.60	4.20	6.00	19.80	1.80%
Region II (Cagayan Valley)	4.00	4.00	4.80	5.60	8.00	26.40	2.40%
Region III (Central Luzon)	6.00	6.00	7.20	8.40	12.00	39.60	3.60%
Region IV-A (CALABARZON)	20.00	20.00	24.00	28.00	40.00	132.00	12.00%
Region IV-B (MIMAROPA)	9.00	9.00	10.80	12.60	18.00	59.40	5.40%
Region V (Bicol Region)	17.00	17.00	20.40	23.80	34.00	112.20	10.20%
Region VI (Western Visayas)	9.00	9.00	10.80	12.60	18.00	59.40	5.40%
Region VII (Central Visayas)	9.00	9.00	10.80	12.60	18.00	59.40	5.40%
Region VIII (Eastern Visayas)	13.00	13.00	15.60	18.20	26.00	85.80	7.80%
Region IX (Zamboanga Peninsula)	18.00	18.00	21.60	25.20	36.00	118.80	10.80%
Region X (Northern Mindanao)	11.00	11.00	13.20	15.40	22.00	72.60	6.60%
Region XI (Davao Region)	14.67	14.67	17.60	20.53	29.33	96.80	8.80%
Region XII (SOCCSKSARGEN)	10.00	10.00	12.00	14.00	20.00	66.00	6.00%
Region XIII (Caraga)	10.00	10.00	12.00	14.00	20.00	66.00	6.00%
BARMM	13.00	13.00	15.60	18.20	26.00	85.80	7.80%
TOTAL	166.67	166.67	200.00	233.33	333.33	1,100.00	100%

Note: Farm labor, utilities & communications, farm inputs such as seed nuts, fertilizers, crop protection, irrigation water, repair & maintenance of vehicles, equipment and farm tools are considered as recurring costs. Land rent is considered as non-recurring cost.

CONVERGENCE WITH OTHER IMPLEMENTING AGENCIES

The implementation framework (Figure 6.4.1d) highlights the importance of convergence among implementing agencies to provide the needed support towards developing working agribusiness corridors for coffee and cacao. This will be accomplished through farm clustering and consolidation following standardized farm management, support for shared facilities, credit, and infrastructure, where needed, and continuing capacity building of beneficiaries and farm labor towards a professionalized industry workforce. This is a challenge as many implementing agencies need to harmonize their targets, budgets and implementation scheme. To implement the program, indicative investment share from the other implementing agencies will be substantial and critical to the success of the program. PCA will continue to provide support to increase yield and income from coconut to complement the increase in income from the farm improvements program.

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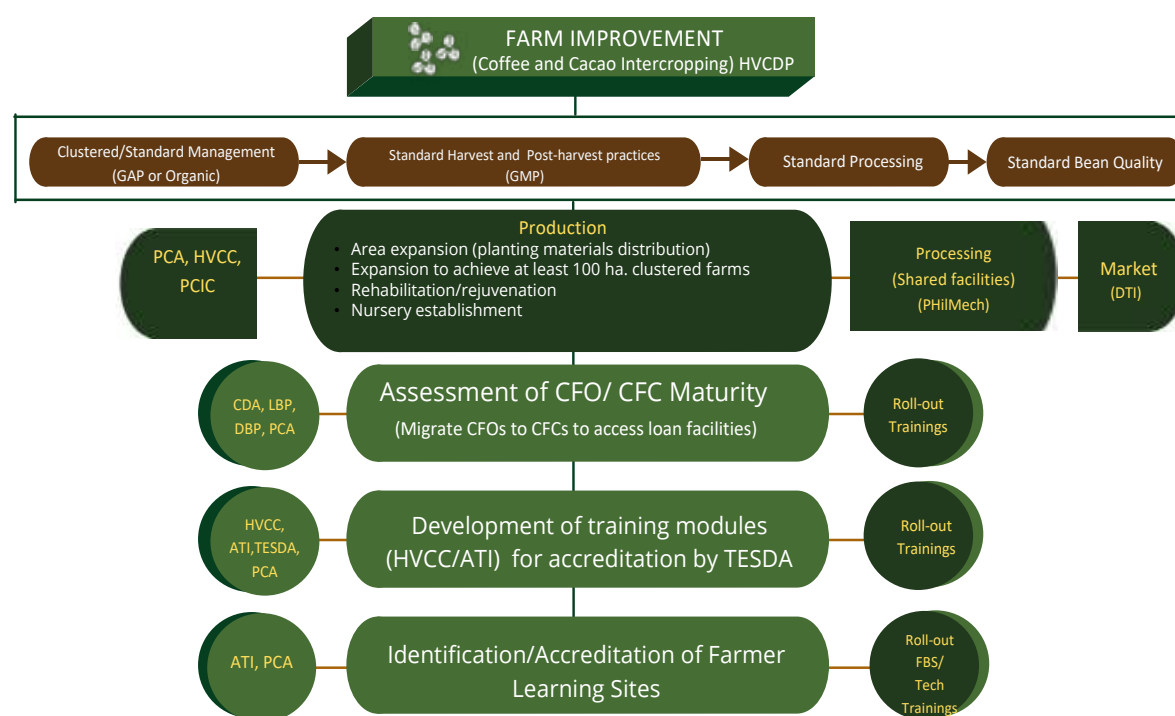


Figure 6.4.1d. Convergence Framework for Intercropping (Coffee and Cacao)

The total convergence investment including the additional support from other implementing agencies indicated that about twice the allocation for HVCDP is need to achieve the targets in the next 5 years. Additionally, qualified beneficiaries will also benefit from the social protection programs.

6.4 COMMUNITY-BASED FARM ENTERPRISE DEVELOPMENT: FARM REHABILITATION AND IMPROVEMENT

6.4.2 LIVESTOCK AND POULTRY INTEGRATION (NATIVE ANIMALS)

PROJECT DESCRIPTION

"Native animals" are breeds of chickens, pigs, cattle, goats, sheep, ducks, and other domesticated farm animals that are more adapted to the environmental conditions of a specific geographical location, having emerged through a long process of natural selection. These uniquely Filipino breeds of animals are more adaptable to the local environment in various areas in the Philippines; have high tolerance to heat stress and changing weather; improved resistance to diseases; and their unique flavor are sought by locals. Native animals are part of rural communities cultural, social, and economic life. Native animals are considered as important components of the local agricultural production systems especially in the rural areas (FFTC, 2010). Such native animals, however, are generally smaller in body size, slower in their growth rate, and poorer in their feed conversion efficiency, thus are fitted in low input, low technology production systems in farming communities. Their characteristics, on the other hand, limit the economic contribution of native animals to household income.

However, their potential and opportunities to help improve economic conditions of small-scale farmers remains promising. The two major concerns relating to native animal production are (1) poor efficiency in the use of locally available feed materials, and (2) generally low production efficiency and productivity. These concerns have been the subject of numerous research spearheaded by the Department of Agriculture through the Philippine Native Animal Development (PNAD) Program under the aegis of the DA-AO No. 15 series of 2010 – “Establishing a Program for Conservation and Utilization of Domesticated Native Food Animals” on which PNAD is founded. The project envisions to “provide pride, health and wealth to Filipinos by conserving, producing and marketing our native animals under a sustainable environment”.

The native poultry and livestock modules proposed for integration under coconuts are modified versions of projects that have been successfully implemented around the country. The farmers success stories have proven the direct benefit of livestock integration as well as the trickle-down effect to cooperatives, communities and community members.

The Native Animal Breeder Production Program (NABP) aims to contribute to uplifting the economic situation of coconut farmers through the integration of native animal production to attain increased coconut farm productivity.

Specifically, the project aims to:

1. Provide breeders of native animals to coconut farmers as a program for coconut farm diversification;
2. Provide capability enhancement training on native animal breeder production for coconut farmer-beneficiaries;

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3. Increase local meat production in order to contribute to the increasing demand for meat in the community;
4. Provide market linkage for coconut products as well as the production of native animal breeders through farmers' cooperative/association (FCA); and;
5. Contribute to increasing the income of the coconut farmer-beneficiaries.

The project shall cover all the 15 regions except the Cordillera Administrative Region (CAR). The components of NABPP shall be implemented in various provinces and regions. The primary beneficiaries shall be registered coconut farmers in the National Coconut Farmers Registry System and the Securities and Exchange Commission (SEC)-registered coconut farmers organizations' which are knowledgeable in livestock raising.

IMPLEMENTATION PLAN

Expansion of beneficiaries of the native poultry and livestock program to coconut farmers' associations and cooperatives is an important strategy to increasing coconut farms' total productivity and farmers' income. This will promote sustainable growth of the native poultry and livestock industry in terms of the increase in native animal population and production volume along with improving coconut farmers' income and overall coconut farm productivity.

The Native Animal Breeder Production Program is composed of four (4) components:

- (1) Free-range native chicken under the coconut (*Manukan sa niyogan*);
- (2) Native pig under the coconut (*Babuyan sa niyogan*);
- (3) Native goat under the coconut (*Kambingan sa niyogan*) and;
- (4) Native cattle under the coconut (*Bakahan sa niyogan*).

The project involves the establishment and development of native animal breeder farms in partnership with farmers' cooperative associations (FCA), Small Coconut Farmers Organization (SCFOs), Provincial Local Government Units (PLGU), Municipal Local Government Units (MLGUs), and other government entities. Figure 6.4.2a presents the framework for native poultry and livestock integration under coconuts and the needed convergence with other implementing agencies.

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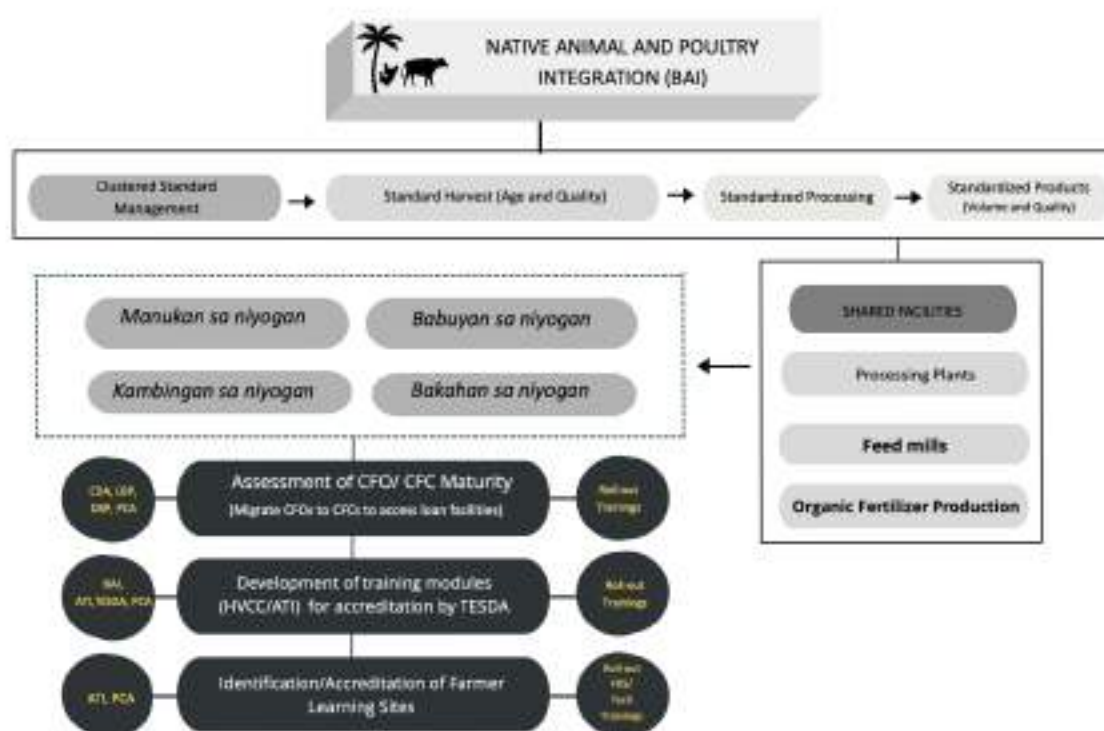


Figure 6.4.2a. Framework for native poultry and livestock integration under coconuts

A. STRATEGIES

A.1 Free-Range Chicken Under Coconut (*Manukan sa Niyugan*)

The project will support the Native Animal Breeder Production by integration of free-range native chicken to coconut production areas through the distribution of foundation stocks of native chicken to coconut farmers. The project will procure native chicken from existing private commercial or backyard native animal farmers to the nearest area where the animals will be distributed to insure animal adaptability. The animals will be distributed directly to the individual or group of coconut farmers to increase their income and also to develop and promote native chicken production. Each individual farmer will be trained by the Bureau of Animal Industry and the Agricultural Training Institute on Free-range Native Chicken Production and Management.

A total of 15 individual farmer-beneficiaries will be grouped into a cluster. Each individual will receive 50 heads of 30-35 days old native chicken, for a total of 750 heads of chicken per cluster. Each cluster will receive one (1) unit of incubator setter of 1,000-egg capacity with separate 300 capacity hatcher. Each individual beneficiary will also receive two (2) bags (50kg/bag) of commercial grower chicken feeds, NCD vaccine and fishnet for fencing as initial starter kits for sustainability of the project. Each cluster has an indicative investment of PHP 250,000.

Adoption of repayment scheme and potential to upgrade into a multiplier/ commercial breeder farm accreditation will increase the number of native chicken producers and native chicken population.

A.2 Native Pig Under Coconut (*Babuyan sa Niyugan*)

The project will support the Native Animal Breeder Production by integration of native pig to coconut production areas thru the distribution of foundation stocks of native pig to coconut farmers. The project will procure native pig from existing private commercial or backyard native animal farmers to the nearest area where the animals will be distributed to ensure animal adaptability. The animals will be distributed directly to the individual or group of coconut farmers to increase their income and also to develop and promote native chicken production. Each individual farmers will be trained by the Bureau of Animal Industry and the Agricultural Training Institute on Native Pig Production and Management and Meat Processing.

Ten individual farmer-beneficiaries will be grouped into a cluster. Each individual beneficiary will receive five (5) heads of native pig (2m:3f) for a total of 50 heads of pigs per cluster. Each individual beneficiary will also receive two (2) bags (50kg/bag) of commercial grower feeds, vaccines and dewormers as initial starter kits for sustainability of the project. Each cluster has an indicative investment of PHP 250,000.

The adoption of repayment scheme and the potential for upgrading into a multiplier/commercial breeder farm accreditation will increase the number of native pig producers and native pig population.

A.3 Native Goat Under Coconut (*Kambingan sa Niyugan*)

The project will support the Native Animal Breeder Production by integration of native goat to coconut production areas thru the distribution of foundation stocks of native goat to coconut farmers. The project will procure native goats from existing private commercial or backyard native animal farmers to the nearest area where the animals will be distributed to ensure animal adaptability. The animals will be distributed directly to the individual or group of coconut farmers to increase their income and also to develop and promote native goat production. Each individual farmers will be trained by the Bureau of Animal Industry and the Agricultural Training Institute on Native Goat Production and Management.

Fifteen individual farmer-beneficiaries will be grouped into a cluster. Each individual farmer will receive three (3) heads of native goat (1m:2f) for a total of 45 native goats per cluster. Each individual beneficiary will also receive two (2) bags (50kg/bag) of commercial grower feeds, vaccines, and vitamin ADE as initial starter kits for sustainability of the project. Each cluster has an indicative investment of PHP 336,000.

Adoption of the repayment scheme and potential to upgrade into a multiplier/commercial breeder farm accreditation will increase the number of native goat producers and native goat population.

A.4 Native Cattle Under Coconut (*Bakahan sa Niyugan*)

The project will support the Native Animal Breeder Production by integration of native cattle to coconut production areas thru the distribution of foundation stocks of native cattle to coconut farmers. The project will procure native cattle from existing private commercial or backyard native animal farmers to the nearest area where the animals will be distributed to ensure animal adaptability. The animals will be distributed directly to the individual or groups of coconut farmers to increase their income, and to develop and promote native cattle production. Each individual farmer will be trained by the Bureau of Animal Industry and Agricultural Training Institute on Native Cattle Production and Management.

A total of 15 individual farmer beneficiaries will be grouped into one cluster. Each individual will receive one (1) head of female native cattle and each cluster will receive one (1) head of breeder bull for a total of 16 heads of cattle per cluster. These individual beneficiaries will also receive two (2) bags (50kg/bag) of commercial grower feeds, vaccines, and vitamin ADE as initial starter kits for sustainability of the project. Each cluster has an indicative investment of PHP 566,000.

The adoption of the repayment scheme and the potential for upgrading into a multiplier/commercial breeder farm accreditation will increase the number of native cattle producers and native cattle population.

B. SELECTION CRITERIA FOR BENEFICIARIES

The target beneficiaries of this project will be the registered coconut farmers in the National Coconut Farmers Registry System and the SEC-registered coconut farmers' organizations who are knowledgeable of livestock raising and willing to adopt to the program guidelines.

B.1 Beneficiary Eligibility

1.1. A list of SCFOs/ Community-Based Organization (CBO) will be jointly selected by PCA, BAI and LGUs for the identification of possible beneficiaries. Further validation and shortlisting shall be done by representatives based on the following criteria:

- Duly PCA accredited/ registered SCFOs/CBO;
- Previous recipients of PCA Projects;
- Willing to be a member of the chosen FCA; and;
- With a good organization track record.

1.2. After the selection of SCFOs/CBO, a list of coconut farmer-members will be submitted and the pre-selection criteria for coconut farmer-beneficiaries are the following:

- Must be a coconut farmer owning at least 0.5 to 5 hectares of coconut farm;
- Must have available farmland for the planting of forages;
- Should have experience in caring and managing native animals;

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- Must be willing to participate in social preparation activities and capability enhancement training;
- Must be willing to provide animal shelter/housing as their counterpart;
- Must have access to potable water supply;
- Must be willing to be a member of the identified FCA; and;
- Must be registered in the National Coconut Farmers' Registry System and the RSBSA

1.3. A list of partners FCA shall be provided by the LGU or the CDA. The pre-selection criteria are the following:

- Duly registered with CDA, if cooperative or with DOLE or SEC, if association;
- The CBO/FCA has been in operation for at least five (5) years; For conduit/CBO/FCA with less than five (5) years of existence and operation, then, a Big Brother Cooperative must be engaged to provide management assistance while the younger Cooperative as the project beneficiary in accordance with the CDA Big Brother/Small Brother Program guidelines;
- Must have a good track record of program/project implementation;
- Should have previous experience in the implementation of various programs/projects from government agencies; and
- Must be willing to allocate funds and resources in support of NABPP, if necessary.

B.2. Beneficiary Equity Requirements

Coconut farmers must be committed to provide available land for the establishment of animal housing and forage area to ensure that the animals are well taken care of and to sustain the feed requirement of the native animals.

Chapter 6.4.2 Livestock and Poultry Integration (Native Animals)

The general process for the implementation of NABPP includes the following:



1. Selection and Validation of Project Sites

This aims to initially assess and validate the feasibility of the NABPP based on the condition of the area, topography, climate, availability of resources, market accessibility, peace and security, among others.

2. Identification, Selection, and Validation of SCFOs and Coconut Farmer-Beneficiaries

- **For the SCFOs** – an initial list of SCFOs will be provided by PCA. The list shall be subject to validation and shortlisting based on the selection criteria.
- **For the Farmer-Beneficiaries** – an initial list of coconut farmer members will be provided by the chosen SCFO. The list shall also be subject to validation and shortlisting based on the selection criteria.
- **For Farmers' Cooperatives/Associations (FCA)** – an initial list of coconut farmers' cooperatives/ association within the area will be provided by the PCA/PLGU/CDA. The list shall be subject to validation and shortlisting based on the selection criteria.

3. Profiling of Coconut Farmers' Organization and Cooperative Conduit

Basic information about the partner beneficiaries shall be collected and validated based on the eligibility criteria.

4. Benchmarking of income and income sources of participating coconut farmer-beneficiaries

To assess and evaluate the gains and outcomes of the project, a baseline survey for the income and income sources of the participating coconut farmer beneficiaries shall be collected.

5. Conduct of Social Preparation Activities

After the selection of SCFOs and the farmer-beneficiaries, social preparation activities shall be conducted to prepare the farmer-beneficiaries in the integration of native animal production and entrepreneurship in their regular farming activities prior to the conduct of technical trainings and distribution of animal stocks.

6. Conduct of Capability Enhancement Activities

This is to provide the farmer-beneficiaries the technical trainings and other related support services in native animal production, processing, and marketing. Other entrepreneurship-related activities shall also be conducted to promote business attitude and skills to ensure project profitability and sustainability. This shall be facilitated by the BAI/ATI/TESDA in-house experts and its expert consultants.

7. Establishment of Animal Housing and Forage Area

Coconut farmer-beneficiaries shall establish a foraging area to ensure the feed availability to sustain the feed requirement of the native animals. The recommended area for forage area is 1000 square meters per head of native animal module. In addition, an established animal housing shall be required from the farmer-beneficiaries prior to distribution of animal stocks. The animal housing shall be based on the recommended standard housing requirement of BAI. This is to ensure that the provided animals will be taken care of.

8. Procurement of Animal Stocks

Source of funds for the procurement of animal stocks shall be provided by BAI thru the allocated fund from the Coconut Farmers Industry Trust Fund, and the facilitation of procurement shall be handled by the DA-RFO and/or the PCA-RFO. Entrustment will be done after the capability enhancement activities and the establishment of forage area and animal housing for coconut farmer-beneficiaries have been completed.

9. Distribution of Inputs, including Animal Stocks, Veterinary Drugs and Biologics

Entrustment of animal stocks shall be conducted after the farmer beneficiaries have undergone social preparation activities and technical trainings. Farmer beneficiaries with established animal housing and forage areas will be awarded animals according to the FCA conduit scheme.

Each coconut farmer-beneficiaries shall receive fifty (50) heads of native chicken for free-range native chicken module, five (5) heads of native pig for native pig module, three (3) goats for native goat module, and one (1) head native cattle for each native cattle module.

Chapter 6.4.2 Livestock and Poultry Integration (Native Animals)

These will be distributed through selected FCA of each project site. Aside from the animal stocks, drugs, biologics and other production inputs may be provided in partnership with the Local Veterinary and Agriculture Offices.

10. Repayment Scheme

To increase the number of native producers and native poultry and livestock population, the project will adopt the animal repayment scheme. Animal repayment will start in the 3rd year or earlier. For every head of native chicken received, the recipient will be required to pay and distribute one (1) head native chicken to the next-in-line recipients. Repayment animals are to be transferred to qualified next-in-line recipients as submitted to PCA/BAI which will be the new members of the clustered group.

11. Upgrading to Multiplier/Commercial Breeder Farm

From year 3 to year 5, the clustered group beneficiaries will be recommended to apply for Multiplier/Commercial Breeder Farm accreditation. Animal facilities and equipment requirement for the establishment of a Multiplier Breeder Farm will be requested from the DPWH and PHilMech subject to the availability of funds.

12. Provision of Technical Support Service

BAI, the Cooperative conduit, partner LGUs, and concerned government agencies shall provide the necessary technical support services in animal reproduction, nutrition, and animal health, forage production and improved feeding system

C. INDICATIVE INVESTMENT REQUIREMENT

The following two tables present the summary of yearly indicative investment and target number of beneficiaries per component strategy.

Table 6.4.2a. Annual indicative investment per strategy (in Millions, PHP), 5 years

NATIVE LIVESTOCK AND POULTRY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
<i>Manukan sa niyugan</i>	37.50	37.50	51.25	61.25	75.00	262.50
<i>Babuyan sa niyugan</i>	17.50	17.50	22.25	25.00	35.00	117.25
<i>Kambingan sa niyugan</i>	40.32	40.32	47.71	55.10	80.64	264.10
<i>Bakahan sa niyugan</i>	70.75	70.75	78.67	91.69	141.50	453.37
TOTAL	166.07	166.07	199.89	233.05	332.14	1,097.21

Chapter 6.4.2 Livestock and Poultry Integration (Native Animals)

Table 6.4.2b. Annual number of farmer-beneficiaries per strategy, 5 years

COMPONENT	MODULE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
<i>Manukan sa niyugan</i>	50-heads/member 15 members/cluster	2,250	2,250	3,075	3,675	4,500	15,750
<i>Babuyan sa niyugan</i>	5-heads (2m, 3f) 10 members/group	700	700	890	1,000	1,400	4,690
<i>Kambingan sa niyugan</i>	3 heads (1m, 2f) 15 members/group	1,800	1,800	2,130	2,460	3,600	11,790
<i>Bakahan sa niyugan</i>	16 heads (15f, 1m) 15 members/group	1,875	1,875	2,085	2,430	3,750	12,015
TOTAL		6,625	6,625	8,180	9,565	13,250	44,245

The following four tables present the indicative investment and number of beneficiaries per animal module. Please note that the native pig modules are limited to those regions/provinces that are classified “ASF green zones”.

The regional indicative investment requirement for five (5) years for the native and livestock production sub-program component is shown in Table 6.4.2c.

Table 6.4.2c. Annual and regional indicative budget allocation, CFIDP programs - native livestock and poultry, 5 years

CFIDP PROGRAMS (NATIVE LIVESTOCK AND POULTRY)	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	6.54	6.54	7.87	9.18	13.07	43.19	3.9%
Region II (Cagayan Valley)	6.54	6.54	7.87	9.18	13.07	43.19	3.9%
Region III (Central Luzon)	6.54	6.54	7.87	9.18	13.07	43.19	3.9%
Region IV-A (CALABARZON)	13.25	13.25	16.25	18.50	26.50	87.75	8.0%
Region IV-B (MIMAROPA)	11.25	11.25	13.50	15.75	22.50	74.25	6.8%
Region V (Bicol Region)	3.83	3.83	4.58	5.40	7.66	25.30	2.3%
Region VI (Western Visayas)	12.56	12.56	15.06	17.57	25.11	82.86	7.6%
Region VII (Central Visayas)	22.80	22.80	27.44	32.07	45.60	150.70	13.7%
Region VIII (Eastern Visayas)	18.36	18.36	22.07	25.78	36.73	121.30	11.1%
Region IX (Zamboanga Peninsula)	7.82	7.82	9.39	11.02	15.64	51.68	4.7%
Region X (Northern Mindanao)	7.82	7.82	9.39	11.02	15.64	51.68	4.7%
Region XI (Davao Region)	21.30	21.30	25.57	29.86	42.60	140.64	12.8%
Region XII (SOCCSKSARGEN)	4.51	4.51	5.41	6.31	9.02	29.77	2.7%
Region XIII (Caraga)	5.93	5.93	7.10	8.36	11.86	39.18	3.6%
BARMM	17.03	17.03	20.51	23.88	34.07	112.53	10.3%
TOTAL	166.07	166.07	199.89	233.05	332.14	1,097.21	100%

Note: Recurring cost are feeds and biological supplements, and technical services. Animals for dispersal are considered as non-recurring costs.

6.4 COMMUNITY-BASED FARM ENTERPRISE DEVELOPMENT: FARM REHABILITATION AND IMPROVEMENT

6.4.3 DAIRY INTEGRATION

PROGRAM DESCRIPTION

Dairy products are the Philippines' 3rd largest agricultural import next to wheat and soybean meal. The country imports almost 99% of our nearly 3.0 M MT liquid milk equivalent (LME) demand per year. While local milk production reached 26,710 MT in 2020 and is predicted to increase to 34,840 MT in 2021 due to growing local dairying capabilities and the implementation of new dairy development projects, local production is hardly making a dent in our local demand. The yearly per capita consumption of milk in the Philippines at 22 kg is low, compared with Thailand at 26 kg, Malaysia at 52 kg, and the United States at 287 kg (USDA, 2020). Dairy production in the Philippines is dominantly community-based. Of the local milk production, around 65% is cow's milk, 30.1% is carabao milk and 4% goat milk.

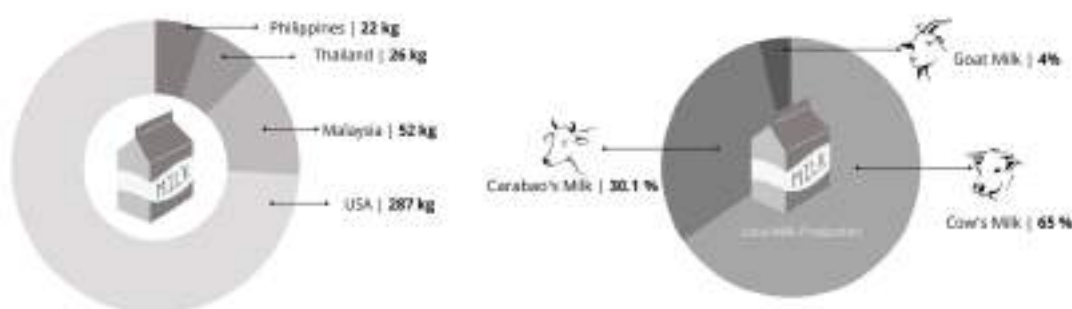


Figure 6.4.3a (left) Yearly per capita milk consumption of selected countries; (right) Share of dairy animals in milk production in the Philippines

Dairying has been proven to be a viable industry, particularly in the countryside because it opens doors of opportunities to generate additional income particularly for small-hold farmers, and provides nutrition to their families. The integration of dairy farming into coconut farms will ensure farm improvement and increase the income of coconut farmers and improve their families' well-being. While waiting for coconut harvest every 45-60 days, farmers have the opportunity to



Figure 6.4.3b A photo of dairy buffaloes under coconuts in Leyte, Philippines

Chapter 6.4.3 Dairy Integration

earn cash daily through the sale of raw milk. Dairying can earn a coconut farmer an additional net income of PHP375 to 400 a day from milk sales and an additional PhP19,000 whenever a male offspring (calf) is sold at 4-11 months.

Republic Act 7884 also known as the National Dairy Development Act of 1995, aims to develop and disseminate appropriate smallholder based-dairy technology, improve livelihood opportunities and increase income level through dairying. It also aims to enhance the nutritional intake of children and pregnant and nursing mothers through the promotion of locally produced milk and milk products. The signing of Republic Act 11524 or the Coconut Farmers and Industry Trust Fund Act from which NDA will have a 3.33% share of the yearly allocation, was created to help coconut farmers raise their incomes, alleviate poverty, and achieve social equity. Funding from the Coco Levy Trust Fund will provide the needed resources to expand the reach of existing NDA dairy areas (Figure 6.4.3c) to more coconut farmers' organizations and cooperatives and establish new dairy areas in suitable and receptive coconut communities.

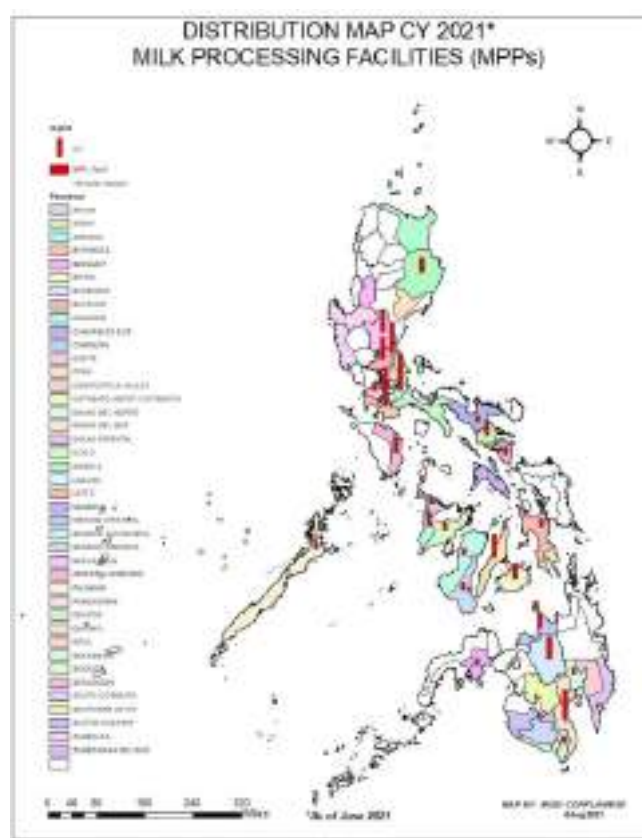


Figure 6.4.3c. Milk processing facilities distribution map (2021)

VISION:

A more improved, productive, and profitable coconut farms integrated with dairy farming activities having dairy animals that produce milk and milk products which provide additional income to coconut farmers and nutritious food to their families.

Specifically, the program aims to:

- increase income of coconut farmers through integrated coconut-dairy farming systems;

Chapter 6.4.3 Dairy Integration

- promote dairy farming and coconut farming as viable integrated farming enterprises;
- enhance capacities of coconut farmers on dairy technology;
- contribute in the attainment of targeted national milk production;
- contribute in increasing national dairy animal population; and
- expand dairy areas through integrated coconut-dairy farming systems.

The figure below illustrates the coconut-dairy farming system integration development plan outlining the contribution of the program at the output, outcome, and impact level with a continuous monitoring and feedback mechanism.

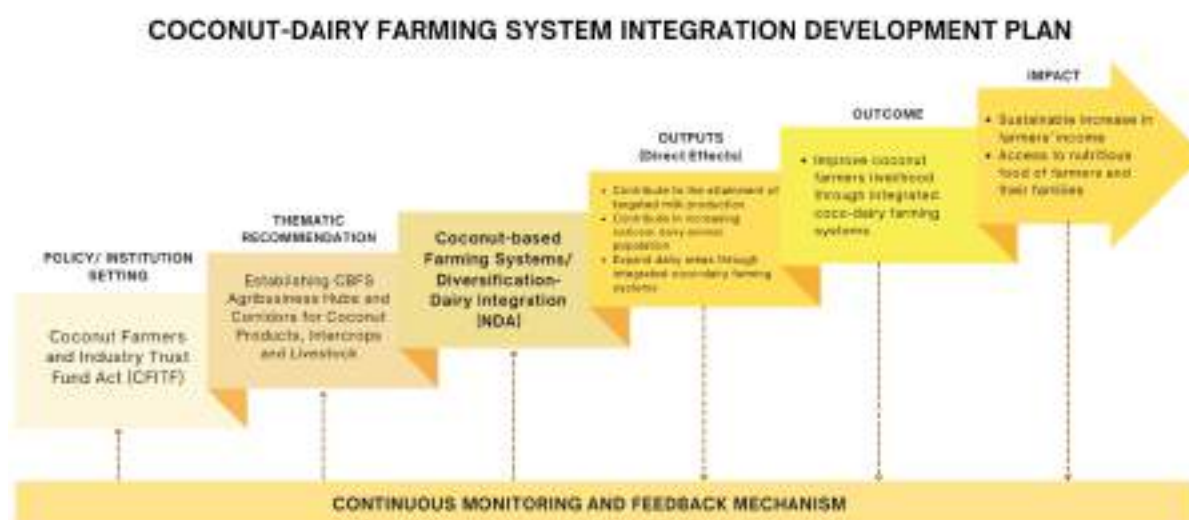


Figure 6.4.3d. Coconut-dairy farming system integration development plan

IMPLEMENTATION PLAN

Figure 6.4.3d presents the framework for agribusinessizing dairy integration under coconuts and the needed convergence with other implementing agencies. Convergence of support for consolidated production of standardized and high-quality milk and other products necessitates the continuing strengthening of coconut farmers' organizations, capacity building of beneficiaries and farm labor towards a professionalized coconut industry workforce, provision of shred facilities for milk trading, and processing, as well as infrastructure support where needed. Animal insurance, credit access, and strong market support.

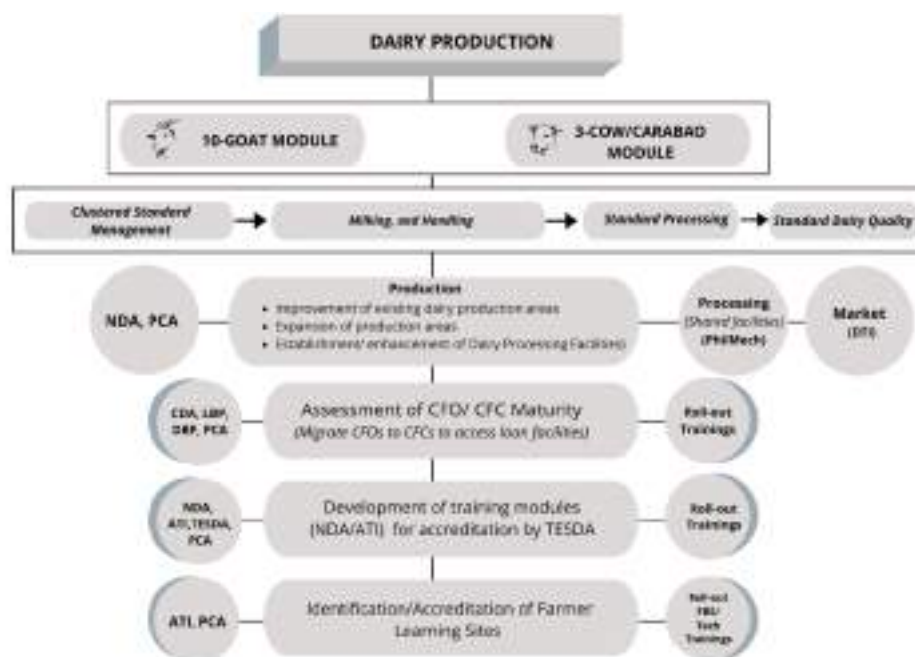


Figure 6.4.3e. Framework dairy integration under coconuts

A. STRATEGIES

The following are the proposed strategies in the implementation of the Dairy Integration Program:

A.1 REJUVENATION AND REHABILITATION OF EXISTING DAIRY PRODUCTION AREAS

- Assessment of the existing coconut farms with dairy production activities registered with PCA and identify their needs in order to rehabilitate or enhance their dairy farm production systems;
- Evaluation of dairy animal milk production and reproduction performance. Analyze their health conditions to know if they need medical attention and proper nutrition;
- Assessment of the capacities of dairy farmers and determine their training needs to efficiently manage their dairy farms;
- Recommendations of the NDA Team will determine the necessary interventions needed;
- Provision of trainings to enhance capacities of dairy farmers. NDA to recommend to ATI, CDA and TESDA to conduct trainings based on training needs analysis;
- Provision of needed technical and extension services like breeding services, animal health and nutrition support like drugs and biologics, planting materials, forage and pasture requirements;
- Distribution of additional animals as a result of the assessment and evaluation of the carrying capacity of the farm;

Chapter 6.4.3 Dairy Integration

- Provision of technical assistance in the establishment of farm facilities such as animal shed, milking areas and needed farm supplies;
- Propose the provision or upgrading of milk collection centers and milk processing plants as needed to PHILMECH; and
- These existing PCA-assisted dairy production areas will now be part of NDA's dairy areas that will be provided with dairy support services and will be regularly assisted, monitored and evaluated.

A.2 EXPANSION OF DAIRY PRODUCTION AREAS

- Explore coconut areas within and outside the NDA dairy zones that are not yet engaged in dairy activities and assess their potentials to become dairy areas;
- Area Mapping/Site Scanning to assess the coconut farms in terms of their strategic location, water, electricity and forage source availability and proximity to existing milk processing plants;
- Determine the level of interest of coconut farmers and LGUs to engage in dairy activities;
- Promote dairy programs and their benefits, and NDA services available to entice coconut farmers and LGUs to venture into dairying;
- Evaluate farmer knowledge and capacity to raise dairy animals and manage their dairy farms. Conduct training needs analysis;
- Train qualified farmers to equip them with the knowledge and skills on dairy technology; Tap the assistance of ATI, CDA and TESDA;
- Prepare qualified farms in terms of forage and pasture establishment, animal housing requirements, availability of feeds sources, water and electricity prior to the arrival of the dairy animals;
- Distribute dairy animals to qualified coconut farmer/cooperatives;
- Provide technical support services such as breeding through artificial insemination, animal health and nutrition support services. Dairy enterprise support services like, continuous training, milk quality and safety support services and market development support;
- Provision or upgrading of milk collection and processing facilities as needed. Request support of PHILMECH; and
- Continuous monitoring and evaluation of established dairy production areas.

A.3 ESTABLISHMENT/ENHANCEMENT OF DAIRY PROCESSING FACILITIES

- Establishment of coco-dairy farms within various dairy zones in order to have access to existing milk processing plants where they can sell their milk produce for processing into milk and milk products.
- Evaluation of existing milk processing plants as to their capacity to absorb and process the milk of the farmer producers.

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- Milk processing plants that need upgrading or enhancement will be recommended for necessary assistance to PHilMech;
- New coco-dairy farms established outside the dairy zones will be provided with milk processing facilities with capacities depending on the volume of milk produced by the farms as recommended by NDA to PHilMech.

The general process for the implementation of the Dairy Integration Program includes the following:

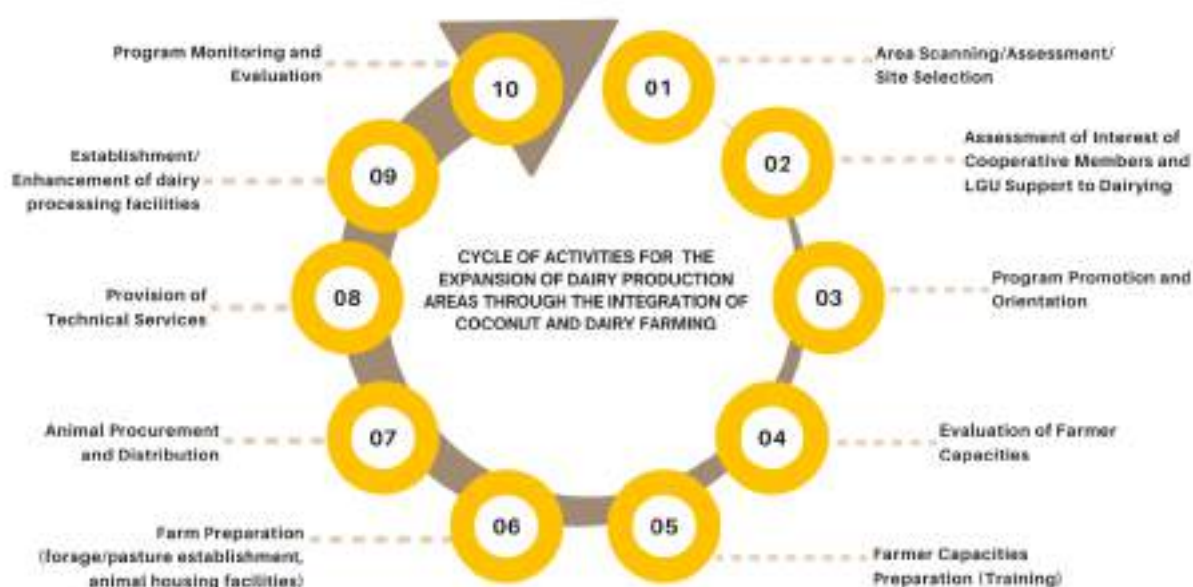


Figure 6.4.3f. Cycle of activities for the expansion of dairy production areas through the integration of coconut and dairy farming

Activities for Year 1:

The initial year will be the **Project Initiation Phase**. Consultations and meetings with PCA regional and central office will be conducted to discuss the possible areas, farmers, and or their cooperatives/groups who are interested to venture into dairying. Access to the list of accredited farmers by the PCA is necessary to verify the qualified coconut farmers that will be part of the project. Likewise, linkages with local government units must also be established to get their support particularly those that have dairy in their Provincial Priority Commodity Investment Plans.

Planning and budgeting for program implementation are conducted together with PCA regions and Central Office. NDA Area Departments will touch base with coconut farmers and cooperatives to assess their level of interest and intent to go into dairy farming to come up with their physical and financial plans per region. A Coco-Dairy Project Implementation Plan will be crafted to contribute to the Coconut Farmers and Industry Development Plan.

Chapter 6.4.3 Dairy Integration

Meanwhile, existing NDA personnel will perform the initial activities for the project like consultations, meetings, planning and budgeting while a Technical Support Team (TechSupportTeam) is being formed. Based on NDA experience in handling projects other than its regular programs, forming a Project Team that is solely dedicated to the implementation of the project is an effective approach. Currently, NDA has only 127 warm bodies and 103 job orders implementing the NDA regular programs and projects. Each area personnel has their designated areas and cooperatives to handle and continue to serve. Their existing area coverage is already too wide to cover additional areas. With NDA's current foreign-assisted project that is being implemented nationwide, a project team was likewise formed to focus on the project alone.

NDA's current set-up of area offices is not on a per regional basis. Area departments are North Luzon, South Luzon, Central Visayas, Western Visayas, Northern Mindanao and Southern Mindanao. Each area departments have various regions under their coverage.

Since there will be additional areas to be covered, the TechSupportTeam will be deployed in the qualified coconut areas for dairying. The TechSupportTeam will be composed of: Overall Project Team in the Central Office headed by a National Special Project Coordinator and a National Technical Support Coordinator. Each Area Departments will have a TechSupportTeam responsible for each regional coverage. The team is composed of an Enterprise Development Officer, Project Veterinarian, Area Technical Support Coordinator and an Administrative Assistant.

The establishment of Coco-Dairy Stations will be done in Year 1 so the TechSupportTeam can operate full blast in Year 2 onwards. NDA's physical presence will be felt through these Coco-Dairy Stations where coco-dairy farmers can air their concerns on their dairy farming activities and for the TechSupportTeam to closely monitor the project areas and provide the much-needed intervention. The TechSupportTeam will be stationed in the Coco-Dairy Stations on-call for the farmers' concerns like pregnancy diagnosis for their animals, animal health concerns, and others. Response time is shorter than waiting for the NDA Area Department personnel's action.

For Year 1, the TechSupportTeam's task is to implement the strategy of rejuvenation and rehabilitation of existing dairy production areas as follows:

- Assess existing coconut farms with dairy production activities assisted by PCA and identify their needs in order to rehabilitate or enhance their dairy farm production systems;
- Evaluate dairy animal milk production and reproduction performance. Analyze their health conditions to know if they need medical attention and proper nutrition;
- Assess the capacities of dairy farmers and determine their training needs to efficiently manage their dairy farms;
- Recommend the necessary interventions needed;
- Propose the provision of trainings to enhance capacities of dairy farmers to ATI, CDA and TESDA;
- Provide needed technical support services like breeding services, animal health and nutrition support like drugs and biologics, planting materials, forage and pasture requirements. Also,

Chapter 6.4.3 Dairy Integration

provide technical advice to farmers in the design and establishment of farm facilities like animal shed and milking areas;

- Distribute additional animals as needed;
- Propose the upgrading of milk collection and processing facilities as needed to PHilMech; and
- Continue to monitor and assist the existing PCA- assisted dairy production areas.

The animal procurement process will start in Year 1. NDA will process the purchase of dairy cattle and goats either locally or imported. Procurement of locally-produced carabao will also be part of the activity. These dairy animals will be distributed to qualified new and existing coco-dairy farmers. For imported dairy animals, delivery will take place in the following year. This gives coco-dairy farmers and NDA personnel more time to prepare the coconut farms for dairy activities.

Activities Year 2 Onwards:

For Year 2 onwards, activities will revolve around the implementation of all three (3) strategies on expansion of dairy production areas, establishment/enhancement of dairy processing facilities and even the rejuvenation and rehabilitation of existing dairy production areas. The expansion of dairy production areas will get full implementation starting Year 2.

Animal Distribution Modules

After going through the cycle of assessment and evaluation, recommendation of actions to be taken, provision of interventions needed, farm and farmer preparation, all systems are ready for animal distribution to qualified coconut farmers/cooperatives. The entry point of dairy farming that will be introduced to qualified farmers are the:

- (1) Three (3) Cow/Carabao Module and
- (2) Ten (10) Dairy Goat Module.

Each qualified farmer with 1-5 hectares of coconut farmland will receive three (3) heads of dairy cattle as their foundation stocks. For those interested in raising dairy goats, the 10 dairy goat module will be introduced. Dairy animals distributed can be imported or sourced locally if available. Land will serve as the equity of the coconut farmer and must have water, electricity, and access to good forage. The following tables detail the package of support and farmers'/cooperative's equity. The dairy cow/carabao module will cost a total of about PHP 550,000 with dairy animals at PHP 450,000 and cowshed, area for milking and pasture development at PHP 100,000 on the equity of the beneficiaries (Annex Table 6.4.3.1). The dairy goat module package will cost a total of about **PHP 900,000** with 10 breedable does costing about PHP 800,000 and an estimated PHP100,000 for farmers'/ cooperative's equity for goat shed, milking areas, pasture development. (Annex Table 6.4.3.2). All dairy animals received will be paid through an animal loan scheme called, "Payment-in-Kind Scheme".

Payment-in-Kind Scheme:

The **Unified Standard Payment-in-Kind Scheme** for cattle and goat whereby the NDA distributes dairy animals to eligible dairy farm operators with each cattle payable in four (4) years; and each goat payable in two (2) years. Payment under this program is 1:1 one (1) similar dairy animal for every animal delivered by NDA and received by the dairy farm operator or DFO.

Female animals are preferred as repayments. In the absence of female animals for payment, the DFO can pay through male animals. The MOA provides four (4) options to pay:

1st Option: Payment in Kind with other Dairy animals. With this Option, the DFO shall be paying with other kind of dairy animals like calves, yearlings, bull, dams provided that the payment shall be equal to the prevailing value of the dairy animal provided at the same time of payment. Further, the animal offered in payment shall strictly adhere to the following order of preference:

1. All Female animals
2. Combination of Female and male animals
3. All male animals.

2nd Option: Cash Payment whereby the cash should be equivalent to the prevailing value or price of the dairy animal at the time of payment.

3rd Option: Arrangements can be made whereby the DFO shall pay for the dairy animals received through the whole or a portion of its periodic milk production. A separate agreement among the parties involved shall be executed and which shall be deemed included in this Agreement.

4th Option: Combination of the 3 options. Arrangements can likewise be made where payment of the dairy animals shall be through a combination of the foregoing three options above.

After all the dairy animals are distributed to the qualified coconut areas, NDA will continue to serve these areas through the provision of technical support services and will be part of regular monitoring and evaluation activities to support dairy farming activities for a successful dairy enterprise.

The Coco-dairy project within five years is targeted to contribute 5%, or a total of 16.43 ('000 MT) of milk to the national dairy roadmap target and 18% based on the Philippine Dairy Production (PDP).

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Table 6.4.3a. Contribution of the project to the national targets, 5 years

TARGETS - DAIRY PRODUCTION (Milk production in MILLION L)	NATIONAL TARGETS BASED ON ROADMAP TARGETS	CONTRIBUTION OF COCO-DAIRY PROJECT (CDP) IN ACHIEVING THE ROADMAP TARGETS	% CONTRIBUTION OF CDP IN ACHIEVING THE ROADMAP TARGETS	NATIONAL TARGETS BASED ON PHILIPPINE DEVELOPMENT PLAN (PDP) TARGETS	CONTRIBUTION OF CDP IN ACHIEVING THE PDP TARGETS	% CONTRIBUTION OF CDP IN ACHIEVING THE PDP TARGETS
Year 1	34.84	-		29.40	-	
Year 2	37.99	1.95	0.05	31.80	1.95	0.06
Year 3	75.25	2.61	0.03	34.25	2.61	0.08
Year 4	115.52	4.72	0.04	36.69	4.72	0.13
Year 5	148.69	7.15	0.05	39.18	7.15	0.18

B. CRITERIA FOR THE SELECTION OF BENEFICIARIES

The following are the criteria for the selection of beneficiaries:

- Individual coconut farmers, Coconut Farmers Organization (CFO) and/or Cooperatives (Coop) registered with PCA under the National Coconut Farmers Registry System;
- Areas with more coconuts planted/harvested/produced, with more coconut farmers and active cooperatives involved;
- Suitability of the area/farm to dairy activities based on NDA assessment and evaluation
- Presence of LGU support to dairying in provinces that have included dairy in their respective provincial Priority Commodity Investment Plan (PCIP);
- Proximity to existing milk processing plants and other dairy facilities; and
- Expressed willingness of coconut farmers/CFO/Coop members to engage into dairy farming.

C. INDICATIVE INVESTMENT REQUIREMENT

The indicative investment per program activities is presented in the following table.

Table 6.4.3b. Summary of indicative investment of dairy program component activities in millions, PHP), 5 years

DAIRY INTEGRATION COMPONENTS	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Provision of Dairy Animals	107.49	107.53	131.55	157.25	234.07	737.89	67.08%
Provision of Technical Support Services	54.73	53.35	62.07	68.67	91.26	330.08	30.01%
Monitoring and Evaluation	4.78	6.12	6.38	7.08	7.67	32.03	2.91%
TOTAL	167	167	200	233	333	1,100.00	100%

1. Provision of dairy animals includes the procurement of dairy animals either locally sourced or imported and distributing them to qualified coconut farmers.
2. Provision of technical services includes the funding of expenses of the three (3) strategies identified in the implementation of the project like breeding expenses, animal health and nutrition expenses. Cost of semen straws, drugs and biologics, planting materials and

Chapter 6.4.3 Dairy Integration

other costs related in the provision of technical services. Also included are the cost of salaries of the Technical Support Team. In the first year of the project which is the project initiation phase, a Coco-Dairy Station will be established strategically to serve the needs of qualified coconut areas/farmers.

3. Monitoring and Evaluation includes the setting-up of a Coco-Dairy Information System with the needed database to capture the performance of the animals, the cooperatives and the overall milk production produced by the different regions. Monitoring of the project which also include planning and assessment and the conduct of project participants' consultation.

The following table presents the indicative physical targets per component activity for the dairy animal modules. The detailed regional plans for dairy integration are presented in Annex Table 6.4.3.3.

Table 6.4.3c. Dairy integration target number of animals for distribution, technical services to be rendered and forage area to be planted, 5 years

DAIRY INTEGRATION PROGRAMS SUMMARY						
ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Number of Animals Distributed	771	731	877	1,095	1,609	5,083
Cattle	653	700	877	995	1,505	4,730
Carabao	10	5	-	-	-	15
Goat	108	26	-	100	104	338
Number of Animals Bred	391	818	1,632	2,680	6,271	11,792
Cattle	300	699	1,454	2,408	5,846	10,707
Goat	91	119	178	272	425	1,085
No. of dairy animals vaccinated	672	1,043	1,959	2,959	5,202	11,835
Cattle	581	890	1,724	2,519	4,289	10,003
Goat	91	153	235	440	913	1,832
No. of animals Tested	699	1,112	1,879	2,934	5,100	11,724
Cattle	626	934	1,637	2,452	4,156	9,805
Goat	73	178	242	482	944	1,919
Number of animals provided with supplementation	819	858	1,172	1,577	2,516	6,942
Cattle	701	789	1,103	1,408	2,343	6,344
Carabao	10	15	15	15	15	70
Goat	108	54	54	154	158	528
Ha. of forage developed	210	195	338	385	463	1,591

Chapter 6.4.3 Dairy Integration

Table 6.4.3d. Annual and regional indicative budget allocation, CFIDP program-Dairy Integration, NDA, 5 years

DAIRY INTEGRATION	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	24.44	28.47	33.91	3.60	4.37	94.78	8.6%
Region II (Cagayan Valley)	-	-	-	38.15	53.43	91.57	8.3%
Region III (Central Luzon)	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	7.50	15.47	3.93	3.63	12.62	43.15	3.9%
Region IV-B (MIMAROPA)	2.53	2.60	14.24	25.85	14.77	59.98	5.5%
Region V (Bicol Region)	13.42	4.92	9.28	4.06	23.71	55.38	5.0%
Region VI (Western Visayas)	38.20	4.19	3.65	35.49	26.96	108.49	9.9%
Region VII (Central Visayas)	-	-	39.86	3.57	25.18	68.61	6.2%
Region VIII (Eastern Visayas)	-	33.25	3.56	15.00	26.52	78.33	7.1%
Region IX (Zamboanga Peninsula)	38.20	2.52	2.60	32.18	4.41	79.91	7.3%
Region X (Northern Mindanao)	-	-	40.32	17.75	33.60	91.67	8.3%
Region XI (Davao Region)	39.63	2.58	43.39	2.88	36.14	124.61	11.3%
Region XII (SOCCSKSARGEN)	3.09	36.71	2.68	47.80	36.30	126.57	11.5%
Region XIII (Caraga)	-	36.29	2.59	3.05	35.00	76.94	7.0%
BARMM	-	-	-	-	-	-	0.0%
TOTAL	167.00	167.00	200.00	233.00	333.00	1,100.00	100%

Note: Recurring cost are feeds and biological supplements, and technical services. Animals for dispersal are considered as non-recurring costs.

The indicative investment by region by program component activities is presented in Annex Table 6.4.3.3

6.5 INTEGRATED COCONUT PROCESSING AND DOWNSTREAM PRODUCTS (SHARED FACILITIES)

PROJECT DESCRIPTION

CFIDP includes a program on “community-based enterprises, including integrated processing of products and downstream products intended to increase incomes of farmers” and a program on “integrated processing of coconut and downstream products”. The Plan shall take into account the distribution of the annual allocation from the Trust Fund, “shared facilities for processing, to be implemented by PHilMech, the beneficiaries of which are coconut farmers cooperatives, in its absence, to the local government units (LGUs) of identified coconut producing towns”.

As the government agency responsible for implementing the shared facilities program component of the Plan, PHilMech is mandated to generate, extend, and commercialize appropriate and problem-oriented agriculture and fishery postharvest and mechanization technologies. It has the technical experience in implementing agricultural mechanization programs such as the current Rice Competitiveness Enhancement Program (RCEP).

The objectives of the Shared Facilities for Processing Program Component of the CFIDP are as follows: (1) to establish community and coconut-based shared facilities nationwide; (2) to enhance the competitiveness of the value chains in the coconut areas by improving product quality and reducing unit costs; and, (3) to develop the entrepreneurial and technical capability of the farmers/beneficiaries towards viable and sustainable operation of the shared facilities.

Shared facilities are described as a community-based social enterprise, applying practical solutions on coconut processing, production, and distribution towards developing the local coconut industry. Shared Facilities will also include processing of products from farm diversification such as coffee, cacao and livestock. The law also states that all projects shall be evaluated on the basis of financial returns and increased farmers’ income. A shared facility for processing is therefore configured in such a way that it is a viable enterprise, making profits for its farmer-members, can pay good prices for its raw material requirements and can sell affordable products of high quality.

The shared facilities shall be shared or jointly used, owned, or operated by the farmers’ cooperative for the following purposes: manufacturing, packaging, labeling, storing, and marketing of selected coconut products and/or by-products for distribution to local or international clients. The set-up of the shared facilities will include the following: building, processing equipment and machinery, storage facilities, hauling and transport vehicle/ tractor or truck, coconut harvesting equipment, basic testing instruments and other ancillary equipment for processing.

Beneficiaries of the shared facilities shall be the coconut farmers’ cooperatives, or LGUs in the absence of farmers’ cooperatives in coconut-producing towns in the country. Ultimately, with the shared facilities program component of the CFIDP, it is envisioned that the following benefits will be achieved to help the coconut farmers in the country: (1) increase in farmers’ income and alleviation in poverty; (2) empowerment of coconut farmers; (3) modernization in coconut processing; (4) achievement of

Chapter 6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)

social equality and increase in equitable opportunities; and (5) inclusive growth of the coconut industry.

IMPLEMENTATION PLAN

A. STRATEGIES

A.1 DEVELOPMENT FRAMEWORK OF THE SHARED PROCESSING FACILITY PROGRAM

As a development strategy, the shared facilities program will adopt the industrialization development process, by which an economy is transformed from a primary agricultural one to one based on the manufacturing and processing of goods. The systems will be mechanized through the introduction of a more advanced mechanization and processing technologies. The products will also evolve from simple to multiple products realizing value-added to the commodity as a result of improved process, systems of operation, products and by-products. The initial introduction of technologies from simple to a more sophisticated and multi-function technologies will also be evident in this strategy.

During the initial year (1st and 2nd year) of implementation, the program will introduce technologies to improve the coconut products at the village level of operation with a capacity of ≤ 5,000 nuts per day. The identified recipients for the shared facilities during the year shall focus on either a single product or combination of two or more processed coconut products and by-products (food or non-food) depending on the technical and financial viability of the proposed shared facilities. Inasmuch as 80% of coconuts goes to copra processing, priority shall be given to shared facility projects related to the improvement of quality copra and processing of copra by-products, without prejudice to the financial viability of other projects. PHilMech and collaborating agencies shall ensure the synergy and complementation of operation between and among the established shared coconut processing facilities (SCPFs).

For the 3rd, 4th and 5th year of implementation, an integrated central processing system shall be introduced to major coconut producing provinces. The integrated system of shared facilities shall comprise of multiple products and modern processing facilities and equipment. Federation of coconut cooperatives or big coconut farmers' cooperatives shall be considered as recipients for this facility. The required raw or semi-processed products shall be sourced out from village level shared processing facilities (SPFs) or group of coconut farmers. Considered as big brother to the village level shared facilities, these integrated shared facilities shall be managed by professional managers who shall be trained by the concerned partner/Implementing Agencies.

A.2 PRE-IMPLEMENTATION PHASE

A.2.1 Coconut Value Chain Framework

The major value chains of the Philippine coconut industry are as follows: Copra-Crude Nut Oil (CNO)/Refined, Bleached and Deodorized (RBD) Coconut Oil- Oleochemicals Value Chain; Desiccated Coconut (DCN) Value Chain; Virgin Coconut Oil (VCO) Value Chain; Coconut Coir Value Chain; Coconut Shell Value Chain; Coconut Sap Value Chain, and Young Coconut Value Chain.

Parallel to these are the value chains for the intercrops particularly coffee and cacao, and the livestock integration with coconut farming.

Crude coconut oil (CNO), the main export product of the coconut industry, has high PAH levels that exceed the 20 ppb limits in the world market. On the other hand, copra cake, the by-product of CNO extraction, exceeds the aflatoxin limit of 20 ppb. Poor CNO and copra cake quality is attributed to the old practice of making half-dry copra using smoke kilns. The coconut water is generally thrown away as waste when farmers make copra. The smoke kilns are fuel inefficient as this use more than half of the husk in partially drying copra.

The farmers generally are raw material suppliers of copra or dehusked nuts. Very few of them make virgin coconut oil (VCO) individually or as a coconut farmers' organization. The equipment used are rudimentary, resulting to products of inferior quality.

The increasing demand of the market for reliable supply and better-quality coconut products and for the adoption of sustainable fair-trade practices opens more opportunities for farmers to be organized into cooperatives to participate more actively in strengthening the value chains using modern farming and processing methods.

A.2.2 Identification of Prospective Shared Facilities for Processing

There are several proposed shared facilities that will enhance the efficiencies of the value chains in the coconut areas. The following describe the different types of products and the main machine components that are needed to run the facilities:

1. Integrated White Copra Centrals (IWCC)

The Integrated White Copra Centrals will produce white copra with 6% moisture content, coconut water concentrate, cocoshell, and charcoal. The Copra Centrals will buy dehusked nuts from farmers, freeing them from the drudgery of making copra. Direct copra marketing and recovery of by-products will result to better prices of dehusked nuts and better

farmers' income. Capacities are in the range of 10,000-50,000 kg-nuts per day.

The main components of the Integrated White Copra Centrals (IWCC) are forced-air, indirectly heated dryers, coco water recovery set-up, and fuel-efficient biomass-fired furnace. The excess coconut shell will be sold to integrated charcoal facilities.

2. Copra Buying Stations (CBS)

The Copra Buying Stations will buy partially dry copra from farmers and immediately re-dry to a safe 6% moisture content to stop mold growth. Mold infestation will result to high aflatoxin and Free Fatty Acid (FFA) levels and will impart dark color to the oil. This value-adding step (redrying) plus the skipping of one to two layers of traders will mean significant increase in farmers' income.

The main components of the Copra Buying Stations are dryers that are indirectly heated and forced air.

3. Integrated Coconut Processing Centers (Wet Process)

The raw materials are whole nuts and dehusked nuts. The main products are VCO, cocowater (CW), coconut water concentrate (CWC), coconut flour and coconut skimmed milk, among others. The scale of operation ranges from 1,000 kg-nuts per day to 10,000 kg-nuts per day. The main components of the Integrated Coconut Processing Centers (wet process) for the scale of 300 kg-nuts per day to 1,000 kg-nuts per day are: coconut graters, hydraulic milk extractor, fermentation vessels, pressure filter and VCO vacuum dryers.

The components for 5,000 kg-nuts per day and above are deshelling machines, coconut meat grinder, coconut milk extractor, disk centrifuge, tubular centrifuge, double-jacketed kettle, and filter system.

Dryers and pulverizer for "*sapal*" to produce coconut flour and spray dryers are needed for coconut skim milk powder. For pure coconut water and fruits/vegetable-blended coconut water, the components are washing bins, coconut water extractor, pasteurizers, and filling/capping machines. For coconut water concentrate, vacuum evaporators are needed. Other components include semi- or automatic liquid filling machines for cocowater and coconut water concentrate, and pouch or bagging filling machines for coconut flour and coconut skim milk powder.

4. Coconut Coir from Mature and Young Nuts

From coconut husks, the following products are produced: twine, geonets, cocopeat, cocologs, handicrafts and fiberboard. The main equipment are decorticator machines, twining and weaving machines and compactors for coco peat.

5. Coco Sap-based Processing Facilities

Coco sap is made into “*bahalina*”, coco sugar, coco syrup, aminos, *lambanog*, coco alcohol (ethanol), and coco toddy vinegar. The equipment needed for coco sugar, coco syrup, aminos are double-jacketed kettles and evaporators and cabinet dryers for sugar. For *lambanog* and alcohol (ethanol), the equipment needed are fermentation vats and distillation system.

6. Integrated Processing Facilities for *Buko* (pared nut, coco water, frozen meat, *bukayo*, *buko pie*)

For *buko*, the equipment are hygienic system of water extraction, freezers, and chillers.

7. Coco Food Center

This is a micro-scale enterprise for the production and marketing of *buko pie*, nata de coco, *macapuno* products and cocomilk. The equipment needed are ovens, freezers, chillers, and product display shelves.

8. Coconut Shell Charcoal Granulating Plant

Products are granulated charcoal, briquettes, and wood tar. The processing plants are provided with charcoal kilns with features to trap the tar for smoke-free operations. Charcoal will be granulated according to the specifications of the activated carbon plants and tar will be sold for wood preservation and insect pest control.

9. Cacao and Coffee Centers

To produce dry fermented cacao and green coffee beans, the equipment are fermentation boxes, indirectly heated dryers, and additionally, dehulling machine for coffee.

10. Dairy Milk and Livestock-based Products

The products from the dairy units are pasteurized milk and blends. Establishment or upgrading of milk processing for dairy and equipment including batch pasteurizer, homogenizer, and chillers. The products from poultry processing are fresh eggs, fresh and frozen meat products. Facilities needed may include breeding houses, slaughter houses, processing and packaging areas for native livestock.

11. Farm Service Crew

A farm service crew will take care, year-round, of 115 hectares of coconut area for harvesting, dehusking, transporting of nuts and general farm maintenance such as cleaning, fertilizing, and preparation for intercropping and pathways. It will ensure continuous supply of coconuts of the right maturity. The farm service crew is mechanized and equipped with a tractor, hauling vehicle, dehusker, husk chipper, power saw, brush cutter and harvesting tools. It is manned by 12 people. As a service provider, the farm service crew is a viable enterprise.

Other machines and ancillary equipment identified in the PHilMech Implementing Guidelines shall also be considered as needed except for the building component, which will be funded by DPWH. All other components shall be charged against the 10% allocated to PHilMech.

Costing and capacity of the shared facilities shall be prepared and finalized by PHilMech depending on the following: existing market prices, product demands, sources of raw materials, capability, and readiness of the beneficiaries as well as other technical and financial considerations.

A.2.3. Preparation of Feasibility Studies and Business Plans

The law mandates that all shared facilities projects shall be evaluated based on financial returns and increased farmers' income. As such, proposals shall be supported by a full-blown feasibility study and business plan. The Regional PCA offices shall assist the proponents in the preparation of feasibility studies as well as business plans. Experts from the different agencies (such as the DTI for assessment of market feasibility, CDA for organizational maturity, and PHilMech for technical feasibility and financial viability, among others) shall also provide assistance in the preparation of the feasibility studies and/or business plan.

Table 6.5a shows some examples of the proposed shared facilities submitted by the PCA Regional Offices which should then be supported by full-blown feasibility studies and business plan and will be subjected to the established PHilMech guidelines for prioritization and evaluation.

Chapter 6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)

Table 6.5a. Some examples of types of shared facilities, products and plant capacities of the proposed shared facilities from PCA Regional Offices

TYPES OF SHARED FACILITY	REGION	PRODUCTS	PLANT CAPACITY
VCO and By-Products	IV	VCO, Coco Water Drink, Coco Vinegar, Coco Flour	5,000 nuts/shift, 1 shift/day
Processing Facility for Coco Sugar	IV	Coco Sugar	500 kg/day
Soil Mill and Refinery	IV	RBD, CNO, Copra Cake	2,000 kg copra/day
Establishment of Direct Coconut Marketing Project	VI	Copra	2,000 kg copra/day
White Copra Processing	VI	White Copra, Coco Shell, Coco Water	5,000 nuts/day
Establishment of <i>Buko</i> Processing Facility	VI	<i>Buko</i>	3,000 daily
Direct Copra Marketing Project	VII	Copra	4,000 kg re-dried copra
Establishment of VCO Processing Facility (10,000 nuts/ day) with Vehicle	VII	VCO, Coco Water Drink, Coco Vinegar, Coco Flour	10,000 nuts/day
Establishment of Coco Sap Processing Facility	VII	Coco Sap, Vinegar, <i>Bahalina</i> , Coco Sugar	1,000 liters/day
Shared Facility for Coconut Coir	VII	Baled Fiber, Geonets, Coir Dust, Coconut Coir-Based Organic Fertilizer	10,000 husks per day
White Copra Central, Decorticating and Charcoal Briquette Processing with Vehicle	VIII	White Copra, Briquette, Coir, Peat, Shell, Vinegar	1,500 nuts/batch
Integrated Processing of Coco Water, VCO, Coco Flour, and Briquettes	VIII	VCO, Coco Flour, Coco Water, Coco Vinegar, Charcoal Briquettes, Granulated Charcoal, Coco net, Coconut Coir-Based Organic Fertilizer	10,000 nuts/day
Establishment of Coco Sap Processing Facility	X	Coco Sap Sugar	200 kg/day
Establishment of Coco Water Processing Facility	X	Coco Water Drink, Copra, Coco Shell	2,000 nuts/day
Integrated Coconut Processing	XI	VCO, Charcoal Briquettes	5,000 nuts/day
Processing Facility for Coco Sugar	XII	Coco Sugar	125 kg/day
Integrated Coconut Processing	XII	White Copra, Coconut Water, Charcoal	5,000 nuts/day

A.2.4 Implementation Strategies

The detailed implementation guidelines in the Implementation Plan formulated by PHilMech will be adopted in the implementation of the shared facilities program component. Important implementation strategies which are part of the detailed Implementation Plan are discussed below.

1. Project Evaluation, Validation and Approval

Under this stage of implementation, the specific activities include: (1) field validation/site validation/prioritization; (2) evaluation of proposal, feasibility studies and business plan; (3) securing all legal and technical requirements; and (4) documentation and MOA signing. The requirements include validation criteria, feasibility proposal, studies and business plan, and legal and technical requirements (DENR, LGU, etc.). The agencies in charge will be PHilMech in coordination with partner agencies.

The following shall be the parameters in the evaluation of the proposals: (1) the project proponent should be a legitimate group of CDA-registered farmers' cooperative with externally audited financial statements for the past two years upon application; (2) the project proposal should be listed as processing activities for shared facilities in the regional CFIDP and the application must be endorsed by the respective PCA Regional Manager of the region; (3) the proposal should have a complete feasibility study and business plan; (4) the proponent-cooperative shall provide the lot with an area not less than the required area as specified in the feasibility study of the proposed shared facilities; and (5) the proponent cooperative should submit evidence of full ownership of the lot or a duly Notarized Usufruct Agreement with the lot owner of not less than 30 years.

The recipient cooperative must have a management system that can run the shared facilities as a business enterprise. Furthermore, the cooperative should also have financial capability (from their funds available or through loans availed from the LBP, DBP, or other financing institutions).

The proposals will be validated at the provincial and regional levels. PHilMech will conduct validation of submitted proposals. Based on the submitted full blown feasibility studies and business plans, the submitted applications will be subjected to analysis and validation by PHilMech in coordination with other partner agencies.

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PHilMech shall adopt the following prioritization and decision criteria for the proposals;

- a) The soundness of feasibility studies and business plans plays a vital role in the prioritization criteria. Since the shared facility component under the Coco Levy Trust fund was conceived to promote economic viability and sustainability of coco business enterprises, the soundness of the submitted feasibility study and business plan as validated by PHilMech should be a major consideration in the prioritization process. The more solid the economic viability and doable the business plan of the proposed project, the more it becomes a priority for inclusion for funding from the regional fund allocation under the CFIDP.
- b) The project proposals validated by PHilMech found to be incomplete will not be included in the priority list in the current year but can be considered for the succeeding year subject to compliance to the required minimum requirements and be subjected again to validation, evaluation, and prioritization process.
- c) The prioritization will be on a first come first served basis. Projects endorsed by PHilMech for the PCA Board approval becomes the responsibility of PHilMech as the lead agency, in partnership with the other agencies, to make the project economically viable and sustainable.
- d) Priority will also be given to proposals aimed at improving copra quality and to process copra-based by-products e.g., coconut water into concentrate and other coconut water beverage formulations; coconut husk into coco peat, coir, fiber, geonet; coconut shell into charcoal, charcoal briquette or activated carbon, among others.
- e) There should be an active support in the establishment of shared processing facilities and provision of sustainability support activities from the LGU. Support from the LGU should be, but not limited to, technical support, financial assistance, social development, shared facility-physical development and infrastructure support, and institutional and capability building.
- f) The supply of raw materials, demand for the products, and the market for product/s that shall be derived from the proposed shared processing facility should be clearly identified.
- g) For technical evaluation, the shared facilities, as proposed in the Regional CFIDP, will be evaluated based on the following: access to raw materials, access to markets, availability of land to be provided by proponent where the shared processing facilities can

be installed, coherence or complementation with other proposed facilities and farm improvement projects, choice of the technology package that is compliant to environmental regulations (preferably zero-waste), and unit costs of production, quality of products, and level of technology compatible to the rural settings of some locations.

2. Procurement, Construction, Installation, Commissioning and Turn Over

Specific activities included in this stage of implementation include planning and design development; procurement process; site preparation, construction of infrastructure, delivery, and installation, testing and evaluation of facilities, commissioning of facilities and turn-over of facilities. The requirements are technology specifications, facility plans and designs, site requirements, testing and evaluation procedure and turn-over documents. The agencies that will be in charge shall be PHilMech in coordination with DPWH, and partner agencies.

Site and field preparation/coordination and documentation like MOA signing and other activities shall be conducted to ensure that all implementation activities shall be done in accordance to the PHilMech Implementation guidelines. This activity shall be spearheaded by PHilMech and other partner agencies.

The procurement of all the facility requirements of the program shall be conducted by PHilMech in accordance to the procurement law (RA 9184). Construction of building shall be facilitated by the DPWH in consultation with PHilMech to ensure compliance with FDA standards for food products. Buildings for non-food products shall comply with national standards. The delivery, installation and testing shall be facilitated by PHilMech to ensure compliance of the facilities to specifications and standards.

During the turn-over of facilities, the established shared facilities shall be turned-over by PHilMech to the identified beneficiaries through conditional Deed of Donation. A MOA shall be entered into by and between PHilMech, the partner agencies and the recipients/beneficiaries, enumerating the duties and responsibilities including repossession or transfer of the shared facility to other qualified beneficiaries when the recipients are found in violation from the intended purpose of the program.

3. Operation, Management and Sustainability

3.1 Capability Building Activities

Training module preparation and roll out of the training modules for the operation, maintenance and management of the shared facility shall be facilitated by PHilMech in coordination with ATI, TESDA and other partner agencies. Continuous organizational development and strengthening shall also be conducted in coordination with CDA.

3.2 Day-to-day Operation and Management

An organizational structure shall be prepared by the beneficiaries for the efficient operation of the shared facility. The needed initial capital shall be provided by the beneficiaries. Additional capital shall be facilitated with the support of LBP and/or DBP. The operation shall always ensure the sources of raw materials, ensuring Good Management practices, compliance to Good Manufacturing Practices, and high-quality products. Market matching and market search and other strategies to ensure market for the coconut products are to be conducted. This shall be facilitated by the DTI.

3.3 Sustainability Activities

Technical assistance, coaching and mentoring shall be a regular activity of PHilMech until the third year of operation. Strategic Plan and Operation Plan shall be crafted by the beneficiaries in coordination with PHilMech and partner agencies. PHilMech and partner agencies shall facilitate the formulation of a revised Business Plan and Financial Analysis and Operations Manual for the beneficiaries. Necessary skills and techniques for business and enterprise operation shall be acquired by the beneficiaries in collaboration with partner agencies.

A.2.5 Convergence of Implementing Agencies for Sustainable Operations of the Shared Facilities

As stated in RA 11524, PHilMech will be the lead agency in the implementation of the shared facilities component of CFIDP and is responsible for the procurement of the facilities and subsequent turn-over to the recipient cooperatives. While PHilMech assumes the leadership role, the successful operation of the shared facilities also depends on the readiness of the recipient and the collective support of the various partner agencies.

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The key implementers for the programs include the HVCDP, BAI and NDA for the intercropping, native livestock and dairy projects under the CBFS farm improvement program; PCA for coconut processing; CDA for organizational and institutional development; ATI for training, education, promotion, and other capability building activities; TESDA for skills/capacity development; DTI for marketing assistance; DPWH for infrastructure development; DBP/LBP for credit assistance; PCA and the DOST for technology and technical assistance, and PHilMech in collaboration with other agencies for enterprise/business sustainability development. The PHilMech as the lead implementing agency and PCA will spearhead the implementation of convergence activities. Figure 6.5a shows the framework showing convergence among different agencies in support of recipient cooperatives under the Shared Facilities program component of CFIDP.

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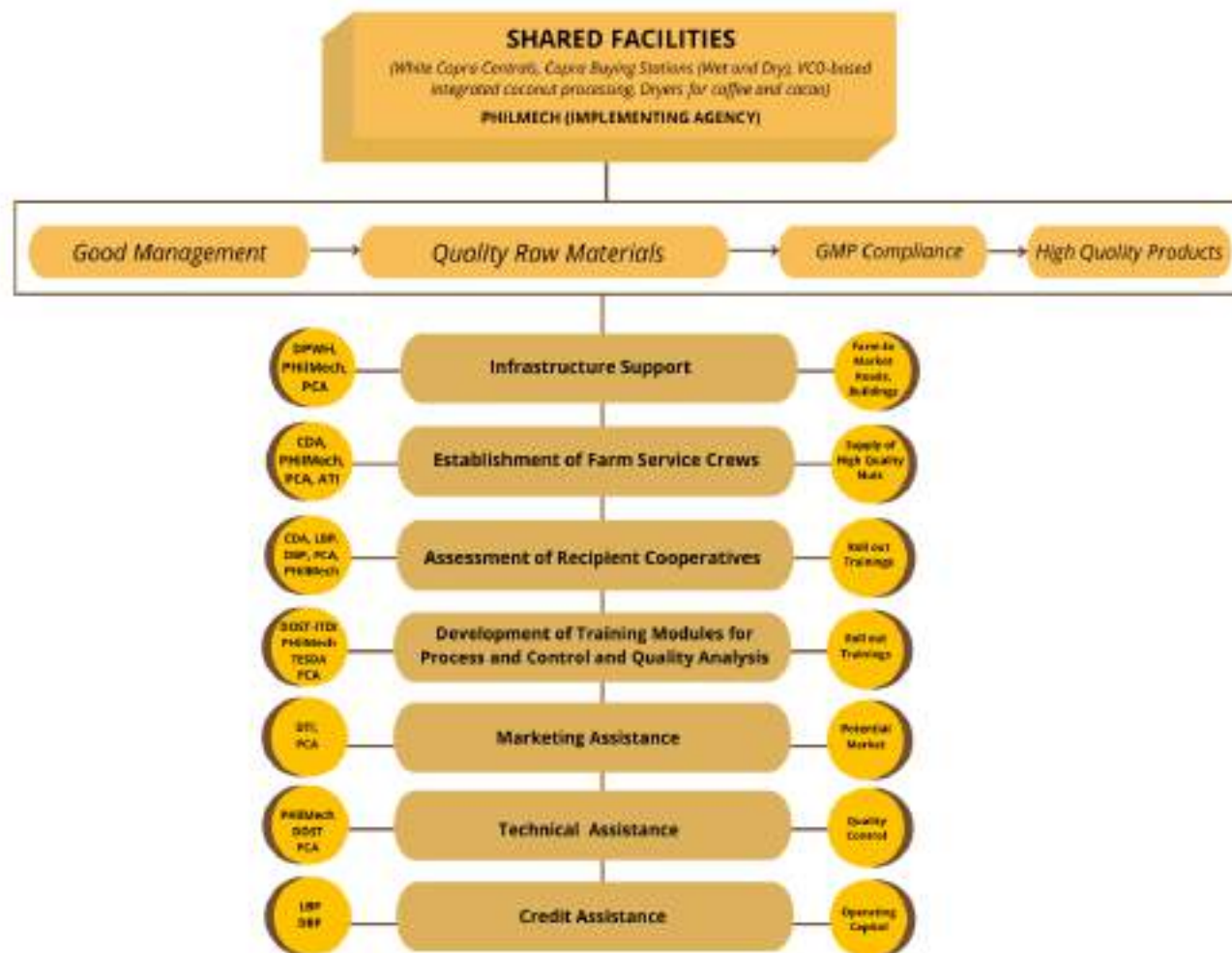


Figure 6.5a. Framework showing the convergence among different agencies in support of recipient cooperatives under the Shared Facilities program component of CFIDP

Sustainability and support mechanisms for the operation, management, maintenance of the shared facilities and market assistance shall be done and implemented. The implementing agencies shall closely supervise and monitor the operation of the shared coconut processing facilities.

To strengthen the coconut cooperatives' organizational capacity and financial and economic viability, the following strategies shall be conducted: (1) organizational and institutional development; (2) education and promotion; (3) skills and capacity development; (4) establishment of shared facilities for processing; (5) marketing assistance; (6) infrastructure development; (7) credit assistance and enterprise, sustainability development; and (8) technology and technical assistance.

Capacity building activities as part of operation, management and sustainability of the shared facility shall include training module preparation to be facilitated by PHilMech in coordination with ATI, TESDA and other partner agencies.

The output of the program shall be the establishment of viable SCPF nationwide that will be managed by well-trained management team and operated by coconut farmers' cooperatives or LGUs.

A.2.6 Proposed Operational/ Business Models

Implementation Scheme 1: Linking the farmers' cooperative with the oil mills

The white copra centrals and copra buying stations will supply high quality copra to the oil mills in a coordinated manner to ensure an almost "just-on-time" operation. In this manner, the time elapsed between copra-making and oil milling will be dramatically shortened in order to reduce inventory costs and post-harvest losses in terms of quality loss and dry matter loss. Exportation of high quality CNO is very much welcomed by reputable CNO users like Unilever and oleochemical companies.

Implementation Scheme 2: Linking the farmers' cooperative with the DCN processors

- a) With the farmers freed from copra-making, they can now be involved in the trading of dehusked nuts by having barangay-based buying stations and bulking stations for direct delivery to DCN factories.
- b) As supplier of coconut water concentrate (CWC):
The cooperative-owned white copra centrals will hygienically recover coconut water and process it into coconut water concentrate. Arrangements with the DCN processors can be made to assist the cooperative produce coconut water concentrate according to standards.

Implementation Scheme 3: Big brother-small brother business model (Large-Scale Integrated SCPF)

- a) There are existing enterprises that can be 'Big Brothers' that could buy finished products or semi-processed from the 'Small Brothers'.
- b) Arrangements could also cover technical assistance on quality control, plant layout and operations. Examples of 'Big Brothers' are oil mills (e.g., J&J, Viscoco, CIIF), DCN processors, Greenlife, Yakap at Halik, Amparitas, Joboken).
- c) Example of 'Small Brothers' are CASCOFAMCO in Capiz, Diaz Women Organization in Dinagat Island, Tag-oyango Multi-Purpose Cooperative in Agusan del Sur, and Tala Orani Multi-purpose Cooperative in Bataan.

Based on the PHilMech implementing guidelines, the 'Big Brother' (private corporation/companies) will establish central modern processing plant/s, ensure to buy the agreed semi-processed products produced by the farmers' federation or cooperative and train the coconut farmers on the necessary skills and operations for the shared facilities. On the other hand, the Small Brother (coconut farmers' cooperative) provides the counterpart facilities and equipment needed to produce the agreed volume and quality of the product, follow processing protocols set by the 'Big Brother'. The 'Big Brother' and 'Small Brother' enter into an Exclusive Supply Agreements (ESA). Products include value-adding products and downstream products with a large scale (\geq 15,000 nuts per day) operating capacity.

Implementation Scheme 4: Cooperative Coconut Processing Enterprise (Small- to Medium Scale- Village Level SCPF)

For cooperatives operating under this model, the general requirements would include establishment of a central processing plant equipped with modern equipment, machines and ancillaries; sourcing raw materials from individual coconut farmers, provision of necessary tools and equipment and logistics to ensure timely delivery of products from the field to the project site based on quality standards, and promotion and marketing of final products. Individual coconut farmers must follow handling protocols set by the farmers cooperative and ensure timely delivery of the agreed volume and quality of needed raw materials. The products under this business model include premium grade copra, coconut water, and value-adding products and downstream products.

Implementation Scheme 5: Cooperative Central Coconut Processing Enterprise (Large Scale Integrated Shared Facilities)

The federation of cooperatives performs the following functions: establish a central processing plant including modern machines, equipment, and ancillaries, ensure to buy the raw materials from individual coconut farmer-members, provide the necessary tools/ equipment and logistics to ensure

Chapter 6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)

timely delivery of product from the field to the plant according to quality standards and promote and market the final product. On the other hand, primary cooperatives follow handling protocols and procedures set by the Cooperative and ensure timely delivery of raw materials. Both parties enter into an ESA. This is a large scale ($\geq 15,000$ nuts per day) operation.

B. CRITERIA FOR THE SELECTION OF BENEFICIARIES

The first step is identification and selection of beneficiaries complying to minimum requirements. PCA and PHilMech shall be in charge of this step of the implementation process. There should be thorough screening of recipient cooperatives and use of proven technology. Screening of cooperatives will be done by PHilMech in collaboration with the CDA, DTI, and PCA, among others.

The criteria for evaluation of prospective farmers' cooperative-proponents are as follows: (1) financially stable cooperative with good management; (2) cooperative membership of over 100 depending on project cost; and (3) NCFRS registrants. The shared facilities proposed by recipient cooperatives must be justified or supported by a feasibility study and business plan.

The requirements include technical and legal documents, application, endorsement and feasibility study and business plan. In the Feasibility Study and Business Plan, the following items should be included in the discussion: (1) access to coconut supply; (2) access to markets; (3) selection of technology; (4) technical capability; (5) environmental compliance; and (6) Good Manufacturing Practice (GMP) compliance.

C. INDICATIVE INVESTMENT REQUIREMENT

RA 11524 mandates that of the annual budget allocation from the Trust Fund, 10% shall be allocated for shared facilities for processing to be implemented by PHilMech. This allocation shall be used for the procurement of equipment and ancillary tools for the shared facility and other project-related expenses such as provision of technical support to the program such as enterprise and technical capability enhancement support and monitoring and evaluation not exceeding 20% and 2% respectively of the annual budget allocation.

The annual indicative investment allocation for the Shared Facilities program component is PHP 500 M for Year 1, PHP 500 M for Year 2, PHP 600 M for Year 3, PHP 700 M for Year 4 and PHP 1.0 B for Year 5. There shall be an annual review of the budget allocation.

In the computation of Regional indicative Investment allocation for the Shared Facilities program component, the weighted average of the following criteria was used: coconut production (35%), coconut area planted or harvested (30%), the number of farmers (20%), and the number of active coconut farmers' organizations (15%). Regions I-III (Ilocos, Cagayan Valley, Central Luzon) have the lowest indicative budget allocation while Region IV-A (CALABARZON) has the highest budget allocation.

Chapter 6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)

Table 6.5b. Annual and regional indicative investment requirement for Shared Facilities program, 5 years

REGION	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					TOTAL	SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5		
Region I, II, III (Ilocos Region, Cagayan Valley, Central Luzon)	8.63	8.63	10.35	12.08	17.25	56.94	1.73%
Region IV-A (CALABARZON)	58.61	58.61	70.34	82.06	117.23	386.85	11.72%
Region IV-B (MIMAROPA)	25.49	25.49	30.59	35.69	50.99	168.25	5.10%
Region V (Bicol Region)	43.65	43.65	52.38	61.11	87.30	288.09	8.73%
Region VI (Western Visayas)	27.13	27.13	32.56	37.98	54.26	179.06	5.43%
Region VII (Central Visayas)	25.01	25.01	30.01	35.01	50.01	165.05	5.00%
Region VIII (Eastern Visayas)	50.15	50.15	60.18	70.21	100.30	330.99	10.03%
Region IX (Zamboanga Peninsula)	52.66	52.66	63.19	73.72	105.32	347.55	10.53%
Region X (Northern Mindanao)	53.84	53.84	64.60	75.37	107.67	355.32	10.77%
Region XI (Davao Region)	51.74	51.74	62.09	72.44	103.48	341.49	10.35%
Region XII (SOCCSKSARGEN)	32.51	32.51	39.02	45.52	65.03	214.59	6.50%
Region XIII (Caraga)	29.74	29.74	35.68	41.63	59.47	196.26	5.95%
BARMM	40.84	40.84	49.01	57.18	81.69	269.56	8.17%
TOTAL	500	500	600	700	1,000.00	3,300.00	100%

Note: The cost of machinery, equipment and the construction cost of buildings shall be categorized as non-recurring costs.

6.6 INNOVATIVE RESEARCH PROJECTS AND THEIR APPLICATION ON COCONUT PROCESSING, PRODUCTION, AND DISTRIBUTION

PROGRAM DESCRIPTION

Research is the foundation of any development anchored on science-based innovation as a strong support to any intervention. In this context, these innovative research projects should back up the proposed programs of the CFIDP under RA 11524. As stipulated in the law, innovative research projects and its practical application on coconut processing, production and distribution must be included as one of the major components of the National Coconut Farmers and Industry Development Program (NCFIDP) to provide scientific basis of the proposed interventions.

As mandated in RA 11524, the PCA is the sole government agency responsible for the development of the industry. Hence, the Research and Development Branch of PCA for more than four (4) decades was in the forefront of formulating and conducting viable research projects with the support of other research institutions and funding agencies such as the DOST-PCAARRD and other external funding organizations. The academe has also contributed much to coconut research as well and over the years, collaborations among them, with PCA and the private sector has been strengthened. However, the transformation of the old R & D agenda to a more practical application of research for industry development is of paramount importance to address major problems confronting the coconut industry that need immediate attention. Research efforts must be aligned to the agribusiness environment of the industry in the context of the New Thinking in Agriculture. Currently, the focus of coconut researches is centered on production, product development and modernization with direct outcomes of increased yield or “*ani*”, increased income or “*kita*” and competitiveness as shown in Figure 6.6a.



Figure 6.6a. Current research programs and perceived outcome

For the CFIDP, PCA's research efforts in collaboration with the DOST and academic universities will have to formulate a unified research agenda for coconut which is rational and practical towards achieving the vision of a resilient, prosperous, and globally competitive industry.

The identified innovative research projects for CFIDP implementation intend to make available science-based interventions and proven models that are practically applicable in the identified programs of the CFIDP. Relevant completed research projects will be evaluated for their utilization in program implementation. These research projects will be categorized and assessed based on their technical feasibility, economic viability, and social acceptability. Further research will be undertaken based on the gaps and needs ascertained in the evaluation process to ensure the soundness of the proposed programs of CFIDP.

A. PRODUCTION RESEARCH

Research projects on production and productivity are well-studied with available technologies on increasing yield and improving farm productivity. However, these are fragmented and lack a clear direction. With the advent of smart agriculture, there is a need to cope up with the pole-vaulting development of science. Sufficient support should be given to increase coconut production and productivity through improved and precise agriculture practices and smart technologies to develop the coconut farm's capacity for a climate-resilient coconut-based farming system. The climate-adaptation policy objectives should be consistent across programs to provide a clear guidance on climate-adaptation and reliable climate information to farmers, and to encourage more efficient use of water and nutritional management.

The innovative researchable areas along this line include:

- Advanced approaches for enhanced and accelerated mass propagation of quality planting materials;
- Molecular-assisted breeding to develop varieties with enhanced tolerance to biotic and abiotic stresses;
- Geo-spatial technologies for remote sensing/ monitoring of soil and crop health, pest and disease dynamics and prediction models;
- Precision water, nutrient and pest management including application of nanotechnology for efficient nutrient utilization and pest management strategies;
- Studies on varietal response to heat and drought tolerance, nutrition and irrigation management;
- Coconut-based farming system with reference to ecological and economic valuation; and
- Continuing improvement of GAP for coconut and intercrops
- Organic or natural farming thru zero waste farm management.

Cognizant of the Philippine Organic Act for the protection of the environment and the consuming public, the latter research topic on organic farming must be pursued in the plan to have ecologically sound farming systems.

B. PROCESSING RESEARCH

1) Food Product Development

The development of Coco-Based Food Products and Enhanced Food Processing Protocol is a major concern in the processing sector. Development of food products of nutritive and health benefits is currently anchored on market opportunities in the health and wellness niche market. Hence, research projects on the development of coconut-based food products should be responsive to market-driven high-value products. Furthermore, priority research projects aimed at increasing income through product diversification and integrated processing must give importance to product quality and economic viability. Application of advance technologies in producing upgraded marketable, high-end coconut products has direct impact on the competitiveness of these products both locally and in the export market. As such, the focus of research should be on the following areas:

- Product quality and processing technology improvement geared towards commercialization.
- Upscaling of product quality standards and development of good manufacturing protocols
- Expanding the utilization of value-adding coconut and by-products with reference to market prospects
- Functionalities of specialty products (i.e., *Makapuno* liquid endosperm) for innovative and nutraceutical applications.
- Clinical research on the healthy benefits of emerging products such as VCO and coconut sap-based products
- Medical research to address the issues on coconut oil (source of allergen, trans fat issue and PAH level requirement for copra quality improvement).
- Exploring new food uses and products from different parts and downstream products of coconut

2) Non-Food Product Development

The program on Integrated Coconut Processing of downstream products thru shared facilities requires rural-based machineries/equipment. The following non-food research activities of various institutions (PCA, PHILMech, DOST-ITDI and SUCs) should converge in the development of advanced and novel equipment that will enhance the processing of coconut-based products:

- Design and development of mechanized system in product processing for coconut and intercrops;
- Development of new non-food coconut-based products for health and environmental applications;
- Development of renewable energy sources from coconut biomass;
- Innovative research supporting mechanization run across the various programs of research like food and non-food product development as well as in Integrated CBFS and GAP;

- Formulation and establishment of technical specifications or criteria, guidance on the design, use or performance of coconut products, processes, and machines; and
- New products or process developed that are guided by certain guides, rules, and standards.

C. RESEARCH MODERNIZATION

For the industry to be competitive, modernization of the coconut R & D is the key to cope up with the pole-vaulting development of the coconut industry globally. Research investment on biotechnology must be upscaled for continuity and be able to compete in fast transformation thru Science and Technology (S & T). Moreover, modernization of coconut research must be complemented with advance Information and Communication Technology. Another major research area in modernization is the application of biotechnology in industry development. Academic institutions and funding agencies must set their focus and direction on biotechnology programs thru collaborative efforts for a unified and focused R & D agenda. At the forefront, the competency of the core technical experts must be at a level best on various areas of specialization needed in advancing the competitiveness of the industry. These innovative research projects shall push a science-based support system to production, processing, and distribution of technologies in various programs to be implemented as defined in RA 11524 which will be sourced from the GAA funding of DOST, DA and PCA. Clearly, the following researchable areas are deemed vital in program implementation to be able to be at par with our coconut growing competitor countries. There is a need to accelerate our quest for progress and science is the foundation for technology development. As identified, modernization of the R and D agenda should include the following areas of concern:

- Application of Biotechnology (Genomics, Bioinformatics and Nanotechnology)
- Knowledge and Information Management System;
- Digitized systems of farm management, product development and technology dissemination for market promotion; and
- Medical studies to support product improvement and promotion.

IMPLEMENTATION PLAN

A. STRATEGIES

A.1 Benchmarking of Available Technologies to Support CFIDP

Research funding agencies and academic institutions shall provide the inventory of available technologies on production, processing, and marketing to identify variances among researchable areas. Research benchmarking will be the basis for setting the focus of research especially researchable areas identified to be relevant for utilization in various projects identified in the CFIDP. In the same manner, this will serve as a point of reference for formulating the research agenda for convergence and prioritization of proposed research projects for indicative investment. Identified mature technologies will focus on

the delivery system and application for utilization. Categorization based on its applicability to the CFIDP will be packaged for application to specified programs and shall be prioritized for further funding if needed for improvement. PCA shall be the research inventory depository with direct collaboration and support from DA-BAR and DOST.

A.2 Needs Assessment and Identification of Research Gaps

Setting the criteria for prioritization of innovative research projects is a must for consideration in the implementation of the programs. Evaluation of the available research that can support the programs has to determine the perceived needs either for improvement or enhancement. This will preclude duplication of undertaking research projects and to ascertain research gaps. Collaborative efforts among funding agencies and institutions involved in coconut research must be integrated and a common platform for coordination and setting a unified R & D agenda in support of the CFIDP is needed.

A.3 Harmonization of the proposed projects and research collaborations

To unify the fragmented conduct of coconut research projects, there should be a mechanism to establish a coordinated and synchronized R & D agenda. A coconut R & D team should be organized under the CFIDP from PCA, DOST Councils, DA-BAR, and academic institutions. Experts and representatives from research funding agencies should be coordinated to craft the national R & D agenda specific for coconut centered on the support system of CFIDP. Funding of these research programs prioritized in the CFIDP must be assured under the GAA of DOST and PCA throughout the entire duration of the research projects. For the approval of research projects, the DOST and PCA shall include experts and representatives from the production and industry stakeholders including the private sector in the evaluation team to warrant the relevance and functionality of expected outputs. In like manner, research programs should have pooling of resources and expertise through collaboration and sharing of facilities.

Furthermore, in consideration that most coconut research projects have long gestation period and the pool of experts in the field of breeding, crop protection and biotechnology is limited, there is a need to have a succession plan. Academic institutions can tap students to engage in coconut research works that can be included in the research programs funded by government agencies. Scholarships of CFIDP-CHED and DOST should have separate priority slots for grantees who will work on coconut and must be given an assurance of government jobs in PCA after completion of their studies.

A.4 Prioritization based on the National Coconut Agenda for R & D (NCARD)

Proposed projects will be evaluated in accordance with the agreed NCARD of the member institutions of the coconut R & D networks and should be aligned to the component programs of the CFIDP. Research projects will be classified into upstream and downstream research and matched with the competency (i.e., available experts and facilities) of the

proposed institutions. Academic institutions can formulate their coconut R & D programs guided by the NCARD policy guidelines set by the R & D networks in accordance with institutional policies of the funding and implementing agencies. Collaborative inter-agency research proposals are encouraged to have inclusive and coherent scheme for R & D investment.

A.5 Utilization of Research Outputs and Technological Information

Research must be market-driven with appropriate extension delivery system to ensure utilization of research findings. The R & D agenda has to be aligned to the unified direction of the coconut industry with a set of targets to be supported by science-based innovations. To have an effective utilization, strategic technology transfer segments must be included in this plan. There should be convergence and shared tasks among the key players in the Coconut R & D network. It is imperative that research efforts must be aligned to agribusiness directions of the industry. Currently, the focus of research is centered on accelerating production, product development and modernization with direct outcomes of increased yield or “*ani*”, increased income or “*kita*” and global competitiveness. These technologies must be utilized and be responsive to the needs and prospects of the coconut industry. The proposed research framework shown in Figure 6.6b is geared towards the evaluation of technologies to be adopted with the participation of the technology generators facilitated by extension agents for effective and sustainable technology transfer mechanism and incubation process. Research funding and implementing institutions must establish a unified R & D agenda to harmonize the resources and prioritize funding of relevant and responsive research projects for application to production, processing, and distribution. In the same manner, research and extension continuum must be effectively established to ensure effective technology transfer and feedback mechanism mainstreaming the farmers in the process as end-users.



Figure 6.6b. Conceptual framework of the research process, transfer, and feedback mechanism for application to production, processing, and distribution

B. INDICATIVE INVESTMENT REQUIREMENT

Based on the initial submission of all research project proposals on coconut to R & D funding agencies by academic institutions, the total research investment requirement is PHP 945.97 M for the five-year investment plan. By research program area classification, production research has an indicative total investment requirement of PHP 292.97 M while for research on product development of food and non-food coconut products, a total of PHP 366.0 M is allocated. The total investment requirement for biotechnology research is PHP 287.40 M. However, these projects will still need to undergo evaluation and prioritization based on the technical requirements of the core programs identified in the CFIDP. Most of these research projects must be aligned to the harmonized regional plans included in the farm improvement and shared facility program components. These indicative investment requirements for GAA funding must be focused and sustainable if the ultimate objective is to modernize the program interventions for industry competitiveness and be able to cope up with technological advances geared towards a prosperous, sustainable, and resilient coconut industry.

Table 6.6b. PCA's innovative research projects and indicative investment requirement for practical application on coconut processing, production, and distribution in support of the CFIDP

PROGRAM/PROJECT TITLE	INDICATIVE INVESTMENT (IN MILLIONS, PHP)							
	CENTER	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	TOTAL
I. PRODUCTION AND PRODUCTIVITY PROGRAM		78.20	68.59	57.58	48.80	34.40	5.00	292.57
A. INTEGRATED CBFS AND GAP	DRC	7.00	15.00	11.00	11.00	7.00	5.00	56.00
1 Application of Geo-Spatial Technologies for Coconut Health Management		7.00	6.00	4.00	4.00	0.00	0.00	21.00
2 Application of Nanotechnology for Precision Coconut farming		0.00	9.00	7.00	7.00	7.00	5.00	35.00
B. VARIETAL IMPROVEMENT AND BREEDING	ZRC	71.20	53.59	46.58	37.80	27.40	0.00	236.57
II. PRODUCT DEVELOPMENT		138.00	110.00	75.00	43.00	0.00	0.00	366.00
A. FOOD PRODUCT DEVELOPMENT	ARC	80.00	57.00	27.00				164.00
1 Product Quality and Food Processing Technology Improvement Geared Towards Commercialization		23.00	14.00	2.00				39.00
2 Expanding the Utilization of Coconut through the Development of Various Nutritive Food Products		37.00	30.00	21.00				88.00
3 Exploiting the functionalities of Makapuno endosperm and its galactomannan for innovative food and nutraceutical applications		20.00	13.00	4.00				37.00
B. NON-FOOD PRODUCT DEVELOPMENT	ZRC	58.00	53.00	48.00	43.00	0.00	0.00	202.00
1 Design and Development of Post Harvest Mechanization for Coconut		10.00	10.00	10.00	10.00	0.00	0.00	40.00
2 Non Food Product Development for Industrial, Agricultural and Environmental Application		23.00	23.00	18.00	18.00	0.00	0.00	82.00
3 Development of Renewable Energy and Solid Biofuels for Household and Industrial Uses		25.00	20.00	20.00	15.00	0.00	0.00	80.00
III. BIOTECHNOLOGY	ARC	65.32	93.22	68.32	53.22	7.32	0.00	287.40
1 Developing new approaches in coconut tissue culture for enhanced mass propagation of quality coconut planting materials		31.32	31.22	22.32	22.22	7.32	0.00	114.40
2 Cadang-cadang Containment Program		9.00	19.00	18.00	13.00			59.00
3 Application of Biotechnology for Coconut Improvement		25.00	33.00	18.00	18.00			94.00
4 Application of nanotechnology in the improvement of high-value coconut products			10.00	10.00				20.00
TOTAL		281.52	271.81	200.90	145.02	41.72	5.00	945.97

IDENTIFIED THEMATIC AREAS OF RESEARCH FOR DEVELOPMENT FOR COLLABORATION TO SUPPORT CFIDP

A. Production

- 1) Conventional breeding to produce high yielding hybrids and cultivars with special traits for specific product lines;
- 2) New approaches in tissue culture for enhanced mass propagation of quality planting materials;
- 3) Cross hybridization and Molecular Assisted Breeding to develop varieties with Enhanced Tolerance of Biotic and Abiotic Stresses;

Chapter 6.6 Innovative Research Projects and their Practical Application on Coconut Processing, Production and Distribution

- 4) Geo-spatial technologies for remote sensing/ monitoring of soil and crop health, pest and disease dynamics and prediction models;
- 5) Precision water, nutrient and pest management including application of nanotechnology for efficient nutrient utilization and pest management strategies;
- 6) Varietal response to Heat and Drought Tolerance, Nutrition and Irrigation Management;
- 7) Continuing improvement of GAP for coconut and intercrops
- 8) Organic or Natural Farming;
- 9) Coconut-based Farming System Investment Modalities

B. Processing

- 1) Integrated Food Product Development for rural-based enterprises (coco sap-based products);
- 2) Nutritional studies of high-value emerging products for market promotion
- 3) Studies on utilization of specialty products from *Makapuno* (i.e., MLE-based products)
- 4) Rural-based coconut water production from copra processing (i.e., mechanization and product quality improvement)
- 5) Studies on health issues for coco-based food products (i.e., allergen and transfat issues)
- 6) Upscaling renewable energy sources
- 7) Moisture and PAH determination studies for copra quality improvement
- 8) Exploring new food and non-food uses and products from different parts and downstream products of coconut

C. Modernization

- 1) Biotechnology
 - bioinformatics
 - transformation
 - gene expression
 - nanotechnology
- 2) Information Technology
 - digitized processes
 - pest and disease prediction models
 - use of e-marketing platform

No development can be achieved without innovative research since it is the foundation of any industry development and competitiveness. It is a science-based strong support in envisioning a sustainable, resilient, and globally competitive coconut industry. Hence, it is a vital component to back up the proposed programs of the CFIDP as stipulated in RA 11524.

6.7 SUPPORT SERVICES

6.7.1 CREDIT

PROGRAM DESCRIPTION

Majority of small coconut farmers still depend on informal money lenders for their credit needs. Informal money lenders, however, extend only small amounts of production loans and charge usurious interest rates. To avail of bigger amounts of loans for their fixed capital investments and working capital requirements, the coconut smallholders need to have increased access to formal banking institutions. Most of the small coconut farmers, however, have limited access to credit from formal lending institutions. Some of the factors that constrain small coconut farmers' access to credit are: (1) lack of borrowing experience/track record; (2) lack of knowledge on how to access formal financing, particularly on putting together the required documents; and (3) lack of collateral.

To provide individual coconut farmers, farmers' organizations, and cooperatives easy access to affordable credit, Republic Act 11524, Article II Sec. 4 paragraph h mandates the LBP and the DBP to implement a credit program to be funded under the Coconut Farmers and Industry Trust Fund. DBP and LBP are the government agencies mandated to promote countryside development, help spur credit activity and financial inclusivity for rural folks and communities and strike a balance between sustainable profitability and progress for all its stakeholders, including the unbanked and unserved across the country. As a development bank, LBP is the largest provider of financial services either directly or indirectly to individual farmers, land-reform beneficiaries, and farmers' cooperatives/associations.

The government thru LBP and the DBP shall carry out responsive credit delivery mechanisms and provide adequate information and assistance to small coconut farmers, SEC-registered farmers' organizations, and CDA-registered cooperatives on available loans for production, processing, trading, and/or on-lending and rediscounting. The CFITF Credit Program is expected to raise the amount of productive investments and economic activities in the countryside, generate more livelihood and income opportunities in coconut-producing communities, and increase productivity and income of the target beneficiaries.

The projects that shall be eligible for financing by LBP and DBP are projects related to the coconut value chain and projects on the establishment of intercroops and/or poultry/livestock integration in coconut farms. The CFITF Credit Program shall provide loans for the following specific purposes:

- (a) working capital (processing, trading, and marketing, purchase of farm inputs, etc.);
- (b) acquisition of machinery and equipment (including vehicle for hauling or any logistical support);
- (c) establishment of facilities for production and post-production, processing, and trading;

- (d) rediscounting of existing loans of SEC-registered coconut farmers' organizations and cooperatives; and
- (e) on-lending to coconut farmers listed in the NCFRS.

On-lending to individual coconut farmers shall be for the purchase of coconut farm inputs (materials and labor), farm inputs for intercropping and poultry/livestock integration under coconut. Rediscounting is a credit facility to supplement the credit requirements of cooperatives as credit conduits by reimbursing the amount they have lent to their sub-borrowers (coconut farmers).

The loanable amount to individual coconut farmers who operate 5 ha and below and are interested in directly availing themselves of loans from LBP and DBP shall be at least PHP 1.0 M. Individual farm workers and coconut farmers with coconut farms of not more than 5 hectares and loan requirement of less than PHP 1.0 M may borrow through their respective cooperatives and coconut farmers' organizations. For relending and project financing, the maximum loanable amount to cooperatives and SEC-registered farmers' organizations shall be up to 90% of the total project cost. In the case of rediscounting, the maximum loanable amount shall be up to 90% of the face value of the sub-promissory note or its current outstanding balance, whichever is lower.

The credit facilities under the CIFTF Credit Program shall include: (1) on-lending (i.e., term loan and credit line) and (2) direct lending (i.e., short term, loan, term loan, and credit line). The term of the loan under the credit line facility shall be two (2) years via 180 days promissory note. The loan maturity for a short-term loan shall be within 360 days. For long-term loan for the acquisition of fixed asset(s), the loan maturity shall be up to seven (7) years based on the projected cash flow but no longer than the economic useful life of the fixed asset(s). For the establishment of a facility, the term of the loan shall be up to ten (10) years based on the projected cash flow. LBP and DBP shall provide a grace period of up to three (3) years on the principal repayment. The term of the loan for relending/rediscounting shall be based on the earliest maturity of the sub-borrowers' promissory note submitted per batch.

Concessional interest rates shall be charged under the CFITF Credit Program. Both banks shall determine the direct and on-lending interest rates to be charged from loan-borrowers, the minimum documentary requirements for loan application, and the collateral requirements for PCA Board approval.

IMPLEMENTATION PLAN

A. STRATEGIES

In the implementation of the CFITF Credit Program, LBP and DBP shall adopt a demand-driven approach. To ensure widest reach of the CFITF Lending Program, LBP and DBP shall have their respective areas of coverage. LBP and DBP's delineation of covered areas shall be province-based. For proper complementation, LBP shall cover all provinces where DBP Lending Centers are not

physically present. DBP and LBP have 30 and 53 lending centers in coconut-producing regions, respectively.

The credit program shall be implemented by lending directly to individual coconut farmers or CDA-registered farmers cooperatives and SEC-registered farmers' organizations. CDA-registered farmers cooperatives and SEC-registered farmers' organizations may also borrow for their relending to eligible individual coconut farmers.

A.1 Loan Application Requirements

To qualify for a loan, an individual farmer must be listed in the National Coconut Farmers Registry System, should have received training related to the project to be financed, must have a project for scaling up of the enterprise, and should have contracts/purchase order agreements with assured source of repayment. Individual coconut farmers with coconut farms of not more than 5 ha and farm workers whose loan requirement is less than PHP 1.0 M may borrow through their respective cooperatives and coconut farmers' organizations.

As regards PCA-accredited cooperatives and other coconut farmers' organizations, the following shall be the requirements to qualify for a loan:

- (1) must be duly registered with the CDA/SEC;
- (2) must have no adverse findings on the organization and its principals;
- (3) should have strong back-office support with defined Operational Structure;
- (4) must exhibit profitable operations and sound financial condition;
- (5) must have past Due Loan Ratio not exceeding 25%;
- (6) must have a Certificate of Compliance from CDA, if applicable; and
- (7) must have received training on financial literacy and technical training on any aspect of the coconut value chain.

Lending to start-ups may be allowed, provided there is a defined source of repayment (i.e., market agreement, Purchase Orders), and the officers of the organization must have relevant management experience on the project.

B. CRITERIA FOR THE SELECTION OF BENEFICIARIES

The target beneficiaries under the CFITF Credit Program shall be individual coconut farmers registered in the NCFRS maintained by the Philippine Coconut Authority, SEC-registered coconut farmers' organizations, and CDA-registered cooperatives with coconut farmers as members. The priority cooperatives and SEC-registered farmers' organizations shall be the beneficiaries under the Shared Facilities, Community-Based Farm Enterprise Development, and Hybridization program components and those that shall engage in on-lending and rediscounting to individual coconut farmer-members.

Chapter 6.7.1 Support Services: Credit

As opposed to other program components under RA 11524, which have specified number of target beneficiaries in specific regions, the provision of credit shall be based on the credit demand of the target beneficiaries.

C. INDICATIVE INVESTMENT REQUIREMENT

Of the annual budget allocation from the Coconut Farmers and Industry Trust Fund, 10% shall be allotted to the CFITF Credit Program to be shared equally by LBP and DBP. The annual indicative investment requirement for the implementation of the CFITF Credit Program shall increase from PHP 500 M in year 1 to PHP 1.0 B in year 5 (Table 6.7.1a).

Table 6.7.1a. Annual indicative investment requirement for the CFITF Credit Program, year 1-5

ITEM	INDICATIVE INVESTMENT (IN MILLIONS, PHP)				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
LBP	250	250	300	350	500
DBP	250	250	300	350	500
TOTAL	500	500	600	700	1,000.00

To effect better implementation of the CFITF Credit Program, an initial regional allocation was prepared jointly by both banks with the assistance of PCA (Table 6.7.1b). The following factors were considered in the regional indicative investment allocation: (1) number of coconut farmers; and (2) number of active farmers' organizations and cooperatives.

Table 6.7.1b. Regional and annual indicative investment requirement for the CFITF Credit Program, year 1-5

REGION	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					TOTAL	SHARE OF TOTAL (%)
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5		
Region I (Ilocos Region)	3.00	3.00	3.60	4.20	6.00	19.80	0.60
Region II (Cagayan Valley)	1.00	1.00	1.20	1.40	2.00	6.60	0.20
Region III (Central Luzon)	2.00	2.00	2.40	2.80	4.00	13.20	0.40
Region IV-A (CALABARZON)	36.73	36.73	44.08	51.42	73.46	242.42	7.35
Region IV-B (MIMAROPA)	16.27	16.27	19.52	22.78	32.54	107.38	3.35
Region V (Bicol Region)	26.00	26.00	31.20	36.40	52.00	171.60	5.20
Region VI (Western Visayas)	47.00	47.00	56.40	65.80	94.00	310.20	9.40
Region VII (Central Visayas)	52.00	52.00	62.40	72.80	104.00	343.20	10.40
Region VIII (Eastern Visayas)	87.00	87.00	104.40	121.80	174.00	574.20	17.40
Region IX (Zamboanga Peninsula)	49.00	49.00	58.80	68.60	98.00	323.40	9.80
Region X (Northern Mindanao)	27.00	27.00	32.40	37.80	54.00	178.20	5.40
Region XI (Davao Region)	50.00	50.00	60.00	70.00	100.00	330.00	10.00
Region XII (SOCOSISARGEN)	36.00	36.00	43.20	50.40	72.00	237.60	7.20
Region XIII (Caraga)	46.00	46.00	55.20	64.40	92.00	303.60	9.20
BARMM	21.00	21.00	25.20	29.40	42.00	138.60	4.20
Total	500.00	500.00	600.00	700.00	1,000.00	3,300.00	100

Note: The annual indicative budgetary requirement only included the loans to be extended to program beneficiaries by LBP and DBP on a daily basis per year, which are classified as recurring costs.

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However, the respective banks shall have the prerogative to re-allocate/ re-align the indicative annual allocation among regions depending on the need/demand of the target beneficiaries during the program implementation period.

Considering the policy pronouncement of the PCA Board that reflows will not be allowed, the Banks shall work only on the actual annual budget drawdowns. Collection on loan repayments shall be remitted to Bureau of Treasury on a periodic basis.

6.7.2 RESEARCH, MARKETING, AND MARKET PROMOTION

PROJECT DESCRIPTION

As provided under RA 11524, the Research, Marketing, and Market Promotion sub-program component shall be implemented by the Department of Trade and Industry – Bureau of Micro, Small and Medium Enterprise Development (DTI-BMSMED), which is one of the bureaus of DTI under the Regional Operations Group (ROG). Under EO 133, the DTI serves as the primary coordinative, promotive, and facilitative arm for trade, industry, and investment activities. It acts as the catalyst for intensified private sector activity to accelerate and sustain economic growth.

In the implementation and monitoring of the National Coconut Farmers and Industry Development Program, the DTI-BMSMED shall initiate, implement, and monitor projects and activities addressing the needs of micro, small and medium enterprises (MSMEs) in the areas of marketing and training. Other DTI bureaus and attached agencies (i.e., Export Marketing Bureau or EMB, Board of Investments or BOI and the Center for International Trade Expositions and Missions or CITEM) shall also actively participate in the implementation of the afore-mentioned national program. The DTI-Regional Operations Group (ROG) shall be responsible for the field operations of the DTI in the regions and provinces. It shall ensure that efficient delivery of market support services including the formulation and implementation of plans and projects shall be provided to benefit MSMEs. In general, business enterprises of coconut farmers' organizations and cooperatives are classified as micro and small. Moreover, the DTI-Bureau of Domestic Trade Promotion (BDTP) shall promote the efficient marketing and distribution of local products (e.g., coconut food and non-food products, processed coffee, cacao, dairy, and meat products) and expand/strengthen linkages between the country's coconut farmers' organizations and cooperatives with local buyers through information exchange and market matching. It shall also implement activities to create awareness of domestic marketing opportunities of existing and new high-value coconut products and investments. The DTI-Export Marketing Bureau, on the other hand, shall oversee the promotion of Philippine coconut exports and provide exporters the enabling environment to make them globally competitive, formulate and execute export strategies, and conduct research on new product development and adaptation opportunities in the export markets in coordination with the DTI-Foreign Trade Service Corps (FTSC). BOI, the lead investment promotion agency of the Philippine government, shall promote investments in the coconut industry at the national level and in the regions for balanced economic development. Meanwhile, CITEM shall assist exporters of processed coconut, cacao, coffee, and dairy products through professionally managed and well-selected programs and activities such as organizing international trade fairs, either physical or virtual or hybrid platform.

The Research, Marketing, and Market Promotion sub-program component is congruent with and supportive of the activities under the Innovative Research, Community-Based Farm Development, and Shared Facilities program components. In designing innovative research projects aimed at creating new high-value downstream coconut-based products, the results of DTI's market research shall provide valuable information to researchers on products that have great market potential which will help them identify and implement research projects that will likely achieve successful product commercialization. A market-driven research approach shall ensure a sustainable demand for their

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newly created research product(s). Product test marketing is also an important component of the product development process that will help researchers and processors gather customer feedback to improve product quality. Results of market research (i.e., demand studies) are also important in identifying the types/forms of processed coconut, coffee, cacao, dairy, and meat products that cooperatives and farmers' organizations should produce that are highly demanded in the domestic and export markets. Information on the buying trends of consumers will also help the cooperatives and farmers' organizations tailor their marketing and sales strategies to their customers, which will ultimately result in higher sales.

Owing to the limited participation of most coconut farmers' organizations and cooperatives in the value chain and their access to markets, DTI's different forms of marketing assistance to coconut farmers' organizations and cooperatives particularly the beneficiaries of the Shared Facilities and Community-Based Farm Development program components shall help in improving their exposure and access to domestic and international markets, which will ultimately redound to increased coconut farmers' incomes. Furthermore, market promotion of processed coconut, cacao, coffee, dairy, and meat products domestically and internationally is expected to result in increased demand for these finished products and in turn, improved sales and income of coconut farmers' organizations and cooperatives as well as their coconut farmer-members.

IMPLEMENTATION PLAN

A. STRATEGIES

A.1 INDUSTRY AND MARKET RESEARCH

A. Market Research

Market research is the systematic process of gathering and analysis of information about consumers' needs and preferences as well as market drivers. This research focuses more on a group of potential customers in the country's target destinations including the international marketplace. This shall include an understanding of the dynamics of the market, including consumer behavior, buying pattern and entry requirements set by the importing destination.

DTI shall implement the following market research projects during the first five years of program implementation:

- a.1 Supply and Demand Studies on Food and Non-Food Coconut Products (all enrolled regions)
- a.2 Value Chain Analysis of Different Coconut Food and Non-Food Products (all enrolled regions)
- a.3 Market Study of Food and Non-Food Coconut Products (all enrolled regions)
- a.4 Product R &D: Product Market Testing (DTI Regions 2, 3, 4A, 4B, 6, 7, 10, and 13)

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- a.5 Market Research on the Acceptability of High-Value/Certified Philippine Food and Non-food Coconut Products (i.e., coconut water from matured coconuts, etc.) in Targeted International Markets (DTI HO)
- a.6 Market Study to Support the Medical Research on VCO against Covid (DTI HO)
- a.7 Philippine Household Consumer Survey on Coconut-based Products Consumption and Consumer Behavior (DTI HO)

The DTI Regional Offices shall conduct collaborative market research undertakings with coconut Business Support Organizations (BSOs) and/or SUCs located in various regions of the country. Research projects of the SUCs shall be funded either by the DA-Bureau of Agricultural Research or the DOST-PCAARRD. The DTI Head Office may also undertake collaborative market research with the PCA Trade and Market Development Department.

B. Industry Research

Industry research pertains to the analysis of a specific industry's environment (e.g., coconut-based industry such as the virgin coconut oil industry, coconut water industry, etc.) that guides the industry to grow and survive in a competitive environment and gain a competitive edge as it predicts the future and changes in the market and analyzes the threats and opportunities facing the industry which are necessary in making strategic decisions. The components of industry research are industry environment (e.g., type of customers, consumer preferences, purchase behavior, other relevant consumer insights, demographic factors, demand requirements, geographic location of markets), the key industry players, industry performance, competitors and competitive landscape (i.e., internal and external competition), product trends, technology innovations, barriers to entry, distribution channels, market trends, relevant product certifications per market, government regulations affecting the industry, environmental concerns, strengths, weaknesses, opportunities, and threats facing the industry. Moreover, industry research examines a coconut-based industry's capacity to produce the requirement of its markets and be able to deliver its product(s) in the desired frequency, time, and volume according to the guidelines/policies set by the country's regulatory institutions, and specifications set by the buyer.

Information generated from industry research is important in comparing the position and competitiveness of an entrepreneur/company (e.g., coconut farmers' cooperative) relative to other participants within the same industry (i.e., its internal competitors) or the performance and competitiveness of a Philippine coconut-based industry as compared to the country's external competitors for the same type of industry in other countries.

The proposed industry research projects to be implemented by the DTI Head Office (HO) for the first five years of program implementation are as follows:

- b.1 Study on Mainstreaming Organic and Fairtrade Certifications for the Coconut Industry
- b.2 Industry Research to Determine the Competitive Advantage of Coconut Sap Sweetener Vinegar vs. Apple Cider Vinegar and Synthetic Vinegar
- b.3 Industry Research on the Competitive Landscape of Coconut Shell Utilization and Artisan Food Products

A.2 MARKETING ASSISTANCE

DTI shall implement several strategies in providing marketing assistance to different beneficiaries of the Shared Facilities and Community-Based Farm Enterprise Development program components such as: (1) conduct of business matching strategies and the establishment of market linkages and contract agreements between suppliers (e.g., coconut farmers, farmers' organizations and cooperatives) and buyers (e.g., processors, institutional buyers, exporters) of raw materials and/or processed coconut, coffee, cacao, dairy, and meat products; (2) provision of market-technology-financing linkages; (3) conduct of trade and investment promotion and facilitation; (4) capacitate MSMEs in digital transformation and onboarding in e-commerce platforms; (5) provision of assistance to coconut cooperatives and farmers' organizations in product packaging, labeling, and barcoding application; (6) provision of technical assistance for establishing geographic indicators and branding, trading hubs, one-stop shops, and trade and market information system; (7) facilitation and assistance on product certifications and business registration; (8) conduct of market intelligence and inbound and outbound trade missions; and (9) provision of assistance to coconut cooperatives and farmers' organizations in preparing business and marketing plans and rendering business and marketing advisory service thru the DTI Negosyo Centers.

The DTI's proposed marketing assistance projects shall include the following:

1. Philippine Raw Materials Suppliers Portal

The Suppliers Portal is a digital sourcing platform that shall enable farmers' groups, cooperatives, and small traders from the regions to be linked with and contacted directly by manufacturers, processors, wholesalers, distributors, retailers, institutional and corporate buyers, consolidators, and exporters. To help boost the coconut trade and value chain within the regions and across cities, the portal's main development shall highlight coconut raw materials for both traditional and non-traditional coconut products that are supplied by MSMEs, farmers' associations, cooperatives, and other suppliers from different parts of the country.

More than a catalogue of suppliers' contact information, the portal shall serve as a comprehensive digital shelf of bulk supply of natural materials (raw coconut parts, coconut derivatives, fresh fruits, native ingredients, and natural fibers),

heritage products (woven byproducts, native fabrics, indigenous fashion accessories, and home decors), and small components (zippers, buttons, buckles, and Velcro, among others). The project components of the Suppliers Portal are development of platform features, digital catalogue, and system maintenance.

2. Marketing Materials for Go Lokal! MSMEs Engaged in the Manufacturing and Processing of High-Value Coconut-Based Products

Go Lokal! is DTI's flagship program in collaboration with select retail partners. It shall serve as a market access platform for Philippine MSMEs for market incubation and brand testing. As marketing support to the Go Lokal MSMEs engaged in the manufacturing and processing of high-value coconut-based products, DTI shall develop and produce a uniquely curated e-catalogue and audio-visual presentation (AVP) that will highlight the Go Lokal MSME-producers of virgin coconut oil, coconut accessories, coconut sweeteners, spreads, coconut-based natural food, and cosmetics, among others. These marketing collaterals will be designed to effectively convey the key messages of the said Go Lokal suppliers and their products that will appeal to targeted audiences, attract customers, boost brand awareness, and increase market reach. The project components of Go Lokal are product photography consisting of creative/lifestyle shots and angle/layout shots, content development for the e-catalogue, and production of AVP.

3. Regional Participation to FAME+

One of DTI's interventions shall be to capacitate Filipino MSMEs in digital transformation and be onboard in e-commerce platforms to help them expand their market while maintaining the delivery of the finest quality goods and services. The FAME+ is one of CITEM's digital initiatives to help MSMEs survive and thrive during the pandemic. It is the digital trade and community platform for Manila FAME and the CITEM Content Development Amelioration Program, a content creation subsidy scheme for exporters which aims to help Manila FAME exhibitors and MSMEs to populate their digital storefront in FAME+ with quality product photos, product descriptions, videos, and company profiles. It intends to ensure and improve the discoverability of exhibitors online, offering them endless possibilities and opportunities to connect to more markets globally. It brings together exhibitors, buyers, and stakeholders into one digital space, that is available 24 hours per day and seven (7) days a week.

To ensure that the MSMEs are capable of establishing and maintaining online presence, DTI shall select MSMEs to be assisted based on the set standards/criteria of CITEM. All selected MSMEs shall have one (1) year free membership to FAME+. The onboarded companies shall have the opportunity to promote their brand via a dedicated digital storefront, display their products on their own page, and engage with clients through the FAME+ platform. It also has a B2B feature that allows the scheduling and conduct of meetings with clients and

partners. Moreover, each company shall be provided with its own dashboard that shall allow them access to CITEM's selection of webinars, profiled business intelligence materials, and access to export enablers that can help them grow their businesses.

4. Development of Investments Prospectus/Value Proposition for the Prioritized High-Value Coconut Product per Region and Development of Regional Supply Database for the Coconut Industry

As the second largest coconut producer in the world and given the strong support of the Philippine government to coconut industry research and development, the Philippines is an ideal investment location for coconut-based product manufacturing. While the promotion of investments at present is done primarily at the national level, this project aims to capacitate regional counterparts in investment promotion considering that the regions have better grasp and understanding of the coconut sector in their respective locations. Generation of investments through investment promotion shall benefit the coconut farmers and farmers' groups through market integration as they are the primary source of raw materials in the production of high-value coconut products. Once an investment materialized in a region, it can create employment within the area and can bring expertise and marketing networks to the players within the value chain, specifically to the coconut farmers and farmers' groups.

The components of this project shall be regional consultations, capacity building, development of regional coconut investments pitch, development of national coconut investments pitch book, and launching of the national coconut investments pitch book and supply database. A Consultant or a Team of Consultants shall be commissioned for this project. The DTI Regional Operations Group which handles the coconut industry cluster shall host the supply database. The project shall have two phases: (1) Phase 1 to cover CAR, NCR, and Regions 1 to 5; and (2) Phase 2 to cover Regions 6 to 13 and BARMM.

A.3 MARKET PROMOTION

To increase the domestic and export demand for Philippine processed coconut, cacao, coffee, dairy, and meat products, the DTI shall implement the following market promotion strategies: (1) conduct extensive market promotion programs and product advertising using multi-media platforms to create awareness of the nutritional, nutraceutical, health, and environmental benefits from coconut; (2) advocate wide utilization and patronage of food and non-food coconut products and by-products in the domestic market; (3) organize local and international trade fairs, local trade missions, and other product exhibition events showcasing processed coconut, coffee, cacao, and dairy products locally, nationally, and internationally; (4) assist farmers' organizations, and cooperatives in promoting their processed coconut, coffee, cacao, dairy, and meat products thru in-store product displays in pasalubong centers and duty free shops in airports, among others; (5) conduct digital marketing and use e-commerce platforms to promote and sell

products; and (6) conduct capacity building activities to exporters and would-be exporters that will enhance their knowledge on market entry requirements, i.e., mandatory health certifications, product quality and product certifications, shipping and logistics concerns, incoterms, etc.

A.3.1 Domestic Market

Interventions will focus on promoting the efficient marketing of coconut food and non-food products through the conduct of marketing events, such as trade fairs, in-store displays, showcases, and local trade missions; expand and strengthen linkages among MSMEs through information exchange and other market matching-related activities; and create awareness of domestic marketing opportunities for new projects, technologies, and investments.

The DTI's proposed market promotion projects in the domestic market shall be as follows:

a. Hybrid *Bagsakan* Special Project: Coconut Industry Showcase

As a marketing platform in partnership with commercial venues, a series of Hybrid *Bagsakan* events (both physical and digital selling) featuring coconut products from MSMEs and coconut farmers shall serve as selling and sourcing activities to reach institutional buyers, traders, consumers, and even exporters. Through an e-commerce platform, the Hybrid *Bagsakan* shall efficiently promote and sell coconut food and non-food products by MSMEs and farmers from different regions as well as facilitate convenient delivery of the products to buyers and consumers. The components of the Hybrid *Bagsakan* Special Project shall include: (1) digital marketing; (2) online order-taking; (3) contactless payment, and delivery of products; and (4) mounting of physical and digital selling events.

b. Antenna Hub

Micro and small enterprises (e.g., coconut farmers' organizations and cooperatives) normally operate on very limited finances. Hence, they are vulnerable to loan sharks and on one side, unable to pursue optimized operations due to fund shortage. Furthermore, they also find it difficult to fund research projects such as product development and market testing. As these two business aspects are critical for business development, the PCA-DTI partnership under the implementation of RA 11524 shall address this problem.

The MSME antenna hub is a facility that shall help MSMEs test market their coconut products including intercropped products such as cacao and coffee products as well as dairy products. This will be a place where products being developed will be sold at promotional prices to gather consumer feedback on product acceptability, preference, and overall marketability. Based on the consumers' feedback, the products will be returned to the processors for improvement, after which the product will be again sold at the antenna hub for test marketing. The process will be repeated

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until the product will be ready for commercialization. By then, the product will graduate from the Antenna Hub and would go to a bigger Trading Hub, and eventually to the export market.

The antenna hubs shall be operated by an experienced or successful private sector business operator (e.g., cooperative, farmers' organization, or a single proprietor) who will be in partnership with DTI and/or PCA. The facility may be hosted by either the DTI, PCA or the LGU or by any two (2) partner agencies. It shall be complete with marketing requirements consisting of small storage rooms (GMP-compliant for food products), storage equipment and tools such as standard weighing scales, adding machines, push carts, refrigerators, freezers, chillers, closed food show cases, shelves, among others and vehicle for deliveries.

The operational cost shall be fully subsidized in the first three years of operation, but operating fund shall be established from a percentage of the product sales (distributor's discount) to be saved from the initial business operation up to the third year and shall be subsequently used during the full operation when it would be expected to have expanded its product coverage. At the start of the operation, there shall be a Storekeeper to manage sales and to conduct the taste tests and other market tests.

The location of each antenna hub must be in a strategic location in selected regions, preferably near areas where the DOST Food Innovation Hubs are located. The product development aspect shall be done in the DOST Food Innovation Hubs so that in the process of business development, the coconut based MSMEs will spend minimal cost for product and market research. It is also ideal to have the facility adjunct to DTI's Hybrid *Bagsakan* Center for efficiency of hauling and delivery, handling, and sales management.

The target beneficiaries shall be coconut farmers' organizations, cooperatives or even farmers/farm workers or their family members who intend to undertake a coconut-based business enterprise. They should be registered in the National Coconut Farmers Registry System and endorsed by either a DTI or a PCA Provincial/Regional Office. As system of application and endorsement shall be mutually agreed upon by PCA and DTI.

A.3.2 International Markets

The market promotion projects of DTI in international markets shall include the following:

a. Business-to-Business (B2B) Meetings

The core competence of the DTI-Export Marketing Bureau is the capacity to mount overseas business meetings and the facilitation of local meetings with the end view of matching suitable buyers with local suppliers/exporters based on their supply

capacity, product specifications, certifications, compliance with local food safety requirements of the Food and Drug Administration (FDA) and other market requirements. Vetting of the supplier's capacity or standing in the industry shall be done by either the DTI Regional Offices where the processing facility is located, or the DTI Export Marketing Bureau including the business support organizations and industry associations where the supplier is a member. A supplier must show an export permit issued by either the PHILEXPORT, or the DTI-Export Marketing Bureau under the Export Development Act (EDA).

The number of participants pegged for this program shall be 30 suppliers spread across coconut farmers' associations, cooperatives and other MSMEs which have the capacity to export coconut products, including intercrops such as cacao and coffee, based on the evaluation of the organizers. For budgetary purposes, one (1) coordinator shall be included for every 5-10 participants.

The agency's B2B activities shall be facilitated through the assistance of the Philippine Trade and Investment Centers (PTICs), the Philippine Embassies overseas, or the Agricultural Attaches. Business transactions shall either be outright sales or negotiated sales. The latter happens when foreign buyers would require additional information from the exporters such as the incoterms to be used (FOB, CIF, CNF, etc.) and when the seller would be uncertain of what price to quote, or when delivery/shipment schedule is still under discussion. Incoterms, a widely used terms of sale, are a set of 11 internationally recognized rules which define the responsibilities of sellers and buyers. Incoterms specify who is responsible for paying for and managing the shipment, insurance, documentation, customs clearance, and other logistical activities. B2B can be a venue for a longer collaboration like joint-venture agreements or long-term contracts.

The major components of a B2B are as follows:

a.1 Outbound Business Matching Mission

The major objective of planned outbound business matching missions of the DTI-Export Marketing Bureau shall be to promote local products and bring local companies into the forefront of the global marketplace. Outbound business matching missions are participated in by exporters, export-ready companies (indirect exporters), would-be exporters, or local suppliers needing exposure in the global market. These exposures will allow Philippine companies to be able to understand the dynamics of dealing or meeting directly with foreign buyers. Usually, outbound business matching missions are conducted side by side with an international exhibition, where companies have their own display booth to accommodate different types of buyer segments, i.e., direct buyers, consolidators, importers, or distributors. Moreover, business matching missions may also consist of store checks, market sensing, visit to a buyer's facility, meeting with government entities

like the U.S. Food and Drug Administration (USFDA), U.S. Department of Agriculture (USDA), Embassy officials, or a visit to offices of support organizations like the Coconut Coalition of the Americas (CCA) and the Coconut Research Center (CRC) in Colorado operated by Dr. Bruce Fife, a famous coconut oil advocate in the United States.

a.2 In-bound Business Matching Mission

An inbound business matching mission, another major business matching component of a B2B, is aimed at promoting local companies by bringing foreign buyers (e.g., big importers, huge overseas consolidators, direct buyers) to the Philippines for business meetings. This type of an activity shall be conducted side by side with an international exhibition that is locally implemented such as the International Food Exhibition (IFEX) and the National Coconut Week Celebration. The in-bound business matching mission may also consist of company or factory visits, sit down meetings usually arranged by the DTI-EMB right where the exhibition is being held.

a.3 Online/Virtual B2B

Online or virtual B2B shall involve all online marketing/trading transactions between businesses. A digital sales platform shall be a party of B2B eCommerce. DTI shall train MSMEs and coconut cooperatives to develop their own website to enable them to engage in online marketing of their products.

b. In-Store Halal Marketing and Promotion

Market and promotion activities for Halal-certified products of the Philippines shall include: (1) in-store promotion in countries like Dubai and the Gulf Cooperation Council (GCC) markets (e.g., Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman) and (2) participation in the Malaysia International Halal Showcase (MIHAS), which is the world's largest Halal exhibition. Malaysia has the biggest Halal Economy in the world and is also the top Halal export market for the Philippines. Considering its strategic location, the Philippines has the best access and opportunity to the global halal market. Considered as growth drivers of Halal global trade are the increase in Muslim population, increase in demand for Halal products even in non-Muslim markets, increased awareness in the availability, quality, and integrity of Halal products, and increase in the number of certifiers to ensure quality and integrity of Halal products in the market.

Participation in these activities shall be open only to companies that have an existing Halal certification, pending and on-going application for Halal certification. Non-Halal certified companies may be considered only in markets where absence of certification is allowed.

B. CRITERIA IN SELECTING BENEFICIARIES

The priority target beneficiaries of the Research, Marketing, and Market Promotion sub-program component shall be PCA-registered farmers' organizations and cooperatives particularly the beneficiaries of the Shared Facilities and Community-Based Farm Development program components, other MSMEs, and individual coconut farmers (including farm workers). Other beneficiaries of DTI's marketing assistance shall be potential buyers of raw and processed coconut, coffee, cacao, dairy, and meat products such as big processing industries, institutional buyers, consolidators, exporters, and would-be exporters. Assistance includes partial or full subsidy in local and international trade promotion activities provided that MSME-beneficiaries have complied with the requirements set by the DTI-Export Marketing Bureau and the Foreign Trade Service Corps and provided further, that participating companies have submitted their list of suppliers of raw materials prior to their acceptance in the promotion activities.

C. INDICATIVE BUDGET

Of the annual budget allocation from the Trust Fund, 5% shall be allotted to the Research, Marketing, and Market Promotion sub-program component to be implemented by the DTI. The annual indicative investment requirement shall increase from PHP 250 M in year 1 to PHP 500 M in year 5. The total indicative investment requirement for the 5-year period shall be PHP 1.65 B. to be shared by the DTI Head Office (33.3%) and the DTI Regional Offices (66.7%). DTI's budget allocation shall be subject to annual review.

Table 6.7.2a. Indicative annual budgetary requirement, Research, Marketing, and Market Promotion sub-program component, 5 years

DTI OFFICE	INDICATIVE INVESTMENT (IN MILLIONS PHP)					TOTAL
	YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	
Head Office	66.61	119.60	136.25	113.50	114.00	549.96
Regional Offices	183.38	130.40	163.75	236.50	386.00	1,100.04
TOTAL	250.00	250.00	300.00	350.00	500.00	1,650.00

Note: The indicative budget only includes recurrent costs such as the cost of office supplies and materials, travel, communication, market promotion, research, and other operating and monitoring costs.

The DTI's regional indicative investment allocation shown in Table 6.7.2b was based on the weighted average of the following criteria: number of NCFRS-registered coconut farmers (30%), number of PCA-registered active farmers' organizations and cooperatives (30%), coconut production (30%), and coconut area (10%) per region. The DTI Regional Offices shall prepare their plan of activities subject to their respective budgetary allocation. The DTI Head Office shall have the option to reallocate the annual budget allocation among regions depending on regional performance and priority needs.

Table 6.7.2b. Regional and annual Indicative investment requirement for Research, Marketing, and Market Promotion sub-program component, 5 years

REGION	INDICATIVE INVESTMENT (IN MILLIONS PHP)						SHARE OF	
	YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	TOTAL	TOTAL	
Region I (Ilocos Region)	0.55	0.39	0.49	0.71	1.16	3.30	0.30%	
Region II (Cagayan Valley)	0.83	0.60	0.75	1.09	1.78	5.05	0.46%	
Region III (Central Luzon)	1.50	1.07	1.34	1.94	3.17	9.02	0.82%	
Region IV-A (CALABARZON)	12.67	9.01	11.32	16.34	26.67	76.01	6.91%	
Region IV-B (MIMAROPA)	8.58	6.10	7.67	11.07	18.06	51.48	4.68%	
Region V (Bicol Region)	13.83	9.83	12.35	17.83	29.10	82.94	7.54%	
Region VI (Western Visayas)	11.32	8.05	10.10	14.59	23.82	67.88	6.17%	
Region VII (Central Visayas)	13.67	9.73	12.22	17.65	28.80	82.07	7.46%	
Region VIII (Eastern Visayas)	21.51	15.30	19.21	27.74	45.28	129.04	11.73%	
Region IX (Zamboanga Peninsula)	19.33	13.74	17.26	24.93	40.68	115.94	10.54%	
Region X (Northern Mindanao)	16.34	11.61	14.57	21.06	32.35	95.92	8.72%	
Region XI (Davao Region)	20.74	14.75	18.52	26.75	43.66	124.42	11.31%	
Region XII (SOCCSKSARGEN)	13.63	9.69	12.17	17.57	28.68	81.74	7.43%	
Region XIII (Caraga)	13.46	9.57	12.02	17.36	28.33	80.74	7.34%	
BARMM	15.43	10.96	13.76	19.88	34.46	94.49	8.59%	
TOTAL	183.39	130.40	163.75	236.50	386.00	1,100.04	100%	

6.7.3 INFRASTRUCTURE DEVELOPMENT

PROJECT DESCRIPTION

Infrastructure development is to be implemented by the Department of Public Works and Highways (DPWH), in identified coconut producing LGUs. The DPWH shall give priority to the use of coconut coir or coconut bio-engineering solutions in controlling soil erosion and slope stabilization in the construction of roads and in other applicable projects.

The DPWH is the government agency mandated to undertake (a) the planning of infrastructure, such as national roads and bridges, flood control, water resources projects and other public works, and (b) the design, construction, and maintenance of national roads and bridges, and major flood control systems.

Construction of farm-to-market roads (FMRs) in coconut-producing provinces shall also be funded through regular appropriations. In the context of the CFIDP, the infrastructure development projects to be funded by the Trust Fund are roads, shared production facilities, trading posts/postharvest facilities, research/training facilities, establishment/rehabilitation of irrigation facilities and others.

The technology of utilizing coconut coir geonets has been proven to be effective in controlling soil erosion and slope stabilization in the construction of roads and in other applicable projects. Coir geonets are low-cost, have good water retention properties and retain strength for at least five years, giving sufficient time for full roots development for plants to control surface erosion and conserve the productivity of the soil. Vetiver grass along with leguminous creeping and twinning grass are used for erosion control.

The benefits from infrastructure development projects include provision and improvement of accessibility for transport of raw materials and products in different locations in the coconut communities, provision of safe facilities and building structures and appropriate centers for training and trading posts.

IMPLEMENTATION PLAN

A. STRATEGIES

For the Infrastructure Development component of CFIDP, the following are the key strategies:

- 1) DPWH as the implementing agency will support the partner agencies such as the PhilMech, LGUs and PCA in the planning and implementation of the projects.
- 2) Mapping of existing and proposed FMRs funded by DA to identify priority projects in coconut areas.
- 3) Mapping of LGU-funded local roads going to shared facilities and the market in order to identify possible project locations.

- 4) Identification of government-owned properties for the establishment of shared facilities, trading posts and training centers.

B. CRITERIA FOR THE PROJECT PRIORITIZATION

The criteria for prioritization of the proposed projects are the following: (1) number of beneficiaries, (2) volume of production, (3) readiness of the cooperatives in the case of shared facilities, trading posts and training centers, and (4) access to markets of the products.

C. PHASES OF IMPLEMENTATION

There are several stages of implementation for Infrastructure Development based on the DPWH Implementation Plan:

Project identification and selection, wherein infrastructure projects will be prioritized based on the number of beneficiaries and/or volume of crops using the recommended Infrastructure Plan of concerned implementing agencies. For the Detailed Engineering Design (DED), surveys will be conducted. The DED will be prepared based on DPWH guidelines for farm-to-market roads and other infrastructures. These will be jointly validated by DPWH and the concerned implementing agencies.

Procurement will be by clustering of projects, or as agreed upon in the MOA and will be in accordance with RA 9184. PCA will be invited as observer. Project implementation or construction will comply with the Commission on Audit Circular No. 2013-004 dated January 30, 2013. PCA will be invited to witness the conduct of concrete pouring. During the completion and turn-over Stages, a Terminal Report to PCA will be given. There will be a one-year defects and liability period by the contractor.

A Monitoring Team shall oversee the successful implementation of the infrastructure development projects at the national and regional levels. A copy of Monthly Report generated from the Project and Contract Management Application will be given to PCA (DPWH Implementation Plan, 2021).

D. CONVERGENCE OF IMPLEMENTING AGENCIES FOR INFRASTRUCTURE DEVELOPMENT

DPWH provides technical assistance on detailed engineering design and certification for buildings. There is a need to spell out clearly in the MOA all the responsibilities of each agency such as, site identification, validation, survey and procurement (Figure 6.7.3a).

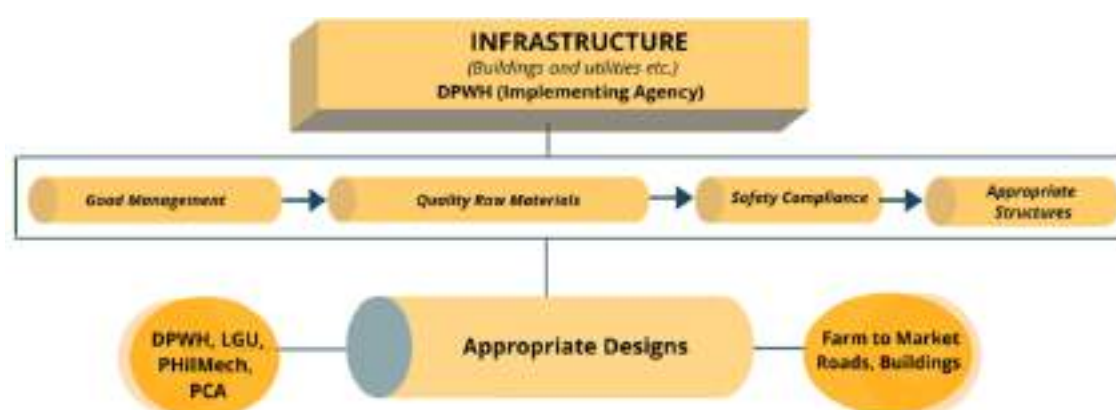


Figure 6.7.3a. Convergence framework for infrastructure development

For the construction of buildings for shared facilities, construction shall be facilitated by the DPWH in consultation with PHilMech. For buildings for food products, compliance with FDA standards will be ensured, while buildings for non-food products shall comply with applicable national standards (PHilMech Implementing Guidelines, 2021).

The annual allocation for Infrastructure Development is ten percent (10%) of the annual allocation for CFIDP. The annual indicative investment for Infrastructure Development is PHP 500 M for Year 1, PHP 500 M for Year 2, PHP 600 M for Year 3, PHP 700 M for Year 4 and PHP 1 B for Year 5 (Table 6.7.3a). There shall be an annual review of the budget allocation.

Table 6.7.3a. Annual indicative investment requirement for the CFITF infrastructure development for 5 years

YEAR 1 (PHP M)	YEAR 2 (PHP M)	YEAR 3 (PHP M)	YEAR 4 (PHP M)	YEAR 5 (PHP M)	TOTAL (PHP B)
500	500	600	700	1000	3.30

Table 6.7.3b shows the Regional Indicative Investment Requirement for CFIDP programs for Infrastructure Development for the first 5 years. Regions 1-3 (Ilocos, Cagayan Valley, Central Luzon) have the lowest allocation and Region 4-A (CALABARZON) has the highest allocation for infrastructure development.

Chapter 6.7.3 Infrastructure Development

Table 6.7.3b. Annual indicative investment requirement for the CFITF Infrastructure Development for 5 years

REGION	REGIONAL INDICATIVE INVESTMENT ALLOCATION (IN MILLIONS PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Regions 1-3 (Ilocos, Cagayan Valley, Central Luzon)	8.63	8.63	10.35	12.08	17.25	56.94
Region 4A (CALABARZON)	58.61	58.61	70.34	82.06	117.23	386.85
Region 4B (MIMAROPA)	25.49	25.49	30.59	35.69	50.99	168.25
Region 5 (Bicol Region)	43.65	43.65	52.38	61.11	87.3	288.09
Region 6 (Western Visayas)	27.13	27.13	32.56	37.98	54.26	179.06
Region 7 (Central Visayas)	25.01	25.01	30.01	35.01	50.01	165.05
Region 8 (Eastern Visayas)	50.15	50.15	60.18	70.21	100.3	330.99
Region 9 (Zamboanga Peninsula)	52.66	52.66	63.19	73.72	105.32	347.55
Region 10 (Northern Mindanao)	53.84	53.84	64.6	75.37	107.67	355.32
Region 11 (Davao Region)	51.74	51.74	62.09	72.44	103.48	341.49
Region 12 (SOCCSKSARGEN)	32.51	32.51	39.02	45.52	65.03	214.59
Region 13 (Caraga)	29.74	29.74	35.68	41.63	59.47	196.26
BARMM	40.84	40.84	49.01	57.18	81.69	269.56
	500.00	500.00	600.00	700.00	1,000.00	3,300.00

Table 6.7.3c shows the list of indicative proposals on regional infrastructure development projects submitted by the PCA Regional Offices, subject to approval by DPWH and other concerned implementing agencies.

Table 6.7.3c. List of indicative proposals on regional infrastructure development projects for years 1-5

Regions	Construction/ Rehabilitation of Farm-to- market roads and bridge		Shared Production Facilities (number)	Trading Posts / Post Harvest Facilities (number)	Research / Training Facilities (number)	Establishment of Fertigation Facilities (number)
	Farm-to-market Roads (in kilometers)	Spillway- type bridge (number)				
Region 1-3, CAR (Ilocos, Cagayan, Central Luzon)			8			
Region 4A (CALABARZON)	27	-	4	13	4	40
Region 4B (MIMAROPA)	18		12	7	-	-
Region 5 (Bicol Region)	14	1	4	-	6	-
Region 6 (Western Visayas)	15	-	4	12	6	-
Region 7 (Central Visayas)	10	-	4	-	1	-
Region 8 (Eastern Visayas)	30	-	4	-	-	-
Region 9 (Zamboanga Peninsula)	14	-	28	-	3	-
Region 10 (Northern Mindanao)	32	-	4	-	5	-
Region 11 (Davao Region)	23	-	4	-	-	-
Region 12 (SOCCSKSARGEN)	16	-	4	-	-	-
Region 13 (Caraga)	9	-	9	-	1	-
BARMM	25	-	4	-	-	-

6.7.4 POLICIES AND REGULATION

PROGRAM DESCRIPTION

The implementation of the thematic programs of the CFIDP necessitate policy support and regulatory guidance in compliance to guidelines and protocols. These policies and regulations are support services to ensure that implementation is in accordance with standards and legal issues. It is necessary that the existing policies and regulations have to be revisited and reviewed to address the possible conflicting provisions and obsolete applications that will affect the program implementation. Further, for each program relevant policies and regulations were identified for PCA to review the policy adoption and regulatory imposition if warranted. Along this line, PCA needs to designate an office to oversee that these policies and regulatory support are coherent with the provision of RA 11524 and will not hamper the program operationalization. Hence, in the PLAN, these policies and regulations linked to the program implementation were reflected to substantiate the implementing guidelines of the proposed strategies.

1. HYBRIDIZATION

The priority policy recommendation on hybridization program has to be in the context of genetic resources preservation and protection for use in varietal improvement. The hybridization program under RA 11524 intends to enhance productivity thru massive planting of hybrids and quality planting materials. As such, the parental genetic materials have to be protected and conserved for utilization in the accelerated replanting and planting program. Thus, this will improve the genetic landscape of coconuts in the country towards increase production. Related to this program, policies for inclusion in the program guidelines are suggested and recommended to address needs for effective program implementation.

- a. **Registration of all parental palms used in the hybrid production with the National Seed Industry Council (NSIC).** Hybrids and parental materials must be NSIC-registered prior to distribution in order to ensure that these hybrids are produced from the assisted pollination breeding of the single-cross recommended and certified parental palms bearing the desired genetic qualities. Accreditation of seedfarms and nurseries to be established shall be included to ensure sources of quality planting materials to be utilized in the massive planting and replanting program.
- b. **Enforcement of Section 4.12 of the Implementing Rules and Regulations of Executive Order No. 1016 (“Withdrawing the Inspection, Commodity and Export Clearance Requirements on Philippine Exports”) on the provision of banning the exportation**

of mature coconuts and coconut seedlings. This is to safeguard the genetic materials that we have in the country and since our genebank has the biggest collection globally, the need for strict implementation of this existing policy. Exportation of mature nuts will endanger the leverage of the country in the genetic conservation of quality planting materials with potential traits.

- c. **Revisit PCA's Charter (Article 1, Sec. 2 of PD 1468 or the "Revised Coconut Industry Code") on the distribution of hybrid seedlings for free and the prohibition of PCA to engagement in the commercialization of coconut hybrids.** There is a need to revisit and qualify the provision on the PCA charter on distribution of hybrids for free. Justifications and clarifications on the criteria to qualify as recipient of free hybrids must be expounded. Private sector must be prohibited in engaging on hybrid commercialization. The probability to attract investors globally that might want to replicate the hybrids for exportation, thus, compromising the exclusive domestic utilization of the locally produced hybrids

- d. **Strict implementation of RA 8048 or the "Coconut Preservation Act" as amended by RA 10598.**

In order to protect the gains of the CHP and other programs like the Accelerated Coconut Planting and Replanting (ACPRP), palms must not be cut indiscriminately. Cutting of palms must be strictly monitored. As stipulated in the law, only palms which are already in the economically unproductive stage are allowed to be cut.

- e. **Review of the international treaty on research engagement and germplasm exchange with other international research partners and the granting of access to our coconut genetic resources.** This International Treaty on Genetic Resources for Food and Agriculture (ITGRFA) is the major international agreement between member countries to conserve, use and manage plant genetic resources for food and agriculture around the world for the benefit of people everywhere. The Treaty ensures that farmers and plant breeders' access, easily the raw genetic material needed to develop new crop varieties, including those with higher yields and those that are resilient to climate change. For coconut it is being coordinated by the Coconut Genetic Resources Network (COGENT) for exchange of genetic resources for the purpose of conservation and use of member countries. Coconut is listed as one of the major crops under this Treaty and Philippines is a contracting party.

2. COMMUNITY-BASED ENTERPRISE DEVELOPMENT: FARM REHABILITATION AND IMPROVEMENT

- a. **Provision of market-based selection of intercrop and animal integration in community-based enterprise.** Marketability of intercrops and animals must be

considered. It is suggested to have an agreement with partner companies (e.g. Jollibee Corporation, San Miguel Foods Corporation) to ensure compliance to market quality specification. Moreover, intercroops and animal dispersal program should consider the demand of existing government programs (i.e. DSWD, DepED feeding program and DPWH for bioengineering technologies) forged with MOU.

b. Provision of the engagement of plant and animal doctors to ensure plant and animal health.

With the farmers' limited knowledge on pest management, the program should engage plant experts (e.g. plant pathologist and entomologist) to conduct periodic monitoring and provide technical assistance to farmers on proper pest management. On animal integration, the program should engage veterinarians or animal husbandry experts to assist in monitoring animal health and guide the farmers on good animal husbandry practices.

c. Clustering of small-scale enterprises for economies-of-scale and Agribusiness Corridor Development (ABC) under the One-DA Strategy. Clustering must be considered in the provision of intercrop for planting or integration of animals for dispersal. This is to produce the required volume for marketing, promote quality, minimize cost of production as inputs that can be purchased in bulk to minimize cost, thus promoting cost-efficiency and market competitiveness. This will also facilitate the establishment of agribusiness commodity corridors in partnership with private entities.

3. INTEGRATED COCONUT PROCESSING AND DOWNSTREAM PRODUCTS

a. Revival of EO 259 ("An Act to Rationalize the Soap and Detergent Surfactant Industry and thereby promote and expand the Utilization of Chemicals derived from Coconut Oil and for Other Purposes") – rationalization on the use of CNO-surfactants in the soap and laundry industry to promote and expand the utilization of chemicals derived from coconut oil. This will trigger the increase in domestic utilization of CNO that will balance export volume with direct effect to price stability of copra and assured domestic market.

b. Harmonization of national standards to international product standards. Existing national standards on coconut products and by-products must be harmonized with the international standards for compliance of member countries with the same products. This will allow both parties to have a consensus in developing product quality standards. A globally unified and harmonized quality standard will strengthen the competitiveness of the product.

- c. **Implementation of increasing Coconut Methyl Ester (CME) of biofuel blend (B2-B5).** PCA already provided assurance of the sufficient feedstock to increase the CME blend from two percent (2%) to five percent (5%). Hence, National Biofuel Board (NBB) policy implementation of the increase blending of B2 to B5 is a must. This will create opportunities to the coconut industry in increasing the domestic utilization with equivalent and direct benefits to the farmers. The potential impact of B5 blend can increase the utilization of CNO locally for CME requirement, thus, will actuate higher demand for copra.
- d. **Enforcement and compliance to Philippine Food Safety Act of 2013.** The mandate includes development of protocol, procedures and qualifications for the identification, recognition or organization of a pool of multi-disciplinary food experts in formulating food safety measures. Additionally, it aims to establish and maintain the Post-market Monitoring System (PMS), including programs for monitoring, fact-finding activities, procedures for risk-based inspection, and collection for testing of locally produced and imported processed and prepackaged food in the market. This will enhance the compliance of manufacturers to produce safe and quality products for consumers' protection.

4. INSTITUTIONAL REFORMS

- a. **Revisit PCA Charter.** There is a need to revisit PD 1468 or the "Revised Coconut Industry Code" and other supplemental issuances to integrate PCA's role in the coconut industry vis-à-vis other agencies and harmonize its functions with current/updated laws and issuances. Further, in compliance with Executive Order No. 138 series of 2021 ("Full Devolution of Functions of the Executive Branch to Local Governments under the Mandanas Ruling"), PCA should come up with new approaches and strategies on how to effectively deliver the necessary services in complementation with the LGUs.
- b. **Reorganization of PCA.** There is a need for PCA to undertake a restructuring plan to have a more responsive organizational structure in view of its role under RA 11524 in the implementation of the CFIDP. Particularly, establishment of the following units: program monitoring office, strategic communications unit, information management systems unit, technology management unit, food safety and regulatory unit, procurement unit and economic research unit.

- 1) **Creation of the Project Management Office (PMO) for RA 11524.** A Program Management Office (PMO) is a department level unit headed by a Department Manager II, reporting directly to the Administrator. This office shall have the following functions:
 - a) Coordinate the implementation of the CFIDP approved by the President,
 - b) Oversee the planning, monitoring and evaluation of all programs under the PLAN
 - c) Interfacing with the PCA Board, the PCA Deputy Administrators, the PCA Regional Managers and the 14 partner agencies as identified in the said Act.
 - d) Oversee the documentation and reporting of outcomes to the PCA Governing Board, manage the accountability requirements with the implementing agencies and generally ensure compliance with RA 11524. Below is the proposed structure:



Figure 6.7.4. Proposed organizational structure in the restructuring plan of PCA

- 2) **Establish a Strategic Communications Unit.** To ensure, not just the dissemination of correct information, but also the promotion of transparency and accountability, strategic communications shall be employed in all aspect of implementation of CFIDP under RA 11524. The Strategic Communications Office shall have the following functions:

- a) Formulate the strategic communications plan of RA 11524
- b) Prepare and standardize the PCA and RA 11524 branding and image
- c) Convert concepts and data into collaterals and materials for multimedia platforms
- d) Manage the content of the PCA Website, Facebook page, and other social media platforms
- e) Build network with different communication agencies and entities

3) **Information Management Systems Unit.** With the intent to aggressively pursue digital/smart agriculture, as well as to come up with an integrated information system to aid in ease of doing business and data-driven decision-making, an Information Management Systems Office needs to be created.

4) **Technology Management Unit.** One of the gaps that was identified in the organizational assessment is the office that links the output of research to operations. PCA had a unit tasked to translate the research outputs into training modules, IEC materials, and investment portfolio/packages. However, after its rationalization in 2013, said office was abolished. The PCA now recognizes the importance of such unit to ensure that research outputs are rolled out and adopted for the benefit of the coconut farmers and the industry.

5) **Food Safety and Regulatory Unit.** One of the critical areas that is crucial in the industry is to provide interventions related to trade regulations, market surveillance, and policy formulation to ensure the competitiveness and sustainability of the established enterprises under CFIDP of RA 11524. This office shall have the following functions such as; a) To formulate, develop, and implement plans on trade and market regulations, including quality standards. b) Coordinate and monitor as oversight function of devolved regulations on domestic trading, marketing, exporting coconut and oil palm products and by-products. c) Undertake market intelligence and surveillance to assess compliance to regulations. d) Regular review and packaging of all related domestic/ national/ international policies related to trade & market development and regulations

6) **Strategy Management Office.** This office will be in-charge of the development of the PCA Transformation Road Map and to oversee its implementation. This office will also conduct strategy alignment to lower-level unit/personnel through cascading workshops; monitor, report, review the strategy implementation of units and individuals to the organization. Conduct of

periodic strategy review and refresh to ensure responsiveness of strategy to the strategic directions will also be undertaken to monitor the process of implementation.

- 7) **Procurement Unit.** In the current operations, PCA has no existing Procurement Division. The Property Division concurrently acts as Bids and Award Committee (BAC) Secretariat, while the General Services Division undertakes small value procurement. One of the reasons for the low fund utilization rate of PCA is the delays attributed to procurement procedures.
- 8) **Economic Research Unit.** PCA has no dedicated unit that performs research on socio-economic-related information, both domestic and international. Statistical data is currently handled by different units in the organization in which data integration and analytics are not harmonized resulting to inconsistencies and data sourcing problem.

In addition, there is a need for PCA to formulate a) resource management plan and policy that shall include: resource generation thru enhancement of current revenue sources, exploring new revenue streams including policy on revenue derived from asset management, collection of PCA fees to other producers of coconut-based products; b) resource utilization for efficient procurement process c) institutionalization of planning, budgeting, and M&E d) Information Technology. There is a need for PCA to leverage in technology advancement thru adoption of digital/smart agriculture and the use of information technology and data analytics in project implementation for ease of doing business and effective decision-making. The institutional transformation of PCA has to be aligned to the operationalization of the CFIDP as the coordinating agency of the program implementation as defined in the RA 11524. These institutional reforms shall strengthen the PCA's coordinating competency which is vital in the implementation of the RA 11524

The background of the slide is an abstract composition of overlapping geometric shapes, primarily triangles and polygons, in shades of orange, red, and yellow. In the lower right portion of the background, there is a faint, semi-transparent image of a person with long hair, wearing a light-colored shirt, leaning over a desk and working on a laptop. The overall aesthetic is modern and professional.

CHAPTER 7

INVESTMENT REQUIREMENTS AND FINANCING

CHAPTER 7. INVESTMENT REQUIREMENT AND FINANCING

7.1 INVESTMENT REQUIREMENTS SUMMARY FOR CFIDP PROGRAMS

As per Republic Act (RA) 11524 known as “The Coconut Farmers and Industry Trust Fund Act”, it was stated in the law that any program related to this plan can be sourced from regularly funded programs. Under Section 8. *Nature and Capitalization of the Trust Fund. – The Coconut Farmers and Industry Trust Fund is separate and distinct from the regular funds appropriated to the PCA through the annual General Appropriations Act (GAA). As such, the PCA shall continue to pursue its mandate of implementing programs and projects from the regular GAA appropriations and from funds under the Trust Fund.* The trust fund shall be maintained for 50 years under the CFIDP which shall be used for the benefit of the coconut farmers and the development of the coconut industry. The Coconut Farmers and Industry Trust Fund (CFITF) will be augmented with all the proceeds arising from the privatization or disposition of the coconut levy assets.

The Plan shall provide only indicative funding requirement or allocation for the implementation of programs and projects to be funded by the Trust Fund itemized or broken down on a project-to-project basis. Pursuant to RA 11524, the Bureau of Treasury shall transfer PHP75 B to the CFITF within the first five years of the said Act’s effectivity. The Law further stipulates that the amount in the Trust Fund account for disposition by the designated government shall not be lower than PHP 5 B for any given year. For the first five years, per guidance of PCA, the proposed indicative investment of the CFIDP is PHP 33 B, for specific programs and projects summarized in Table 7a. This 5-year indicative investment proposal does not preclude further increases above the proposed allocation for a given year, subject to the ability of the implementing agencies to implement and spend their corresponding budgets according to the PLAN. The PLAN will be subject to review every year, taking into consideration the absorptive capacity and performance of the implementing agencies and the outputs and outcomes of the programs based on performance indicators. Expected birthing pains will test the ability of the implementing agencies to undertake together, massive yet necessarily cohesive programs for the benefit of the coconut farmers and industry. As the programs’ implementation progress is regularly monitored and evaluated, the planning and implementation gaps are expected to be resolved by the 2nd year. Henceforth, the yearly budget allocation is proposed to be increased to PHP 6 B in the 3rd year and PHP 10 B year in the 10th year, allocated proportionately to the various implementing agencies as specified in RA 11524.

As included in the Plan, the six national programs in the CFIDP will be funded by the Trust Fund, with each implementing agency allocated a percentage directly and shall implement the programs. In the case of the innovative research program component and the policies and regulations sub-program component categorized under the support services program component, these will be funded under the General Appropriations of concerned agencies and institutions. In addition, the CFIDP Program Management Office (CPMO) to be created by PCA to undertake coordination, monitoring and evaluation will be allocated funds from their GAA. Similarly funding for PMO activities will also be provided from the GAA budget of PCA as emphasized by the TFMC.

Chapter 7. Investment Requirement and Financing

Presented in Table 7.a is the yearly indicative investment per program component for a period of five years with corresponding allocation by percentage to the implementing agencies cited in the law. However, there are programs and targets that can be expanded and include more beneficiaries if programs and projects linked to the strategies mentioned in the PLAN can be supported from other fund sources such as those enumerated in Table 7.b column 4.

Table 7.a. Annual indicative investment allocation of CFIDP national program components, 5 years

RA 11524 PROGRAM COMPONENTS	IMPLEMENTING AGENCIES	ANNUAL BUDGET ALLOCATION (IN MILLIONS, PHP)						TOTAL
		PERCENT ALLOCATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
GENERAL BUDGET ALLOCATION		100%	5,000.00	5,000.00	6,000.00	7,000.00	10,000.00	33,000.00
6.1 Social Protection		30%	1,500.00	1,500.00	1,800.00	2,100.00	3,000.00	9,900.00
6.1.1 Health and Medical Programs	PCA with PhilHealth	10%	500.00	500.00	600.00	700.00	1,000.00	3,300.00
6.1.2 Crop Insurance	PCIC	4%	200.00	200.00	240.00	280.00	400.00	1,320.00
6.1.3 Scholarships	CHED	8%	400.00	400.00	480.00	560.00	800.00	2,640.00
6.1.3 Training of Coconut Farmers and their Families	TESDA & ATI	8%	400.00	400.00	480.00	560.00	800.00	2,640.00
6.2 Coconut Farmers Organization and Development	CDA	5%	250.00	250.00	300.00	350.00	500.00	1,650.00
6.3 Hybridization (Operations and Research)		20%	1,000.00	1,000.00	1,200.00	1,400.00	2,000.00	6,600.00
6.3.1 Hybrid Coconut Development (Operations)	PCA	15%	750.00	750.00	900.00	1,050.00	1,500.00	4,950.00
Hybrid Seednut Production			429.08	405.11	383.39	453.44	823.74	2,494.76
Seedfarm Development in Government Lands			87.09	55.59	56.18	62.56	69.01	330.43
Communal Hybrid Nursery Establishment			67.25	179.55	291.19	341.41	384.00	1,263.41
Strategic Hybrid Planting/Replanting			39.53	94.80	141.97	154.52	194.42	625.24
Precision Farming			76.41					76.41
(nutrient support for existing coconut hybrids)								
Professionalizing the Coconut Farm Workforce			29.26					29.26
Program Support to Hybridization			21.38	14.95	27.28	38.07	28.83	130.50
6.3.2 Research on Coconut Hybrids	DOST-PCAARRD	5%	250.00	250.00	300.00	350.00	500.00	1,650.00
R&D			217.50	208.50	233.00	262.50	395.00	1,316.50
Technology Transfer and Promotion			5.00	7.00	15.00	20.00	30.00	77.00
Socio-Economic and Policy			5.00	7.00	7.00	20.00	20.00	59.00
Capacity Building			10.00	15.00	30.00	30.00	30.00	115.00
Knowledge Management and M&E			12.50	12.50	15.00	17.50	25.00	82.50
6.4 Community-Based Farm Enterprise Development: Farm Rehabilitation and Improvement		10%	499.74	499.74	599.89	699.38	998.47	3,297.21
6.4.1 Intercropping (Coffee and Cacao)	DA-HVCDP	3.3%	166.67	166.67	200.00	233.33	333.33	1,100.00
PSS*			56.16	68.74	92.56	99.16	126.53	443.15
ESETS*			77.37	73.19	60.46	69.93	91.31	372.26
AMEFS*			24.01	15.62	37.25	51.95	100.22	229.05
FPMA*			9.13	9.11	9.73	12.30	15.27	55.54
6.4.2 Native Animal and Poultry Integration	DA-BAI	3.3%	166.07	166.07	199.89	233.05	332.14	1,097.21
Manukan sa niyugan			37.50	37.50	51.25	61.25	75.00	262.50
Babuyan sa niyugan			17.50	17.50	22.25	25.00	35.00	117.25
Kambingan sa niyugan			40.32	40.32	47.71	55.10	80.64	264.10
Bakahan sa niyugan			70.75	70.75	78.67	91.69	141.50	453.37
6.4.3 Dairy Integration	NDA	3.3%	167.00	167.00	200.00	233.00	333.00	1,100.00
Provision of Dairy Animals			107.49	107.53	131.55	157.25	234.07	737.89
Provision of Technical Support Services			54.73	53.35	62.07	68.67	91.26	330.08
Monitoring and Evaluation			4.78	6.12	6.38	7.08	7.67	32.03
6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)	PHilMech	10%	500.00	500.00	600.00	700.00	1,000.00	3,300.00
6.6 Innovative Research Projects and their Practical Application on Coconut Processing, Production and Distribution	PCA, DOST, SUCs, and DTI							
6.7 Support Services		25%	1,249.50	1,250.00	1,500.00	1,750.00	2,500.00	8,249.50
6.7.1 Credit Programs	LBP & DBP	10%	500.00	500.00	600.00	700.00	1,000.00	3,300.00
Credit Programs under LBP			250.00	250.00	300.00	350.00	500.00	1,650.00
Credit Programs under DBP			250.00	250.00	300.00	350.00	500.00	1,650.00
6.7.2 Research, Marketing and Market Promotion	DTI	5%	249.50	250.00	300.00	350.00	500.00	1,649.50
Research			24.25	28.25	27.25	14.75	18.00	112.50
Industry			7.50	5.50	3.00	3.00	3.00	22.00
Market			17.25	22.75	24.25	11.75	15.00	91.00
Others (includes market assistance and promotion)			225.25	221.75	272.75	335.25	482.00	1,537.00
6.7.3 Infrastructure Development	DPWH	10%	500.00	500.00	600.00	700.00	1,000.00	3,300.00
6.7.4 Policies and Regulation	PCA							
Program Management Office (PMO), Monitoring and Evaluation	PCA							

*Production Support Services (PSS)

*Extension Support, Education and Training Services (ESETS)

*Agricultural Machinery, Equipment and Facilities Support Services (AMEFS)

*Farm Production-related Machinery and Equipment Distribution (FPMA)

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For the regional program targets that need additional support to be able to address the needs of the coconut industry and realize the vision of a prosperous and empowered production sector, the support of the LGUs and the private sector in particular can be tapped to augment the coco levy fund and the annual budget allocation to regular government programs.

7.2 OTHER POSSIBLE SOURCES OF FUNDS TO COMPLEMENT THE CFIDP PROGRAMS

As stipulated in RA 11524, “The CFITF is separate and distinct from the regular funds appropriated to the PCA through the annual GAA. As such, the PCA shall continue to pursue its mandate of implementing programs and projects from the regular GAA appropriations and from funds from the Trust Fund”. “Programs relating to planting, replanting, fertilization, research and development, market promotion and farm-to-market roads in coconut producing provinces, shall also be funded through regular appropriations”. Other sources of funds per program component that can be tapped to augment the needed resources for comprehensive CFIDP implementation and expansion of services and coconut beneficiaries are the GAA of the implementing agencies and other government agencies and institutions as presented in Table 7.b.

In the same manner that coconut industry stakeholders include the private sector, it is logical to consider Public-Private Partnership as a strategy to sustain and spur private investment in the development process. Hence, the Plan can be viewed as an initiator, catalyst, and prime mover of the unified coconut industry’s development, with the private sector generating much of the needed propulsive force.

Clearly, investments coming from other potential sources must be infused if the vision of modernizing the coconut industry is to be realized. One of the avenues for stimulating private sector investment is the Philippine Economic Zone Authority (PEZA). The PEZA serves as locations for the operation of agro-industrial enterprises to accelerate the growth and development of the Philippine agro-industrial sector. Moreover, the Philippine Economic Zone Authority (PEZA) serves as locations for the operation of agro-industrial enterprises to accelerate the growth and development of the Philippine agro-industrial sector. PEZA has a scheme of promoting modern infrastructure and common shared facilities to encourage groups of export-oriented investors to establish agribusiness corridors by linking farmers and processors. Starting with the PEZA-registered oil mills, the government should encourage the oil mills to invite foreign investors on the establishment of White Copra Centrals and Copra Buying Stations that will be operated by farmers’ cooperatives. Other mills may also be encouraged to get PEZA registration to enjoy the above said incentives. As cited in the RCFIDP of PCA Region VIII (Eastern Visayas), Samar Island and Leyte Island are potential Economic Zone locations.

Province-Led Agriculture Fisheries Extension System (PAFES) aims to strengthen the collaboration between the DA, LGUs, the academe, and the private sector, and to bring extension services to the grassroots. With PAFES, the provincial LGUs will serve as extension hubs that will synchronize agricultural plans and programs, as well as organize the activities of various stakeholders. It is expected that private sector investments will be enhanced thru PAFES.

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Table 7.b. Activities of major CFIDP programs that can be funded under GAA

COMPONENT	IMPLEMENTING AGENCY/IES	FUNDING SOURCE	REGULAR GOVERNMENT PROGRAMS FUNDED BY GAA
6.1 Social Protection:			Incentivized Planting and Replanting
6.1.1 Health Insurance	PCA with PhilHealth	CFIDP	
6.1.2 Crop Insurance	PCIC	CFIDP	PCIC RSBSA Crop Insurance Program
6.1.3 Scholarships	CHED	CFIDP	DOST and CHED Scholarship Programs
6.1.4 Training of Coconut Farmers and their Families	ATI and TESDA	CFIDP	Training Programs of ATI and TESDA
6.2 Coconut Farmers Organization and Development	CDA	CFIDP	CDA's Cooperative Development and Strengthening Program
6.3. Hybridization			
6.3.1 Hybridization Operations	PCA	CFIDP	PCA- Coconut Fertilization Project; PCA-Incentivized planting and replanting; BPI- GAP certification
6.3.2 Hybridization Research	DOST-PCAARRD	CFIDP	
6.4 Community-Based Farm Enterprise Development: Farm Rehabilitation and Improvement			
6.4.1 Intercropping (Coffee and Cacao)	DA-HVCDP	CFIDP	PCA-KAANIB Enterprise Development Project (KEDP)- intercropping BPI- GAP certification DA HVCDP Regional Field Offices (RFOs): Farm Inputs (Seeds, Seedlings, Fertilizers, etc.), Production facilities (Nursery, Scion Groves, Rain shelter, Black Nets, Seedling Bag, etc.) Technology Demonstrations such as but not limited to Tree Rehabilitation and/or Rejuvenation Small farm equipment (pole pruner, saw, shears, grass cutters, etc.)
6.4.2 Livestock and Poultry Integration (Native Animals)	DA-BAI	CFIDP	Philippine Native Animal Development (PNAD) Center - BAI; PCA- KAANIB Enterprise Development Project (KEDP) -Coconut-Livestock Integration
6.4.3 Dairy Integration	NDA	CFIDP	Philippine Carabao Center Dairy Program
6.5 Integrated Coconut Processing and Downstream Products (Shared Facilities)	PhilMech	CFIDP	
6.6 Innovative Research Projects and their Practical Application on Coconut Processing, Production and Distribution	PCA, DOST, SUCs, and DTI	GAA	Shared Facilities Program of DTI and DOST's Sulong Sa Tao; DTI, DOST- Coconut Processing Facilities and Equipment
6.7 Support Services			
6.7.1 Credit	LBP and DBP	CFIDP	Agricultural Credit and Policy Council (ACPC) Credit Programs, Agricultural Competitiveness Enhancement Fund (ACEF), and other lending conduits
6.7.2 Research, Marketing and Market Promotion	DTI	CFIDP	DTI's Trade, Market Promotion and Marketing Assistance
6.7.3 Infrastructure	DPWH	CFIDP	DA – Agribusiness and Marketing Assistance Division, Philippine Coconut Authority, Infrastructure Development Program of DPWH and LGUs
6.7.4 Policies and Regulation	PCA		
Program Management Office (PMO), Monitoring and Evaluation	PCA	GAA	

The Mandanas-Garcia Ruling shall increase the funds for LGUs as a result of a larger base for the computation of the IRA (now known as the National Tax Allotment or NTA). The substantial increase in the share of the LGUs from the national taxes will empower the LGUs in providing basic services and facilities to their constituents and aid them in the effective discharge of other duties and functions devolved to them under Section 17 of R.A. No. 7160. The Department of Finance initially computed and increase of PHP 134.39 billion in the Internal Revenue Allotment (IRA) of the LGUs in 2022. With the enhanced budgets, and signing of E.O. No. 138 Series of 2021, which directs the full devolution of basic services and facilities from the national government to the local governments, the LGUs' participation and support to agricultural development, including the CFIDP, can be further

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strengthened. Support to rural and farm-to-market roads, farmers' training centers, strategic trading posts and processing facilities and other needed local infrastructures will encourage private investments in farm and processing enterprises in partnership with farmers' cooperatives. Active support and engagement of the LGUs, inclusion and co-funding of CFIDP initiatives in their respective physical framework and development plans will greatly contribute to achieving the objectives of CFIDP.



CHAPTER 8

PROGRAM MANAGEMENT AND INTER-AGENCY COORDINATION

8.1 PROGRAM IMPLEMENTATION ARRANGEMENTS

PCA as the lead implementing agency will establish a CPMO to coordinate, manage, monitor, and evaluate program implementation that involves 14 government agencies and GOCCs implementing the various program components. The programs, projects and activities of the implementing agencies will be executed in 14 regions, including BARMM, according to their established implementation processes.

The implementing agencies will designate focal persons for their CFIDP program implementation teams to participate in regular coordination meetings at the national level for the overall coordination and management of activities/projects (technical and policy) and at the regional level for field level activities/projects. Implementing agencies will *participate* in annual planning and implementation reviews and prepare progress reports on their CFIDP component for use in regular coordination meetings to synchronize schedules of activities that involve other agencies including project facilitation/problem solving.

To support the coordination function of the CPMO, a National Inter-Agency Technical Committee (NIATC) shall be established to convene periodically to review progress, coordinate implementation of activities and inputs, and propose measures to improve progress. The NIATC will be composed of team leaders or focal persons of implementing agencies for their assigned CFIDP components.

At the regional level, a Regional inter-agency technical committee (RIATC) will also be organized to conduct regular coordination meetings to review regional CFIDP progress, coordinate activities and conduct project facilitation. The PCA Regional Manager will coordinate implementation of CFIDP activities at the regional level with the PCA Regional Office as the secretariat.

The PCA Board has endorsed to the GCG the creation of a Project Management Office Department in PCA that will coordinate and manage the implementation of CFIDP Programs. The organization and staffing of the new department are currently under review in GCG for approval and funding.

8.1.1 IMPLEMENTATION OF CFID PROGRAM COMPONENTS

The 15 implementing agencies will be responsible for their respective program components and sub-components following the process described in the previous sections of the document. Pursuant to RA 11524, the agencies will incorporate in their annual portfolio of projects as basis for the CFITF Committee for the release of their respective budgets.

The Trust Fund Management Committee (TFMC) has issued guidelines governing the disbursement process from the Trust Fund to the implementing agencies to maximize the economic use of resources and enhance transparency in the monitoring and utilization of the funds (Sec. 3, h, DOF-DBM-DOJ JMC 1.2001).

The agencies' designated offices that participated in detailing the CFID Program component will be involved in the actual implementation. The implementing agencies will designate

representatives to the CFIDP Inter-Agency Technical Committee (IATC) for coordination of implementation of activities with other agencies and to the Program Steering Committee for overall coordination and policy decision making.

The preparation of the annual workplan and budget of the implementing agencies will be integrated in the CFIDP Annual Workplan following IATC review and concurrence of the Program Steering Committee.

8.2. PROGRAM MANAGEMENT STRUCTURE

The following figure shows the overall program management structure for CFIDP. Roles and responsibilities of the key players are briefly discussed in the following sections.

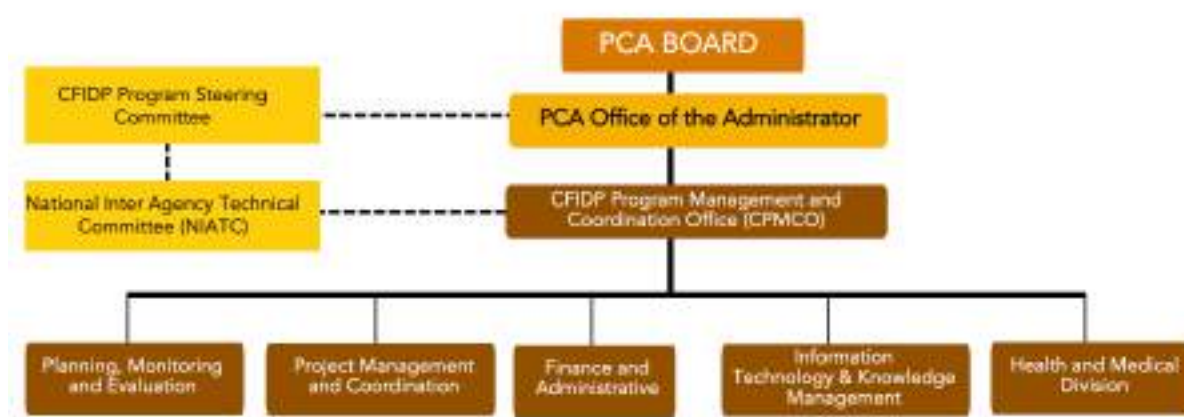


Figure 8.1. Proposed CFIDP overall program management structure

8.2.1 PCA Board

The PCA mandate is to implement and attain the declared national policy “to promote the rapid integrated development and growth of the coconut and other palm oil industry in all its aspects and to ensure that the coconut farmers become direct participants in, and beneficiaries of, such development and growth” (PD, 1468).

The PCA Board was reconstituted pursuant to RA 11524 to strengthen the participation of coconut farmers in the crafting and implementation of the Coconut Farmers and Industry Development Plan with the inclusion of three (3) board members from the coconut farmers’ sector (one representative each for Luzon, Visayas and Mindanao).

RA 11524 or the Coconut Farmers and Industry Trust Fund Act provided fresh mandate for PCA to “consolidate the benefits due to coconut farmers, especially the poor and marginalized under various statutes and expedite the delivery thereof to attain increased income for coconut farmers, alleviate poverty and achieve social equity”.

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The PCA Board shall be responsible for the overall implementation of the CFIDP at the policy level and shall also be responsible for reporting of CFIDP progress to the TFMC and the Congressional Oversight Committee on Fisheries and Agriculture Modernization (COCAFAM).

8.2.2 PCA Office of the Administrator

The PCA Office of the Administrator shall be responsible for the overall execution of the Program.

As such, the major responsibilities of the PCA shall include:

1. Overall Program planning, coordination, management, monitoring, evaluation and reporting, including providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, and results and financial data, as necessary;
2. Procurement of goods and services, including human resources support for the operation of the CPMO and the component that PCA directly implements i.e., (1) Hybridization, planting and replanting, and (2) health and medical support for coconut farmers;
3. Financial management, including overseeing financial expenditures against program budget;
4. Integrating the learning from program implementation to annual plans and budget;
5. Provide guidance and facilitate coordination and harmonization of approaches across the various implementing agencies involved in the various components of the CFIDP Program; and
6. Provide direction to the CPMO, to overcome conflicts, constraints, mitigate risks and resolve implementation problems.

8.2.3 CFIDP Program Steering Committee

The Program Steering Committee (PSC) shall be composed of the following:

Chairperson: DA Secretary
Co-Chairperson: PCA Administrator

Members:

1. Philippine Coconut Authority (PCA)
2. Philippine Crop Insurance Corporation (PCIC)
3. Commission on Higher Education (CHED)
4. Agriculture Training Institute (ATI)
5. Technical Education and Skills Development Authority (TESDA)
6. Cooperative Development Authority (CDA)
7. Department of Science and Technology – Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD)
8. Department of Agriculture – High Value Crop Development Program (DA-HVCDP)

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9. Bureau of Animal Industry (BAI)
10. National Dairy Authority (NDA)
11. Philippine Center for Postharvest Development and Mechanization (PHilMech)
12. Land Bank of the Philippines (LBP)
13. Development Bank of the Philippines (DBP)
14. Department of Trade and Industry (DTI)
15. Department of Public Works and Highways (DPWH)
16. Bangsamoro Autonomous Region for Muslim Mindanao – Office of the Regional Governor

The representatives of the PSC member agencies will be at least at the Assistant Secretary level or equivalent with designated permanent alternate representatives.

The PSC is the decision-making body that provides direction, guidance, and oversight for the effective implementation of the Program. Specifically, their roles and responsibilities are:

1. Provide strategic directions and guidance for implementation of the Program towards achievement of CFIDP program results (outputs, outcomes and impact);
2. Provide guidance and support for the resolution of program-related issues and concerns;
3. Oversee and support the commitment for funding and other support for the program;
4. Oversee prudent and efficient use of program budgets and other resources; and
5. Provide guidance on the conduct of Program Reviews and the implementation of the resulting external review recommendations.

The Mid-Term Review and End of 5th year Program Review are specified in RA 11524 and are to be conducted by third party service providers. External program reviews will be conducted every five (5)-years thereafter, or as deemed necessary.

The PSC will meet at least quarterly and as needed to discuss and decide on program issues and concerns.

8.2.4. CFIDP Program Management Office

The CPMO will be established directly under the Office of the PCA Administrator. It will have overall operational project management and coordination responsibility. It will be in charge of the day-to-day operations of the program and will efficiently implement the program plan from inception throughout its conclusion.

The CPMO will be headed by a Program Manager and composed of five (5) major units, namely:



The roles and responsibilities of the CPMO are:

1. Ensure that the Program meets its budgetary and performance obligations, and that at all times the lines of communication between the PCA, the implementing agencies, and beneficiaries are well maintained and accessible;
2. Provide Program management guidance, systems, tools and standards in program execution;
3. Develop and implement a Program Operations Manual;
4. Develop and maintain a Program monitoring and evaluation (M&E) system
5. Perform periodic Program monitoring and evaluation and prepare required reports for submission to the TFMC, PCA Board, and NEDA;
6. Develop and maintain an Integrated Information System (IIS) for CFIDP Program management, M&E and knowledge management and learning,
7. Monitor technical, financial, procurement, and contract management responsibilities of implementing agencies
8. Act as secretariat to the PSC and IATC;
9. Perform other related tasks as directed by the PCA Administrator

The detailed roles and responsibilities of the CPMO units and staffing requirements shall be prepared by the PCA.

Specific manuals and guidelines will be prepared by the CPMO to cover Program Operations, Finance and Administration, Monitoring and Evaluation, and other manuals/guidelines as deemed necessary.

Additional staff and consultants may be hired as needed but should be based on the approved Annual Work and Financial Plan (AWFP) and following the usual hiring process.

8.2.5 National CFIDP Inter Agency Technical Committee

A National CFIDP Inter Agency Technical Committee (IATC) will be formed with the following composition and functions:

A. Composition

Chairperson	:	PCA Deputy Administrator
Vice-Chairperson	:	DA Asst. Secretary
Members	:	Designated Representatives of agencies in the PSC

The members of the IATC are Director-level officials (senior level technical officers) representing the implementing agencies implementing components of CFIDP program. The IATC is tasked to perform the following functions:

1. Assist the PSC in fulfilling its oversight responsibilities on specific technical matters;
2. Provide valuable inputs and technical assistance in areas of strategic importance to the project;
3. Review/harmonize work plans and budget, for endorsement to the PSC;
4. Review the Program's progress, mid-term review and evaluation reports and make recommendations for follow-up actions for efficient and effective implementation;
5. Serve as venue for updating the Program manager on policies and good practices that can enhance implementation;
6. Serve as venue for communicating project learnings and good practices to the respective sectoral agencies to enhance sustainability
7. Undertake other relevant tasks as may be requested by the PSC

Other agencies with critical roles for specific activities may be invited to selected sessions of the IATC or the PSC. The IATC may meet *en banc* or by thematic clusters as determined by the IATC membership. The CPMO will assist the IATC as the secretariat and through the provision of resource persons and facilitation of sessions.

The TWC will meet every quarter or as needed.

8.2.6 Program Implementing Agencies

The Program implementing agencies based on the Program components are presented in the following table.

Table 8.2. Implementing agencies per program component

Component 1. Social Protection		
Sub-Component		
A.	Health and Medical Program	Philippine Coconut Authority (PCA)
B.	Crop Insurance	Philippine Crop Insurance Corporation (PCIC)
C.	Scholarship	Commission on Higher Education (CHED)
D.	Training of Coconut Farmers and their Families	Agriculture Training Institute (ATI) and Technical Education and Skills Development Authority (TESDA)
Component 2. Coconut Farmers Organization and Development		
Cooperative Development Authority (CDA)		
Component 3. Hybridization		
Sub-Component		
A.	Operations	Philippine Coconut Authority (PCA)
B.	Research	Department of Science and Technology – Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD)
Component 4. Community-Based Farm Enterprise Development		
Sub-Component		
A.	Coffee and Cacao Intercropping	Department of Agriculture – High Value Crop Development Program (DA-HVCDP)
B.	Native Livestock & Poultry	Bureau of Animal Industry (BAI)
C.	Dairy Integration	DA National Dairy Authority (NDA)
Component 5. Integrated Coconut Processing & Downstream Products Shared Facilities for Processing		
Philippine Center for Postharvest Development and Mechanization (DA-PHILMECH)		
Component 6. Support Services		
Sub-Component		
A.	Credit	Land Bank of the Philippines (LBP) Development Bank of the Philippines (DBP)
B.	Market Assistance, Promotion and Research	Department of Trade and Industry (DTI)
C.	Infrastructure	Department of Public Works and Highways (DPWH)
D.	Policies and Regulations	Philippine Coconut Authority (PCA)
Component 7. Innovative Research Projects (Practical Application on Coconut Processing, Production and Distribution)		
PCA, DOST (PCAARRD, PCIEERD, POHRD, ITDI & FNRI) and Academic Institutions		
Component 8. Program Management, Coordination, Monitoring and Evaluation		
PCA		

8.2.7 Other Program Partners and Stakeholders

Other Program partners and stakeholders may be identified as the Program is implemented. These may include national and local non-government organizations (NGOs), LGUs, private sector business organizations, civil society organizations, farmers' organizations, community organizations, and other types of stakeholders.

8.1.3 PROGRAM DOCUMENTATION AND REPORTING

The Program reports and documentation prepared by the CPMO will be submitted to the PCA Board composed of the DA, DOF, DBM, DOST, DTI and the PCA Administrator. The CPMO will copy furnish progress reports to other relevant government agencies including NEDA (as an oversight agency) to keep track of the progress of the implementation of CFIDP and assist, if necessary, in coordinating with other relevant planning bodies (e.g., Regional Development Councils or Planning and Development Authorities).

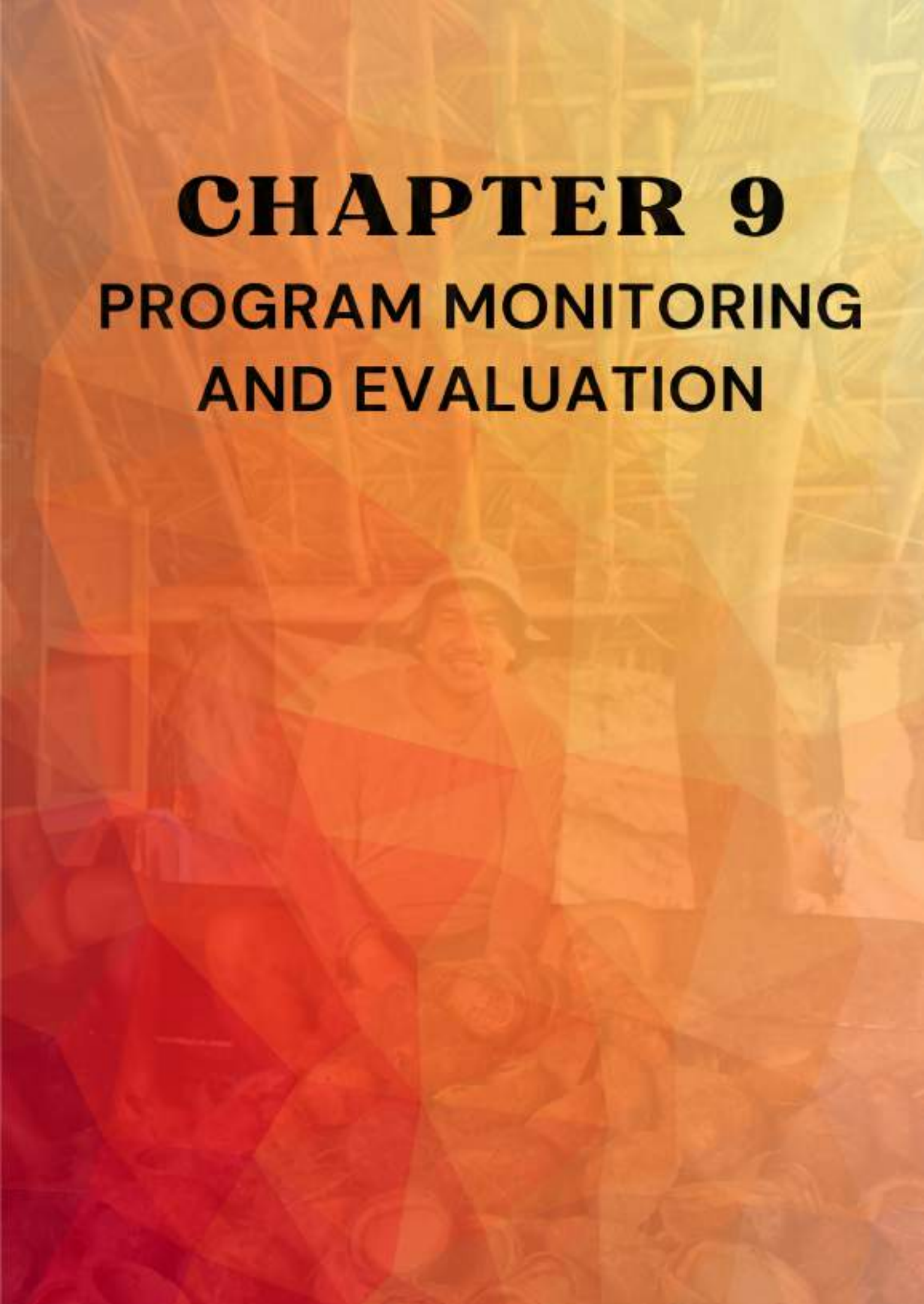
The following table lists the progress reports and documentation to be prepared by the responsible agencies and offices and submitted to the PCA Board through the PCA Administrator:

Table 8.3. Program documentation and reporting requirements

TYPE OF REPORT	SUBMISSION REPORT
1) Annual Work and Financial Plan	4 th quarter of preceding year
2) Quarterly Progress Report	2 nd week of the following quarter
3) Annual Progress Report	2 nd week of the following quarter
4) Monthly Consolidated Progress Reports: Output of the Integrated Information Management System	1 st week of the following month
5) M&E data inputs to the IIMS	Regular monthly report/updates in the IIMS
6) Documentation of emerging good practices and samples of Program success stories	Quarterly
7) Mid-Term Review report (3 rd Party)	Last quarter of third year
8) End of 5 th Year Review and every 5 years thereafter (3 rd Party)	Every 5 th year of implementation

CHAPTER 9

PROGRAM MONITORING AND EVALUATION



Chapter 9. Program Monitoring and Evaluation

Program Monitoring and Evaluation (M&E) is a major task of the Program Management Office (PMO) in the implementation of the different components of the Program. It is important that the CFIDP managers and principal stakeholders are informed with accurate and timely M&E information for the periodic assessment of project performance, and the evaluation of results in terms of relevance, efficiency, effectiveness, impact and sustainability.

In the M&E of CFIDP program performance, the evaluation is focused on ensuring efficiency in the delivery of outputs with the activities/inputs implemented. It is a continuous process that is anchored in the existing M&E reporting system of the 14 partner implementing agencies. The M&E activity will generate monthly and quarterly M&E reports for Program managers/decision-makers in the periodic review of implementation performance, project facilitation and in the conduct of annual plan and budget activity. The M&E will also report on the progress of outcome indicators annually to assess the effectiveness on the use of the completed outputs by the target beneficiaries.

The evaluation of CFIDP in achieving its development objectives (outcome and impact level) will involve periodic assessment of the outcome and impact indicators. This evaluation will be conducted for CFIDP program at the third year and end of 5 years through third party evaluators as required in the law. For CFIDP, initial Program Investment duration is 5 years with the specific activities/projects, targets and budget.

CFIDP will continue to be implemented for 50 years as specified in RA 11524 and will follow the CFIDP development framework. Program enhancement/adjustments will be made based on the M&E findings and recommendations of the independent evaluation, which will be conducted every 5 years.

Figure 9.1 below presents an overview of the M&E process for Program performance and achievement of the results (output, outcome and impact). Outputs are the result of the completed activities/projects that are detailed in the different components of the CFIDP Investment Program.

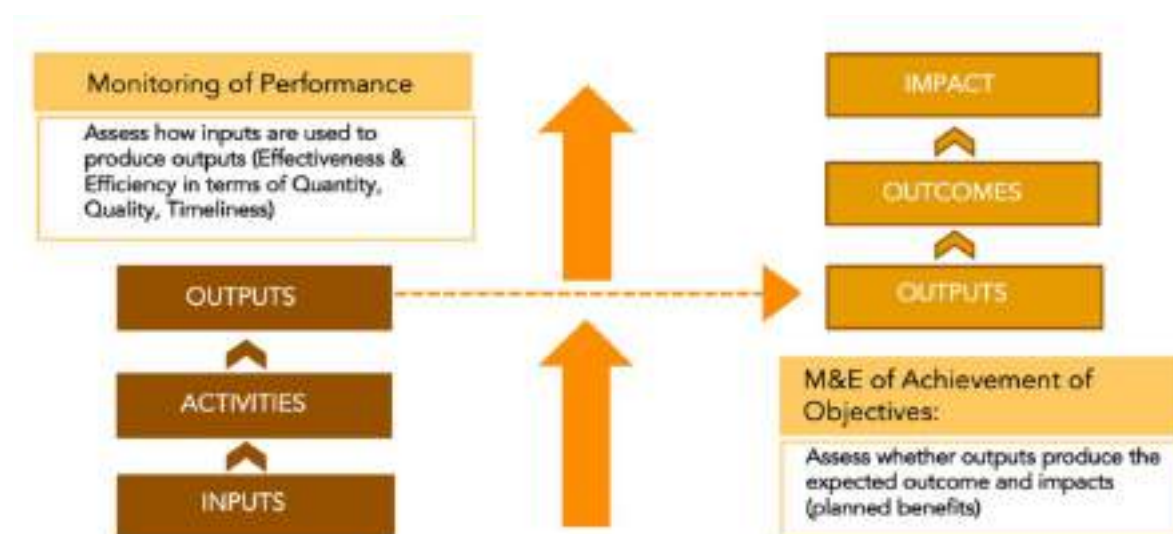


Figure 9.1. Overview of M&E process for performance and achievements

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The implementors will prepare the regular progress reports that will cover physical, financial and issues/deviations. Implementation efficiency will be assessed based on quantity, timeliness, and quality of outputs and effectiveness of the project in delivering the outputs. The M&E process of the achievement of the objectives involves the assessment of the outcome and impact indicators during project operations and maintenance stage.

Annex Table 9.1 – CFIDP Results Matrices presents the annual targets of the output level indicators of the CFIDP Program Logical Framework. The impact and outcome level objectives and indicators are discussed in the following subsections.

9.1 CFIDP LOGICAL/RESULTS FRAMEWORK

The development approach of CFIDP is anchored on the Coco Levy Law (RA 11524). The law requires that in the formulation of the Plan, the PCA shall be guided by the following objectives: a) increase 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.

Based on these objectives, the CFIDP logical results framework for the Program was developed as presented in the figure below



Figure 9.2. CFIDP logical/results framework

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The CFIDP long-term objectives is to contribute to agriculture sector objective: A resilient, sustainable, and competitive coconut industry and likewise to the societal goal of the Philippine Development Plan: *Matatag, Maginhawa at Panatag na buhay*. Three long term objectives were formulated from the review of the existing situation of the coconut famers and industry during the preparation of the Coconut Farmers and Industry Roadmap. The impact objectives adopted for CFIDP are: (1) sustainable increase in farmers' income, (2) more equitable access and distribution of basic social services and (3) global competitiveness.

At the outcome level, five objective statements were developed to guide the detailing of the components to be implemented and funded by the Coconut Farmers and Industry Trust Fund. The objectives are:

- 1) Agriculture productivity within ecological limit improved
- 2) Rehabilitation of the coconut industry intensified
- 3) Support to coconut processing and value adding activities strengthened
- 4) Access of farmers to credit, crop insurance, health, education, and social services increased
- 5) Market access of coconut farmers organizations and MSMEs expanded.

Annex 9.1 presents the CFIDP logical framework in the standard table matrix the summary of the CFIDP Program design/approach. The logical framework follows the standard four columns: (1) Program Objectives/Outcomes, (2) Program Indicators, (3) Means of Verification and Assumptions. The four levels (rows) show the objectives logically arranged from inputs/activities, outputs, outcome, and impact/goal level. This Annex shall be the main document to be used by the implementing agencies and the CPMO in the monitoring and evaluation of CFIDP Implementation performance and achievement of objectives.

9.1.1 CFIDP IMPACT/GOAL

The objective at the Goal level is: To rehabilitate and modernize the coconut industry toward increasing farmers' productivity and income, and to empower coconut farmers (organizations and families) toward poverty alleviation and social equity.

The table below shows the four indicators that will be assessed by third party evaluators at the third year and end of 5th year to determine level of success in achieving the Program Objective. The means of verification list the sources of information from official sources (PSA, BAS, etc.), Annual Reports, independent studies, or surveys) and primary surveys that maybe conducted by the third-party evaluator during the third year and end of 5-year evaluation. The target values for the impact/goal indicators are shown in Table 9.1. Some of the numerical targets (outcome and output) are not complete and will be prepared during the inception meetings.

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Table 9.1. CFIDP program objectives and performance indicators

OBJECTIVES/OUTCOME	PERFORMANCE INDICATOR/TARGET	MEANS OF VERIFICATION	ASSUMPTIONS
Program Objective Goal: To rehabilitate and modernize the coconut industry toward increasing farmers' productivity and income, and to empower coconut farmers (organizations and families) toward poverty alleviation and social equity.	<ul style="list-style-type: none"> poverty incidence of coconut farmers reduced to 60 % in 2027 from 90 % in 2020 ¹Twenty-five % (320, 000) of NCFRS-registered landless farmers employed by 2027 At least 150% increase in coconut farmers' average household income by 2027 ²coconut farm productivity is increased by 60% by 2027 contribution of coconut industry to annual agriculture and fisheries production increase from 4% to 7% by 2027 	<ul style="list-style-type: none"> PSA indicators on income and productivity CFIDP annual reports Surveys conducted by third party institutions Independent evaluation of CFIDP at the third year and end of program PCA Annual Reports on coconut industry performance DOF (BIR, BOC) annual reports exports Studies and statistics on the global coconut industry 	<ul style="list-style-type: none"> Policy support to the coconut industry (resources from coco-levy is available) Global Market for coconut products expands Extreme weather conditions from climate change Destructive pests and diseases Private sector actively supports and participate/invest in the coconut value chain

¹ 1.275 M tenants and farm workers (NCFRS, 2018)

² National average yield of coconut: 44 nuts/palm/year (2019) to 70 nuts/palm/year (2027)

9.1.2 OUTCOME/RESULTS INDICATORS AND METHODS OF DATA COLLECTION

M&E of the achievement of the CFIDP objectives at the outcome level will involve the assessment of the indicators that will be generated by the CPMO from reports of partner implementing agencies, PCA NCFRS database, and official data sources (PSA, DA-BAS) including results of periodic surveys conducted by implementing agencies. The CFIDP Logical Framework further details the five Outcome statements and Outputs of the components to be implemented by PCA and the 14 partner implementing agencies/offices.

The table below shows the outcome level results, indicators definition and how to get the information. The Results matrices for the indicators at the output, outcome and impact level are shown in Table 9.1. Baseline information and annual targets for some of the indicators will be detailed during the project start-up by the Program manager (CPMO) and partner agency implementing teams.

Table 9.2. Outcome level results and indicators

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OUTCOMES	INDICATORS	DEFINITION AND HOW/WHERE TO GET THE INFORMATION
1. Productivity within ecological limit improved	1.1 Increase in yield of coconut farms to 7,000 nuts/ha by 2027 from 4,400 nuts/ha (2019)	Report on estimate of count of nuts harvested per has. thru sample surveys. PMO to use PCA methodology in establishing the 2021 baseline and annual monitoring. Compute: [annual increase/2021 baseline] x 100
	1.2 % Increase in national coconut production (mil tons) and value of production (Php) of coconut products (white copra, whole nuts, DCN, new products, etc.)	Information from sales reports of CFOs, MSMEs, Coco farmers, traders, oils mills, etc. % Increase will be computed and compared the 2021 baseline
	1.3 % Increase in has. of coconut farms with sustainable intercrop and/or livestock production (has/total has. national coco farms)	Reports from field units on has. of coconut farms practicing sustainable intercropping of livestock production. % increase in has. to be computed vs. 2021 baseline
	1.4 % Increase in annual income of CF from coconut production (white copra, whole nuts, DCN, new products, etc.)	CFIDP assessment reports of CF income. PCA reports -Annual increase in income from the established baseline
	1.5 % Increase in annual income of CF from sustainable intercrop and/or livestock production	CFIDP assessment reports of CF income. PCA reports -Annual increase in income from the established baseline
2. Rehabilitation and modernization of coconut Industry intensified	2.1 % of coconut farmers (CF) provided with technical services	Ratio in % of CF provided with technical services vs the NCFRS registered farmers.
	2.2 % Increase in coconut farmers adopting new technologies (from NCFRS registered)	Reports from PCA field units and ratio is computed as % increase from the NCFRS registered
	2.3 % of cooperatives/farmers organizations operating successful business enterprises using improved technologies and modern machinery and equipment	Baseline, third year, and end of-program surveys
	2.4 % increase in number of CF engaged in integrated coco dairy farming system % increase in annual income of CF from coco dairy farming system	BAI progress reports CFIDP reports -annual increase in % from baseline data
	2.5 % increase in number of CF engaged in native animal breeding farming system % increase in annual income of CF from native animal production	BAI progress reports CFIDP reports -annual increase in % from baseline data
3. Support to coconut processing and value adding activities increased	3.1 % increase of coconut farmers/cooperatives/farmers organizations that access coconut processing and value adding activities	CFIDP report on CFOs and Coops
	3.2 % of cooperative-beneficiaries successfully operating and maintaining shared facilities for processing	Baseline, third year, and end of program surveys CFIDP PMO reports
4. Market access of coconut farmer organizations and MSMEs expanded	4.1 % share of cooperatives/ farmers organizations national coconut sector production	Computed as the ratio of total annual production (Php) of CFOs and MSMEs to the total coconut industry production in percent
	4.2 % of clustered coconut farmers/cooperatives/farmers organizations with expanded market outlets in the domestic and/or export	Baseline, third year, and end of program surveys CFIDP PMO and DTI reports

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OUTCOMES	INDICATORS	DEFINITION AND HOW/WHERE TO GET THE INFORMATION
	markets for their diversified coconut and other agricultural products (raw materials, intermediate, and finished products)	
	4.3 % of clustered coconut farmers/cooperatives/farmers organizations directly trading their consolidated raw materials, intermediate, and finished products to different market outlets	Baseline, third year, and end of program surveys CFIDP PMO, CDA & DTI monitoring reports
5. Access of coconut farmers to credit, crop insurance, training, and social services increased	5.1 % increase in coconut farmers (NCFRS-registered) covered by Health and medical insurance	Availment by coconut farmers (CF) will be monitored and % increase vs 2021 baseline computed for: 1) trainings assistance, 2) covered by health insurance, 3) CF that insured their crops, number and has.
	5.2 % increase in number of farmers with crop insurance	
	5.3 % increase in coconut farmers trained by TESDA and ATI	
	5.4 number of coconut farmer's children that completed their scholarships grants or financial assistance	Baseline, third year and end of 5 years implementation surveys; CHED monitoring reports
	5.5. number of coconut farmers children that completed scholarship are employed or engage in business	
	5.6 % of coconut farmers/cooperatives/SEC-registered farmers organizations provided with loans under the CFIDP Credit Program	Baseline, third year and end of 5 years implementation surveys; LBP and DBP monitoring reports
	5.7 % of cooperatives/SEC-registered farmers organizations trained by CDA, TESDA and ATI	Availment by cooperatives/farmers organizations will be monitored and % increase vs 2021 baseline computed for trainings assistance

9.2 CFIDP PROGRAM M&E MECHANISM

9.2.1 NATIONAL LEVEL

The CFID Program Manager will be responsible for the overall M&E of CFID Program implementation. To undertake this key function, the M&E system will be developed during Program start up including the M&E Manual of Operations. The M&E team leads the detailing of the M&E system following the CFIDP Management/Coordination, M&E and Implementation Framework shown in Figure 9.3.

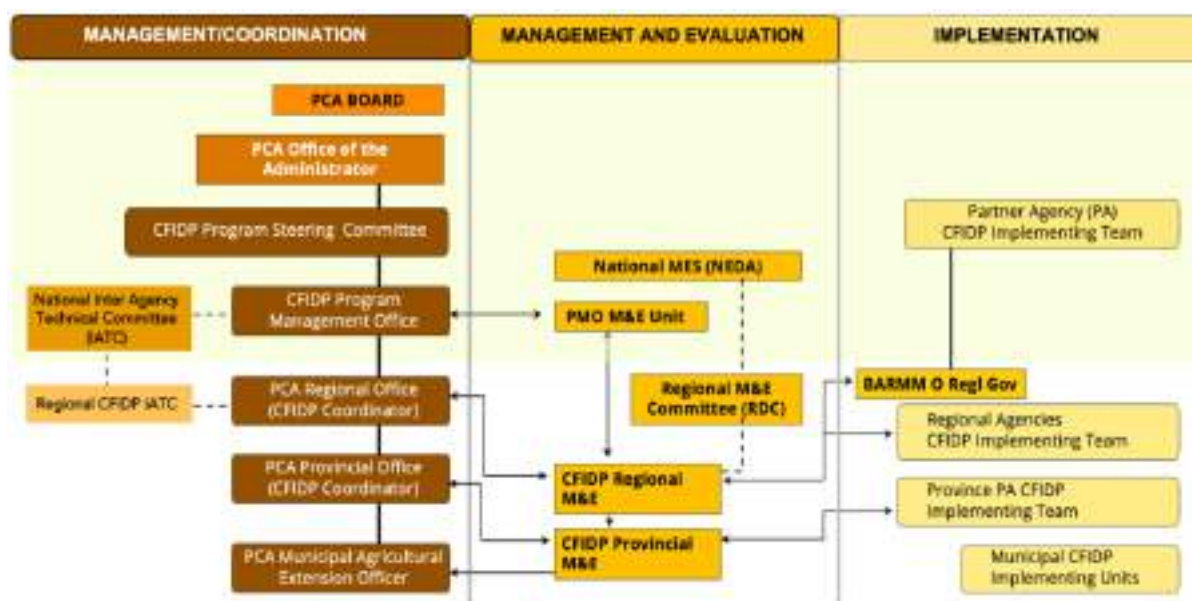


Figure 9.3. CFIDP management, coordination, monitoring and evaluation, and implementation framework

The M&E mechanism for the different components will be anchored on the existing M&E process for the partner implementing agencies. The CPMO M&E will closely coordinate with the M&E focal persons of partner agencies in the conduct of periodic monitoring and evaluation of the Program.

M&E report formats will be prepared including the corresponding guides for accomplishing the forms and conduct of orientation for M&E focal persons of implementing agencies. Output report formats will be prepared to support the information needs of Program Management, PSC, PCA Board and the TFMC. The CPMO will develop an IT-based Integrated Information Management System (IIMS) to facilitate the M&E and information requirement of Program Management. The system will link the implementing agencies to the CFID Program database that will allow online reporting of monthly status of activities/projects. With the availability of GIS-based information systems that are user-friendly, the CPMO may incorporate location-based digital information in the activities/projects implemented. The coconut farmers database (NCFRS) will be reviewed and linked with the IT-based system for monitoring and evaluation.

The implementing agencies' M&E focal persons will prepare consolidated reports on the implementation of CFIDP activities and projects and submit to the CPMO. The progress reports will cover implementation problems/issues and recommendations for action by decision makers.

The M&E units of PCA Regional Office will be equipped for M&E of the regional CFIDP program. Regional Progress reports will provide area perspective (region and provincial) and useful for validation of progress by Program Management.

The CFIDP M&E Plan will guide the M&E team in its role of ensuring the gathering of M&E information (baseline data, progress reports, field validation), maintaining the IT-based M&E information systems,

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processing the data/reports into consolidated reports, conduct of Program Implementation Reviews and third-party evaluation.

The CFIDP consolidated M&E reports will be used in the meetings of the CFIDP Program Steering Committee, the PCA management and the Trust Fund Management Committee

9.2.2 NATIONAL AND REGIONAL LEVEL M&E

The CFID Program Manager through the M&E Unit shall lead the coordination with relevant agencies (e.g., NEDA, DOF, and DBM) and the annual monitoring and evaluation of the plan implementation at the national level. Likewise, the CFIDP M&E unit at the regional and provincial levels may consider the RPMES as part of its stakeholders to support project facilitation at the field level.

9.2.3 REGIONAL AND FIELD LEVEL M&E

The regional CFIDP management and coordination will be led by the PCA Regional Managers and supported by technical and M&E staff. The interagency body (Regional CFIDP IATC) is proposed to coordinate and manage the implementation of CFIDP at the regional level. The implementing partners' CFIDP regional focal persons will participate in the monthly coordination meetings to update on progress, implementation challenges and proposed measures to improve performance. Other M&E stakeholders, e.g. RDC Regional Project Monitoring and Evaluation System (RPMES) will be provided CFIDP progress reports.

Provincial level coordination is also proposed through the PCA provincial offices that will link or closely coordinate with the CFIDP implementing teams of the partner agencies at this level. Regular M&E reports will be prepared by the M&E focal person to update provincial stakeholders on the progress of activities. Regular coordination meetings with partner agency province level focal persons will be held for reporting of implementation progress and for discussing/resolving implementation issues.

9.2.4 BARMM Regional M&E

CFIDP projects/activities in the Bangsamoro Autonomous Region for Muslim Mindanao (BARMM) will be implemented by the counterpart offices of the national government agencies e.g., MAFAR, MITT, MPW, CSEA. The M&E system of the BARMM agencies will cover the CFIDP activities/projects and submit progress reports to CPMO and their respective national agency partners.

9.2.5 IMPLEMENTING AGENCY M&E MECHANISM

Implementing agencies will be responsible for conducting their own M&E process and reporting mechanism. The CFIDP portfolio of the agency will be integrated in the existing reporting system and IT based project information system and generate the reports in the format and frequency prescribed by the CFIDP M&E system.

9.3 OUTCOME, OUTPUTS, AND INDICATORS BY PROGRAM COMPONENT

9.3.1 COMPONENT 1. SOCIAL PROTECTION

The component covers (a) health and medical programs (PCA and PhilHealth); (b) crop insurance (PCIC); (c) scholarship (CHED); and (d) training of coconut farmers and their families (ATI and TESDA). The agencies involved will use their existing M&E mechanism to cover the CFIDP activities/projects implemented. The M&E report will cover the progress of performance indicators at the output and outcome level to assess the effectiveness and impact of social protection component. Key M&E responsibilities of partners includes the following:

- a) **Health and Medical Programs.** PhilHealth in coordination with PCA, conducts M&E of the program and impact assessment including submission of quarterly, semestral and annual reports to the PCA Governing Board. A focal person will be designated (Department Manager) at the Central Office to closely coordinate, monitor and provide technical assistance to program implementation
- b) **Crop Insurance.** PCIC will conduct periodic field and table evaluation to identify problems, solutions, and remedial actions and submit periodic accomplishment reports on the progress of the approved programs/projects, including the status of fund utilization and terminal report to the PCA Board.
- c) **Scholarships** CHED will regularly monitor and evaluate the implementation and conduct impact assessment, post-auditing activities, inspection, and liquidation and support the monitoring and evaluation undertaken by a third-party evaluator.
- d) **Training of coconut farmers and their families.** ATI/TESDA will provide administrative support, management and M&E system necessary for the implementation and submit periodic accomplishment reports on the progress of the approved programs/projects, including status of fund utilization and terminal report to the PCA Board.

The table below shows the indicators (outcome and output) that will be covered in the M&E of the social protection component.

Table 9.3.1. Social protection component outcome/output and indicators

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OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Access of farmers to credit, crop insurance, health, education, and social services increased	% increase in coconut farmers (NCFRS registered) covered by health and medical insurance % increase in number of farmers with crop insurance % increase in coconut farmers and beneficiaries trained by ATI % increase in coconut farmers and beneficiaries trained by TESDA % increase in number of CF beneficiaries provided with scholarship	ATI Annual Reports TESDA Annual Reports PhilHealth Annual Reports PCA Annual Reports PCIC Annual Reports CHED Annual Reports
OUTPUT:		
Health and Medical Program	no. of CF covered by PhilHealth insurance funded by coco levy funds	PhilHealth Progress Reports
Roster of coconut farmers for coverage by medical insurance	no. of coconut farmers (NCFRS registered) covered by PCA administered health support programs	PCA Progress reports
Prioritized list of coconut farmers	no. of CF farmers covered by PhilHealth funded by other government programs	
Coconut farmers covered by PhilHealth	no. CF provided/granted insurance claims Amount of claims paid by PhilHealth	
OUTPUT:		
Scholarship program for coconut farmers supported by coco levy funds	no. of CF and beneficiaries supported by CFIDP scholarship program	CHED Progress Reports
Support to CF and beneficiaries in accessing other scholarship programs of the government	no. of CF farmers and beneficiaries assisted in availing other scholarship programs	
OUTPUT:		
Training program for coconut farmers and beneficiaries thru Farmers Field Schools	no. of CF and beneficiaries trained by ATI CFIDP program	ATI Progress Reports
Training of coconut farmers and beneficiaries on technical and vocational skills	no. of CF and beneficiaries trained on technical vocational courses no. of training modules developed no. of technical and vocational courses developed	

9.3.2 COMPONENT 2: ORGANIZING AND EMPOWERMENT OF FARMERS ORGANIZATIONS AND COOPERATIVES

CDA will designate a Department Manager at the Central Office to closely coordinate, monitor and provide technical assistance to program implementation, including the formulation of working agreements, guidelines, and policies pertaining to the program management. The monitoring and evaluation will cover implementation performance and achievement of results including conduct of impact assessment and post-auditing activities (inspection, and liquidation). The CDA will support the monitoring and evaluation to be undertaken by a third party evaluator.

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The table below shows the indicators (outcome and output) that will be covered in the M&E of the Organizing and Empowerment of Farmers Organizations and Cooperatives component.

Table 9.3.2. Organizing and empowerment of farmers organizations and cooperatives component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Access of farmers to credit, crop insurance, health, education, and social services increased	% of coconut farmers cooperatives trained/ assisted and registered with Securities and Exchange Commission (SEC) % of coconut farmers cooperatives trained/assisted and registered with other regulatory agencies (LGUs, DA, DTI, etc.) % of CF cooperatives engaged in business/enterprises with good financial track record	CDA Annual Reports CFIDP Annual Progress Reports
OUTPUT:		
Training program for coconut farmers organizations (CFO) officers on basics of cooperative operations	no. of training conducted for officers of coconut farmer organizations no. of CFO officers trained no. of CFOs assisted in registration with SEC	CDA Progress Reports CFIDP Progress reports
Support to CFOs in their registration with SEC	no. of SEC registered cooperatives (new) no. of CF cooperatives engaged in business/ enterprises with good financial track record	

9.3.3 COMPONENT 3: DEVELOPMENT OF HYBRID COCONUT SEEDLING FARMS AND NURSERY FOR PLANTING AND REPLANTING

The existing M&E mechanism of PCA and DOST-PCAARRD will cover component activities that will include (1) conduct periodic field and table evaluation of the programs/projects to identify problems, solutions, and remedial actions to avoid delays in the implementation, (2) submit periodic accomplishment reports on the progress of the approved programs/projects, including status of fund utilization and terminal report and (3) support the conduct monitoring and evaluation to be undertaken by a third party evaluator.

The table below shows the indicators (outcome and output) that will be covered in the M&E of the hybridization, planting and replanting component.

Table 9.3.3. Hybridization component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Productivity within ecological limit improved	% annual Increase in yield of coconut in nuts per has. from the national baseline % Increase in national coconut production (tons, mil) and value of production (Php,	PCA Progress Reports CFIDP Progress Reports DOST-PCAARRD Progress Reports

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OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
	mil) of coconut products (white copra, whole nuts, DCN, new products, etc.) % increase in has of new coconut farms planted with hybrids and improved varieties established % increase in number of farmers with new coconut farms planted with hybrids and improved varieties # of new hybrid varieties developed and approved for mass propagation and use in planting and replanting	
OUTPUT:		
a. Operations Increased production of hybrid seedlings in the modern/expanded PCA seed gardens On-farm hybridization with selected dwarfs and pollen from selected talls for planting materials Established coconut seedfarms and communal nurseries in government lands in partnership with LGUs and SUCs the long term. Establish new coconut farms (hybrid & improved varieties) Rehabilitation of coconut farms (replanting with hybrids and improved varieties) Professionalization of coconut workforce through skills training in hybridization farms and creation of farm service crew teams.	# of hybrid seedlings # has. planted # of hybrid and improved varieties of coconut seedlings # has. planted # of seedfarms # of communal nurseries # has. seed farms # has of communal nurseries # has. planted # of farms # has. planted # of farms # of CFs trained # of teams of farm service crew	PCA Progress Reports CFIDP Progress Reports DOST-PCAARRD Progress Reports
b. Research & Development Developed hybrid coconut variety tested for yield and productivity ready for mass propagation Technology transfer and promotion campaigns and IEC materials produced	# of hybrids developed and approved for planting and replanting # of campaigns and IEC materials produced and distributed	

9.3.4 COMPONENT 4. FARM IMPROVEMENTS THRU COCONUT BASED FARMING SYSTEM (CBFS)

The component covers (a) Livestock and Dairy Production (DA-NDA), (b) Native Animal Breeder Production Program (NDA), and (c) Coffee and Cacao Production Program (DA-HVCDP).

The existing M&E mechanism of implementing agencies will cover the CFIDP activities/projects implemented. NDA will set up a Coco-Dairy Information System database to capture the performance of the animals, the cooperatives and the overall milk production. The M&E reporting will cover the progress of performance indicators at the output and outcome level to assess effectiveness and

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impact of Farm Improvement thru CBFS component. Key M&E responsibilities of partners includes the following:

Table 9.3.4. Farm improvement component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Sustainable increase in coconut farmers' income	no. of CF engaged in integrated coco dairy farming system	Surveys conducted by third party institutions
Improved health of CF families with their access to nutritious dairy food	% increase in income of CF with dairy production	Independent evaluation of CFIDP at mid-term and end of program
	no. of CF HH with access to nutritious food	DA-NDA Annual Reports on CFIDP dairy projects and native animal production
	no. of CF engaged in integrated native animal breeding farming system	DA-HVCDP Reports
	% increase in income of CF from native animal production	
	no. of CF engaged in Coffee and Cacao farming system	
	% increase in income of CF from coffee and cacao production	
OUTPUT:		
Coconut-based Farming Systems: Diversification-Dairy Integration (DA-NDA) and Native animal breeding/production program	Annual HH Income of coconut farmers from dairy and native animal production	DA Progress Reports
	no. of CF engaged in integrated native animal breeding farming system	
	no. of modules completed and in operation	
	no. of native animals distributed, by kind	

Table 9.3.4. Farm improvement component outcome/output and indicators continued...

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTPUT:		
Coconut-Based Farming System: Coffee and cacao production	Annual HH Income of coconut farmers from coffee and cacao production	DA HVCDP Progress Reports
Established production modules	no. of CF engaged in coffee and cacao farming system	
Postharvest facilities provided	no. of modules completed and in operation	
	no. of coffee and cacao planting materials distributed	
	no. of farm inputs distributed, by kind	

9.3.5 COMPONENT 5. SHARED FACILITIES FOR PROCESSING PROGRAM

PhilMech will coordinate with partner implementing agencies: CDA, ATI, TESDA, DTI, DPWH, LBP, DBP, PCA, PLGUs and LGUs in the planning, implementation, and operation & maintenance of shared facilities. As the lead agency, will be responsible for the M&E for the component, integrating the reports of partners in the periodic progress reports and evaluation.

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Specific M&E responsibilities include: (a) regular M&E of the implementation performance and impact assessment, post-auditing activities, inspection, and liquidation; (b) support the conduct of M&E by a third-party evaluator; (c) conduct periodic field and table evaluation of the project to identify problems, solutions, and remedial actions to avoid delays in the implementation; and (d) submit periodic accomplishment reports on the progress of the approved programs/projects, including status of fund utilization and terminal report to the PCA Board.

The M&E reporting will cover the performance indicators at the output and outcome level to assess effectiveness and impact of Shared Facilities for Processing component. Key M&E responsibilities of partners includes the following:

Table 9.3.5. Shared facilities for processing component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Support to coconut processing and value adding activities strengthened	% of coconut farmers/ cooperatives/ farmers organization with increased access to coconut processing and value adding activities	PhilMech Annual Reports DTI Annual Reports CDA Annual Reports
Rehabilitation and Modernization of the coconut industry intensified	% of cooperative-beneficiaries successfully operating and maintaining shared facilities for processing % of cooperatives/farmers organizations operating successful business enterprises using improved technologies and modern machinery and equipment	
OUTPUT:		
Established shared coconut processing facilities for CF cooperatives operation as an enterprise	no. of SCPFs completed by type/classification	PhilMech Progress Reports
Established village level SCPF and in operation (capacity building, technical training, O&M and entrepreneurship training)	no. of SCPFs completed by type/ classification turned over to CF cooperatives	
Establish integrated central processing system for multiple products with modern processing facilities and equipment	no. of village level SCPF in operation as a business enterprise	
	Volume by type of products produced by the SCPF (output)	
	no. of coconut farmers using the services of the SCPF	
	volume (kg) of coconut products (copra, white meat etc) processed in the SCPFs (input)	

9.3.6 COMPONENT 6. RESEARCH, MARKETING AND MARKET PROMOTION

DTI will design a monitoring and evaluation system for the research, marketing, and market promotion components to include industry and market research, trade and investment promotion and facilitation, and marketing agenda and conduct monitoring and evaluation of the project and impact assessment, including submission of periodic reports. The M&E will be mainstreamed in its existing M&E system to cover implementation performance and impact assessment. The M&E information will be used to assess progress, identify constraints/problems, and propose remedial actions to avoid

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delays in implementation. DTI will submit periodic accomplishment reports on the progress of the approved programs/projects, including status of fund utilization and terminal report to the PCA and will support the conduct of third-party evaluation.

Table 9.3.6. Research, marketing and promotions component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Market access of coconut farmer organizations and MSMEs expanded	% of clustered coconut farmers/cooperatives/farmers organizations with expanded market outlets in the domestic and/or export markets for their diversified coconut and other agricultural products (raw materials, intermediate, and finished products)	DTI Annual Progress Reports
OUTPUT:		
Market/industry research for high-value coconut products	# of research for high value coconut products	DTI Progress Reports
Develop export promotion programs for high-value coconut products	# of export promotion program for high-value coconut products developed # of high-value coconut products promoted and exported # of exporters provided access and exposure to new or traditional markets # of business matches arranged for producers of high-value coconut products # of companies with increased export performance/revenue generation	
Provide export marketing assistance for high-value coconut products	# of export marketing activities for high-value coconut products conducted # of new exporters capacitated with market entry product quality requirements # of coconut farmers capacitated with market entry and product quality requirements	
Develop market certifications policy advocacy for the coconut industry	# of policy studies developed (with recommendations discussed with DA, PCA and DTI) # of IEC and investment promotion materials developed # of market matching activities conducted # of supply contracts facilitated	
Provide marketing support for the coconut industry	# of trade fairs and <i>Bagsakan</i> events showcasing coconut-based products conducted # of permanent stores with special settings of coconut-based products established Amount of sales generated # of MSMEs with coconut-based products onboarded to e-commerce platforms	

9.3.7 COMPONENT 7. CREDIT PROGRAM

The component covers the CFIDP credit program that will be jointly implemented by DBP and LBP. The existing M&E mechanism will regularly monitor and evaluate implementation progress in accordance

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with the Plan, conduct post-audit activities (inspection and liquidation) and support the conduct of evaluation by a third-party evaluator.

The M&E reporting will cover the progress of performance indicators at the output and outcome level to assess the effectiveness and impact of the credit program component. Table 9.3.7 shows the indicators that will be covered.

Table 9.3.7. Credit program component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Access of farmers to credit, crop insurance, health, education, and social services increased	% increase in coconut farmers (NCFRS registered) provided with loans under the CFIDP credit program % of CF cooperatives/SEC-registered farmers organizations provided with loans under the CFIDP credit program % increase in CF cooperatives that access credit support from CFIDP credit program	LBP Annual Reports DBP Annual Reports
OUTPUT:		
Credit program support for coconut farmers under CFIDP developed and expanded	# of CF cooperatives provided with loans Amount (PHP) of loans provided to CF cooperatives # of CF cooperatives rated with good standing, or with no past due accounts	LBP Annual Reports DBP Annual Reports

9.3.8 COMPONENT 8. INFRASTRUCTURE DEVELOPMENT

DPWH will designate a Senior Official for management, monitoring and evaluation of the infrastructure development program component of the CFIDP. The DPWH, through its implementation Office, shall be responsible for the preparation of the standard design/specifications, Program of Work (POW), Approved Budget of the Contract (ABC), Detailed Unit Price Analysis (DUPA), and construction schedule. It shall also be responsible for securing the Environmental Compliance Certificate (ECC)/Certificate of Non-coverage (CNC) and other supporting documents for the projects based on the lists submitted by the PCA and on the approved standards set by the parties. The office will submit monthly physical and financial status reports on progress of works, problems encountered, and project accomplishment, and certified Financial Reports. DPWH will support the monitoring and evaluation to be undertaken by a third-party evaluator. The indicators that will be covered by the M&E are shown in the following table.

Table 9.3.8. Infrastructure development component outcome/output and indicators

OUTCOME/OUTPUT	PERFORMANCE INDICATOR	MEANS OF VERIFICATION
OUTCOME:		
Support to coconut processing and value adding activities increased	% increase of coconut farmers/ cooperatives/farmers organizations that access coconut processing and value adding activities % increase in number of coconut farmers/ cooperatives/farmers organizations that access coconut processing and value adding activities % reduction in transport cost with the use of the farm to market roads	DPWH Annual Reports
OUTPUT:		
Infrastructure support to coconut processing and value adding activities: (1) transport link to farms and (2) buildings and utilities	# of CF cooperatives provided with support infrastructure # of CF using the support infrastructures (roads and buildings) # kms of FMR roads completed # of buildings/utilities for shared facilities # of buildings for trading posts, area in sq.m. # of buildings for training centers (+sq.m.) # of fertigation facilities # of bridges, spillway type # of processing buildings and area (sq.m)	DPWH Progress Reports

9.4 MONITORING AND EVALUATION PLAN

The CPMO team supported by the PCA Corporate Planning Office will be responsible for CFIDP Program monitoring and evaluation. The Program Logical Framework and the Results Framework provide performance and impact indicators for program implementation along with their corresponding means of verification.

The Budget for the conduct of periodic progress monitoring and reporting activities will be part of the CPMO operations budget. The M&E activities are covered in the Monitoring and Evaluation Plan and includes the conduct of third-party evaluation of the CFIDP program on the third year and end of fifth year, and every five years thereafter. The funding requirement for the M&E Plan will be included in the PCA General Appropriations Act.

The Integrated Information System (IIS) to be developed by the CPMO will include a database of the M&E indicators that will be collected during the periodic surveys (baseline, third year, and end of program surveys) for use during the conduct of CFIDP evaluation. The third-party evaluation will cover

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the Organization for Economic Co-operation and Development evaluation criteria on relevance, efficiency, effectiveness, impact, and sustainability. The Evaluation Terms of Reference to be conducted by third-party will be developed by the CPMO in coordination with NEDA.

The following sections outline the principal components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The M&E budget is provided in Table 9.4.

Table 9.4. CFIDP M&E Plan and Indicative Budget

ACTIVITY	OUTPUTS	TIME FRAME	RESPONSIBLE PARTIES	Indicative Investment (PHP MILLION)
CFIDP Inception Workshop	Inception Workshop Report	Within 3 months from Program start	CFIDP Program Manager (PM) & PCA administrator Partner agencies	0.8
Validate/update baseline Indicators	Report on validated program baseline information	Within the first 3 months of project	CFIDP Program Manager (CPM) M&E staffs	1.5
Progress reporting, review and verification of outputs	Measurement of Means of Verification for program output	Monthly	PM, technical and M&E staffs	To be determined during the annual workplan preparation
Design and quantification of outcome indicators	Measurement of Means of Verification of program results.	Annually as required or at mid-term and end of program (evaluation cycle)	CPM and M&E staff	none
CFIDP IATC & CPSC coordination meetings	Minutes and Records of Discussions of meetings CFIDP Progress Reports	Monthly for IATC and quarterly for the CPSC meetings	CPM, M&E and technical staffs PCA Admin Partner agencies	none
Conduct of Annual Implementation Review	Report on CFIDP Implementation Performance	Annually (before end of year)	CPM, M&E staffs Partner agencies, PCA Admin	0.2
Mid-term Evaluation	MTR Evaluation Report of third-party evaluators	2.5 years from program start	CPM, M&E staff PSC, Independent Evaluation Team	3
End of Program Evaluation	End of Program Evaluation Report of third-party evaluators	5 th years of program evaluation	CPM, M&E staff PSC, Independent Evaluation Team	3
Conduct of field visits	M&E Validation field visits	Quarterly	CPM M&E staff	0.4
Conduct of performance and financial audit	Audit report	Annually	COA	0.8
Dissemination of lessons learned	Documentation on program benefits, emerging lessons and best practice Disseminate or publish online	Quarterly	CPM M&E staff	none

9.5 PROJECT START

A Program Inception Workshop will be held within one month after the approval of the CFIDP by the President, starting with an invitation to those who have assigned roles in the Program Organizational Structure, Component managers and Focal Persons of partner implementing agencies, PCA Department heads, key technical personnel, and regional technical officers. The inception workshop

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is necessary to building ownership for the project results and to plan the first year annual workplan. The Inception Workshop aims to address key implementation issues including:

- a) Assisting all partners to fully understand and take ownership of the CFIDP Program;
- b) Detailing the roles, support services and complementary responsibilities of PCA and its Board, Trust Fund Management Committee, CFIDP Program Steering Committee, Partner agencies implementation teams for their CFIDP Component, Regional PCA offices and staff vis-à-vis the Program team;
- c) Discussing roles, functions, responsibilities within the Program decision-making structure including reporting and communication lines, and conflict resolution mechanisms;
- d) Finalization of the first annual workplan based on the program results framework and the Logical framework. A review and agreement on the indicators, targets, and their means of verifications will be required as well as re-check assumptions;
- e) Providing a detailed overview and reach consensus on reporting, monitoring and evaluation requirements, M&E workplan and budget;
- f) Discussion of financial reporting procedures and obligations and arrangements for annual audits;
- g) Planning and scheduling Program Steering Committee (PSC) meetings;
- h) Clarification of roles and responsibilities of all program organizational structures as well as planned dates of first PSC meeting within the first year of implementation.

An Inception Workshop Report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided upon during the meeting.

The M&E Plan will involve preparations for the CFIDP program to generate information for management (CPMO), Program Steering Committee, PCA and the Trust Fund Committee, on progress of the activities involving PCA and partner agencies. The Plan will be prepared for the evaluation of the overall CFIDP program in terms of relevance, efficiency, effectiveness, impact, and sustainability to be conducted by third-party evaluators at the third year, end of 5th year, and every 5 years thereafter. It will also provide for the conduct of implementation reviews and consultations and the sharing of emerging lessons and best practices. Information on the progress of implementation will also be shared to program stakeholders and public using online platforms.

M&E arrangement starting in the 6th year will continue to cover CFIDP activities and inputs funded by the Coco Levy Trust Fund (RA 11524). Program implementation arrangement may change depending on the Management and Coordination set up that will be adopted e.g., PCA organization mainstreams CFIDP into its regular departments and field implementing units.

9.5.1 SETTING UP CFIDP PROGRAM MANAGEMENT OFFICE (CPMO)

The composition of the CPMO organization is described in Chapter 9, Sec 8.2. A full-time Program Manager will be hired by PCA and will report directly to the Deputy Administrator to be assigned as Program Director.

Chapter 9. Program Monitoring and Evaluation

CPMCO has the overall operational program management responsibility in accordance with the CFIDP Plan and applicable government guidelines and procedures for the implementation of program activities and utilization of the coco levy funds. The Program manager will oversee the development of the Integrated Information Management System that will generate and provide updates for management's decision making and consolidated reports on the program status for the meetings of the PSC, NIATC, PCA Board, TFMC and COCAFAM. The M&E unit's key staff members to be hired shall be: 1 M&E Specialist and two M&E Associates who will be responsible for implementing the M&E Plan.

ANNEXES

Chapter 6.1.4 - Annex

Annex Table 6.1.4.1. Nationwide (to be implemented by the Central Office) Targets and Budget, CFIDP programs - Training Component, ATI (Year 1-5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication and Administration of e-Learning courses													
Courseware Development of Coconut-based Farming	No. of e-courses developed	2	2	2	2	2	10	0.2	0.2	0.2	0.2	0.2	1.0
Administration of e-Learning Courses	No. of e-courses administered	2	2	2	2	2	10	0.1	0.1	0.1	0.1	0.1	0.5
Development/Enhancement of Knowledge Products	No. of KPs developed/ enhanced	30	30	30	30	30	150	4.5	4.5	4.5	4.5	4.5	22.5
Reproduction/Dissemination of Knowledge Products	No. of KPs reproduced/ disseminated	100,000	100,000	100,000	100,000	100,000	500,000	5.0	5.0	5.0	5.0	5.0	25.0
Documentation and Publication of good agricultural practices/best practices/success stories	No. of success stories documented	11	11	11	11	11	55	3.3	3.3	3.3	3.3	3.3	16.5
	No. of success stories published	11	11	11	11	11	55						
Development of Radio elements and program materials	No. of subject matter aired	10	10				20	0.4	0.4				0.8
Training and Other-related Activities							-						
Development of Facilitator's Guide	No. of Facilitator's guide	14					14						
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Native Chicken Production and Management	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Native Goat Production and Management	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Native Cattle Production and Management	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Native Pig Production and Management	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						

Chapter 6.1.4 - Annex

Annex Table 6.1.4.1. Nationwide (to be implemented by the Central Office) Targets and Budget, CFIDP programs - Training Component, ATI (Year 1-5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Milk Processing and Management (Goat)	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.6	0.6	0.6	0.6	0.6	3.1
	No. of Participants	30	30	30	30	30	150						
Provision of Grants													
Provision of Grants to other ESPs thru the AFE Grant System	No. of grantees	0	0	0	0	1	1	12.5	11.7	58.9	85.8	207.6	376.4
Planning, Monitoring and Evaluation Activities													
Baseline study on the AEWs', farmers leaders', and other extension service providers' level of knowledge on coconut	No. of studies	1					1	2.1					2.1
Result Evaluation Study	No. of studies					1	1					2.5	2.5
Formulation of Annual, Mid-term, and Long-term Plans	No. of planning workshops	2	2	2	2	2	10	1.1	1.5	1.5	1.2	1.2	6.4
Performance Assessments	No. of internal assessments	2	2	2	2	2	10	1.1	1.5	1.5	1.2	1.2	6.4
								39.0	36.8	83.6	109.9	234.2	503.5

Chapter 6.1.4 - Annex

Annex Table 6.1.4.2. Ilocos Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	4	4	4	4	4	20	0.2	0.2	0.2	0.2	0.2	1.0
Training and Other-related Activities		8	12	5	12	5	42						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	60	60	60	60	60	300	0.1	0.1	0.1	0.1	0.1	0.5
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20		20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20		20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20		20		40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20		20		40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	1	1	1	5	0.8	0.8	0.8	0.8	0.8	4.0
	No. of graduates (farmers)	500	500	500	500	500	2,500						

Chapter 6.1.4 - Annex

Annex Table 6.1.4.2. Ilocos Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	60	40	60	240						
Training on Native Goat Production and Management	No. of extension activities funded	1	1	2	2	2	8	0.2	0.2	0.4	0.4	0.4	1.6
	No. of farmers trained	20	20	40	40	40	160						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded		2		2		4	0.0	0.4	0.0	0.4	0.0	0.8
	No. of farmers trained		40		40		80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded		2		2		4	0.0	0.4	0.0	0.4	0.0	0.8
	No. of farmers trained		40		40		80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded		2		2		4	0.0	0.4	0.0	0.4	0.0	0.8
	No. of farmers trained		40		40		80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded		2		2		4	0.0	0.4	0.0	0.4	0.0	0.8
	No. of farmers trained		40		40		80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	1	1	1	2	2	7	0.2	0.2	0.2	0.4	0.4	1.4
	No. of farmers trained	20	20	20	40	40	140						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	2	1	1	1	1	6	0.4	0.2	0.2	0.2	0.2	1.1
Enhancement of Coconut-Based LSA/FS	No. of LSA		1	1	1	1	4	0.0	0.1	0.1	0.1	0.1	0.5
								8.7	12.3	7.4	12.7	7.6	48.7

Chapter 6.1.4 - Annex

Annex Table 6.1.4.3. Cagayan Valley Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.0	1.0
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	60	60	60	60	60	300	0.1	0.1	0.1	0.1	0.1	0.5
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20		20		60						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20	-	20	-	20	60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20	-	20	-	20	60						
TOT on Milk Processing and Management (Goat)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20		20		20	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20		20		20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						

Chapter 6.1.4 - Annex

Annex Table 6.1.4.3. Cagayan Valley Targets and Budget, CFIDP programs - Training Component, TI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
TOT on Production of Coconut Products and By-products	No. of Trainings	1		1	1	1	4	0.5	0.0	0.5	0.5	0.5	2.0
	No. of Participants	20	-	20	20	20	80						
School on the Air	No. of SOA	1	1	1	1	1	5	0.8	0.8	0.8	0.8	0.8	4.0
	No. of graduates (farmers)	500	500	500	500	500	2,500						
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	60	40	60	240						
Training on Native Goat Production and Management	No. of extension activities funded	1	1	2	2	2	8	0.2	0.2	0.4	0.4	0.4	1.6
	No. of farmers trained	20	20	40	40	40	160						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Coconut-Cacao/Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Cacao/Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	1		1	1	2	5	0.2	0.0	0.2	0.2	0.4	1.0
	No. of farmers trained	20	-	20	20	40	100						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	2	1	1	1	1	6	0.4	0.2	0.2	0.2	0.2	1.1
Enhancement of Coconut-Based LSA/FS	No. of LSA		1	1	1	1	4	0.0	0.1	0.1	0.1	0.1	0.5
								12.4	8.0	12.5	8.9	12.5	54.4

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Annex Table 6.1.4.4. Central Luzon Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	7	7	7	7	7	35	0.4	0.4	0.4	0.4	0.4	1.8
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	60	60	60	60	60	300	0.1	0.1	0.1	0.1	0.1	0.5
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20		20		60						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings				1	1	2	0.0	0.0	0.0	0.5	0.5	1.0
	No. of Participants				20	20	40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings				1	1	2	0.0	0.0	0.0	0.5	0.5	1.0
	No. of Participants				20	20	40						
TOT on Milk Processing and Management (Goat)	No. of Trainings				1	1	2	0.0	0.0	0.0	0.5	0.5	1.0
	No. of Participants				20	20	40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings				1	1	2	0.0	0.0	0.0	0.5	0.5	1.0
	No. of Participants				20	20	40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						

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Annex Table 6.1.4.4. Central Luzon Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	1	1	1	5	0.8	0.8	0.8	0.8	0.8	4.0
	No. of graduates (farmers)	500	500	500	500	500	2,500						
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	60	40	60	240						
Training on Native Goat Production and Management	No. of extension activities funded	1	1	2	2	2	8	0.2	0.2	0.4	0.4	0.4	1.6
	No. of farmers trained	20	20	40	40	40	160						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded				2	2	4	0.0	0.0	0.0	0.4	0.4	0.8
	No. of farmers trained				40	40	80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded				2	2	4	0.0	0.0	0.0	0.4	0.4	0.8
	No. of farmers trained				40	40	80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded				2	2	4	0.0	0.0	0.0	0.4	0.4	0.8
	No. of farmers trained				40	40	80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded				2	2	4	0.0	0.0	0.0	0.4	0.4	0.8
	No. of farmers trained				40	40	80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	1	2	2	1	8	0.4	0.2	0.4	0.4	0.2	1.6
	No. of farmers trained	40	20	40	40	20	160						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	2	1	1	1	1	6	0.4	0.2	0.2	0.2	0.2	1.1
Enhancement of Coconut-Based LSA/FS	No. of LSA		1	1	1	1	4	0.0	0.1	0.1	0.1	0.1	0.5
								9.1	8.8	8.7	12.8	12.1	51.7

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Annex Table 6.1.4.5. CALABARZON Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.3	1.3
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	60	60		60		180						
TOT on Native Pig Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20	-	20	-	60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20	-	20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20	-	20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings		1			1	2	0.0	0.5	0.0	0.0	0.5	1.0
	No. of Participants		20	-	-	20	40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings		1			1	2	0.0	0.5	0.0	0.0	0.5	1.0
	No. of Participants		20	-	-	20	40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						

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Annex Table 6.1.4.5. CALABARZON Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	200	200	200	200	40	840						
Training on Native Pig Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	1	1	1	1	1	5	0.2	0.2	0.2	0.2	0.2	0.9
Enhancement of Coconut-Based LSA/FS	No. of LSA			1	1	1	3	0.0	0.0	0.1	0.1	0.1	0.4
								8.1	11.8	8.1	9.3	10.7	48.1

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Annex Table 6.1.4.6. MIMAROPA Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.2	0.2	0.2	0.2	0.2	0.9
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	60	60		60		180						
TOT on Native Pig Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1	1	1		3	0.0	0.5	0.5	0.5	0.0	1.5
	No. of Participants		20	20	20		60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1	1	1		3	0.0	0.5	0.5	0.5	0.0	1.5
	No. of Participants		20	20	20		60						
TOT on Milk Processing and Management (Goat)	No. of Trainings			1	1	1	3	0.0	0.0	0.5	0.5	0.5	1.5
	No. of Participants			20	20	20	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings			1	1	1	3	0.0	0.0	0.5	0.5	0.5	1.5
	No. of Participants			20	20	20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.6. MIMAROPA Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	200	200	200	200	40	840						
Training on Native Pig Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded			2	2	2	6	0.0	0.0	0.4	0.4	0.4	1.2
	No. of farmers trained			40	40	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded			2	2	2	6	0.0	0.0	0.4	0.4	0.4	1.2
	No. of farmers trained			40	40	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded			2	2	2	6	0.0	0.0	0.4	0.4	0.4	1.2
	No. of farmers trained			40	40	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded			2	2	2	6	0.0	0.0	0.4	0.4	0.4	1.2
	No. of farmers trained			40	40	40	120						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	1	9	0.4	0.4	0.4	0.4	0.2	1.8
	No. of farmers trained	40	40	40	40	20	180						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	3	2	2	1	1	9	0.5	0.4	0.4	0.2	0.2	1.6
Enhancement of Coconut-Based LSA/FS	No. of LSA		2	1	1	1	5	0.0	0.3	0.1	0.1	0.1	0.6
								8.4	9.6	11.8	11.9	10.5	52.1

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Annex Table 6.1.4.7. Bicol Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	6	6	6	6	6	30	0.3	0.3	0.3	0.3	0.3	1.5
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.0	0.5	0.0	0.0	1.0
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1		1	1		3	0.5	0.0	0.5	0.5	0.0	1.5
	No. of Participants	20	-	20	20		60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1		1	1		3	0.5	0.0	0.5	0.5	0.0	1.5
	No. of Participants	20	-	20	20		60						
TOT on Milk Processing and Management (Goat)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20	-	20	-	20	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20	-	20	-	20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.7. Bicol Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	60	60	60	260						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	60	40	60	240						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	4	4	3	1	1	13	0.7	0.7	0.5	0.2	0.2	2.3
Enhancement of Coconut-Based LSA/FS	No. of LSA		3	2	2	1	8	0.0	0.4	0.3	0.3	0.1	1.0
								12.3	8.7	12.3	9.0	10.3	52.5

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Annex Table 6.1.4.8. Western Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)				
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5
Strategic Communication												
Information Caravans	No. of other AF related activities	6	6	6	6	6	30	0.3	0.3	0.3	0.3	0.3
Training and Other-related Activities							-					
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20	20	20	20	100					
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20	20	20	20	100					
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20		20		60					
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0
	No. of Participants	60	60		60		180					
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0
	No. of Participants	20	20		20		60					
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1			1	1	3	0.5	0.0	0.0	0.5	0.5
	No. of Participants	20	-	-	20	20	60					
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1			1	1	3	0.5	0.0	0.0	0.5	0.5
	No. of Participants	20	-	-	20	20	60					
TOT on Milk Processing and Management (Goat)	No. of Trainings	1			1	1	3	0.5	0.0	0.0	0.5	0.5
	No. of Participants	20	-	-	20	20	60					
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1			1	1	3	0.5	0.0	0.0	0.5	0.5
	No. of Participants	20	-	-	20	20	60					
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20	20	20	20	100					
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20	20	20	20	100					
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5
	No. of Participants	20	20	20	20	20	100					
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6
	No. of graduates (farmers)	500	500	500	500	500	2,500					

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Annex Table 6.1.4.8. Western Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)				
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5
Farmer-level Trainings												
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	200	200	200	200	40	840					
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	2			2	2	6	0.4	0.0	0.0	0.4	0.4
	No. of farmers trained	40	-	-	40	40	120					
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	2			2	2	6	0.4	0.0	0.0	0.4	0.4
	No. of farmers trained	40	-	-	40	40	120					
Training on Milk Processing and Management (Goat)	No. of extension activities funded	2			2	2	6	0.4	0.0	0.0	0.4	0.4
	No. of farmers trained	40	-	-	40	40	120					
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	2			2	2	6	0.4	0.0	0.0	0.4	0.4
	No. of farmers trained	40	-	-	40	40	120					
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4
	No. of farmers trained	40	40	40	40	40	200					
Certification of Learning Sites for Agriculture							-					
Certification of coconut-based LSA/FS	No. of LSA	5	2	3	1	1	12	0.9	0.4	0.5	0.2	0.2
Enhancement of Coconut-Based LSA/FS	No. of LSA		4	2	2	1	9	0.0	0.5	0.3	0.3	0.1
								12.5	8.9	8.7	12.1	11.8

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Annex Table 6.1.4.9. Central Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	4	4	4	4	4	20	0.2	0.2	0.2	0.2	0.2	1.0
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	40	40		20		100						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Pig Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings			1	1		2	0.0	0.0	0.5	0.5	0.0	1.0
	No. of Participants			20	20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings			1	1		2	0.0	0.0	0.5	0.5	0.0	1.0
	No. of Participants			20	20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings			1		1	2	0.0	0.0	0.5	0.0	0.5	1.0
	No. of Participants			20	-	20	40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings			1		1	2	0.0	0.0	0.5	0.0	0.5	1.0
	No. of Participants			20	-	20	40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.9. Central Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Pig Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	2	2	2	1	1	8	0.4	0.4	0.4	0.2	0.2	1.4
Enhancement of Coconut-Based LSA/FS	No. of LSA		1	1	1	1	4	0.0	0.1	0.1	0.1	0.1	0.5
								10.1	10.3	12.7	11.1	11.5	55.5

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Annex Table 6.1.4.10. Eastern Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	6	6	6	6	6	30	0.3	0.3	0.3	0.3	0.3	1.5
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	40	40		20		100						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Milk Processing and Management (Goat)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.10. Eastern Visayas Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	5	4	3	1	1	14	0.9	0.7	0.5	0.2	0.2	2.5
Enhancement of Coconut-Based LSA/FS	No. of LSA		4	2	2	1	9	0.0	0.5	0.3	0.3	0.1	1.1
								9.8	13.8	9.1	13.0	12.2	57.8

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Annex Table 6.1.4.11. Zamboanga Peninsula Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	3	3	3	3	3	15	0.2	0.2	0.2	0.2	0.2	0.8
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Pig Production and Management	No. of Trainings						-						
	No. of Participants						-						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1			1		2	0.5	0.0	0.0	0.5	0.0	1.0
	No. of Participants	20	-	-	20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1			1		2	0.5	0.0	0.0	0.5	0.0	1.0
	No. of Participants	20	-	-	20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings	1			1		2	0.5	0.0	0.0	0.5	0.0	1.0
	No. of Participants	20	-	-	20		40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1			1		2	0.5	0.0	0.0	0.5	0.0	1.0
	No. of Participants	20	-	-	20		40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.11. Zamboanga Peninsula Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings							-	0.0	0.0	0.0	0.0		
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded			2	2	1	5	0.0	0.0	0.4	0.4	0.2	1.0
	No. of farmers trained			40	40	20	100						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	3	11	0.4	0.4	0.4	0.4	0.6	2.2
	No. of farmers trained	40	40	40	40	60	220						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	2			2		4	0.4	0.0	0.0	0.4	0.0	0.8
	No. of farmers trained	40	-	-	40		80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	2			2		4	0.4	0.0	0.0	0.4	0.0	0.8
	No. of farmers trained	40	-	-	40		80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded	2			2		4	0.4	0.0	0.0	0.4	0.0	0.8
	No. of farmers trained	40	-	-	40		80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	2			2		4	0.4	0.0	0.0	0.4	0.0	0.8
	No. of farmers trained	40	-	-	40		80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	9	6	7	4	4	30	1.6	1.1	1.2	0.7	0.7	5.3
Enhancement of Coconut-Based LSA/FS	No. of LSA		5	2	2	2	11	0.0	0.6	0.3	0.3	0.3	1.4
								13.5	10.1	9.6	13.4	9.1	55.7

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Annex Table 6.1.4.12. Northern Mindanao Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.3	1.3
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings			1	1		2	0.0	0.0	0.5	0.5	0.0	1.0
	No. of Participants			20	20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings			1	1		2	0.0	0.0	0.5	0.5	0.0	1.0
	No. of Participants			20	20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings			1		1	2	0.0	0.0	0.5	0.0	0.5	1.0
	No. of Participants			20	-	20	40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings			1		1	2	0.0	0.0	0.5	0.0	0.5	1.0
	No. of Participants			20	-	20	40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.12. Northern Mindanao Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded			2	2	1	5	0.0	0.0	0.4	0.4	0.2	1.0
	No. of farmers trained			40	40	20	100						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded			2		2	4	0.0	0.0	0.4	0.0	0.4	0.8
	No. of farmers trained			40	-	40	80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture							-						
Certification of coconut-based LSA/FS	No. of LSA	15	6	6	4	4	35	2.6	1.1	1.1	0.7	0.7	6.1
Enhancement of Coconut-Based LSA/FS	No. of LSA		14	7	7	7	35	0.0	1.8	0.9	0.9	0.9	4.4
								11.1	11.3	13.8	11.5	12.2	59.9

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Annex Table 6.1.4.13. Davao Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.3	1.3
Training and Other-related Activities													
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	60	60		60		180						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20	-	20		40						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1		1		2	0.0	0.5	0.0	0.5	0.0	1.0
	No. of Participants		20	-	20		40						
TOT on Milk Processing and Management (Goat)	No. of Trainings		1			1	2	0.0	0.5	0.0	0.0	0.5	1.0
	No. of Participants		20	-	-	20	40						
TOT on Milk Processing and Management (Cattle)	No. of Trainings		1			1	2	0.0	0.5	0.0	0.0	0.5	1.0
	No. of Participants		20	-	-	20	40						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.13. Davao Region Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	200	200	200	200	40	840						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Milk Processing and Management (Goat)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded		2			2	4	0.0	0.4	0.0	0.0	0.4	0.8
	No. of farmers trained		40	-	-	40	80						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	15	6	7	4	4	36	2.6	1.1	1.2	0.7	0.7	6.3
Enhancement of Coconut-Based LSA/FS	No. of LSA		14	7	7	7	35	0.0	1.8	0.9	0.9	0.9	4.4
								11.5	15.3	10.3	11.5	12.4	61.1

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Annex Table 6.1.4.14. SOCCSKSARGEN Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	4	4	4	4	4	20	0.2	0.2	0.2	0.2	0.2	1.0
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Native Cattle Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings	1		1	1		3	0.5	0.0	0.5	0.5	0.0	1.5
	No. of Participants	20	-	20	20		60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings	1		1	1		3	0.5	0.0	0.5	0.5	0.0	1.5
	No. of Participants	20	-	20	20		60						
TOT on Milk Processing and Management (Goat)	No. of Trainings	1		1	1		3	0.5	0.0	0.5	0.5	0.0	1.5
	No. of Participants	20	-	20	20	-	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings	1		1		1	3	0.5	0.0	0.5	0.0	0.5	1.5
	No. of Participants	20	-	20	-	20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	1	1	1	5	0.8	0.8	0.8	0.8	0.8	4.0
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.14. SOCCSKSARGEN Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings	No. of extension activities funded												
	No. of farmers trained												
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded	2		2		2	6	0.4	0.0	0.4	0.0	0.4	1.2
	No. of farmers trained	40	-	40	-	40	120						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	10	4	3	3	3	23	1.8	0.7	0.5	0.5	0.5	4.0
Enhancement of Coconut-Based LSA/FS	No. of LSA		9	4	4	4	21	0.0	1.1	0.5	0.5	0.5	2.6
								13.3	9.8	11.6	10.5	10.1	55.3

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Annex Table 6.1.4.15. Caraga Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.3	1.3
Training and Other-related Activities							-						
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated	80	120	120	120	120	560	0.1	0.2	0.2	0.2	0.2	0.8
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	60	60		60		180						
TOT on Native Goat Production and Management	No. of Trainings	1	1		1		3	0.5	0.5	0.0	0.5	0.0	1.5
	No. of Participants	20	20		20		60						
TOT on Dairy Farm Operation and Management (Goat)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Dairy Farm Operation and Management (Cattle)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Milk Processing and Management (Goat)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Milk Processing and Management (Cattle)	No. of Trainings		1		1	1	3	0.0	0.5	0.0	0.5	0.5	1.5
	No. of Participants		20	-	20	20	60						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.15. Caraga Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5), continued

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings													
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	200	200	200	200	40	840						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Dairy Farm Operation and Management (Goat)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Dairy Farm Operation and Management (Cattle)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Milk Processing and Management (Goat)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Milk Processing and Management (Cattle)	No. of extension activities funded		2		2	2	6	0.0	0.4	0.0	0.4	0.4	1.2
	No. of farmers trained		40	-	40	40	120						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture													
Certification of coconut-based LSA/FS	No. of LSA	4	3	3	1	1	12	0.7	0.5	0.5	0.2	0.2	2.1
Enhancement of Coconut-Based LSA/FS	No. of LSA		3	1	1	1	6	0.0	0.4	0.1	0.1	0.1	0.8
								8.7	12.5	8.5	11.9	11.7	53.3

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Annex Table 6.1.4.16. BARM Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Strategic Communication													
Information Caravans	No. of other AF related activities	5	5	5	5	5	25	0.3	0.3	0.3	0.3	0.3	1.3
Training and Other-related Activities													
Reproduction and Dissemination of Facilitator's Guide	No. of copies disseminated						-						
Coconut Specialist Course	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Farm Business School	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Good Agricultural Practices for Coconut	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Chicken Production and Management	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	40	40	40	20	20	160						
TOT on Native Goat Production and Management	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Native Cattle Production and Management	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Cacao Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Coconut-Coffee Farming System	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
TOT on Production of Coconut Products and By-products	No. of Trainings	1	1	1	1	1	5	0.5	0.5	0.5	0.5	0.5	2.5
	No. of Participants	20	20	20	20	20	100						
School on the Air	No. of SOA	1	1	2	1	2	7	0.8	0.8	1.6	0.8	1.6	5.6
	No. of graduates (farmers)	500	500	500	500	500	2,500						

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Annex Table 6.1.4.16. BARM Targets and Budget, CFIDP programs - Training Component, ATI (Year 1 – 5)

PPAs	Unit of Measure	Physical Target					TOTAL	Budget (in Million Php)					TOTAL
		Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5	
Farmer-level Trainings							-						
Training on Farm Business School	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Good Agricultural Practices for Coconut	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Chicken Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Goat Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Native Cattle Production and Management	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Cacao Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Coconut-Coffee Farming System	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Training on Production of Coconut Products and By-products	No. of extension activities funded	2	2	2	2	2	10	0.4	0.4	0.4	0.4	0.4	2.0
	No. of farmers trained	40	40	40	40	40	200						
Certification of Learning Sites for Agriculture						-	-				-		
Certification of coconut-based LSA/FS	No. of LSA	15	5	5	4	4	33	2.6	0.9	0.9	0.7	0.7	5.8
Enhancement of Coconut-Based LSA/FS	No. of LSA		13	5	5	5	28	0.0	2.3	0.9	0.9	0.9	4.9
								11.4	11.9	11.3	10.3	11.1	56.0

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6.3.1 – ANNEX: COCONUT HYBRIDIZATION PROGRAM – OPERATIONS

Table 6.3.1.1. Regional and annual targets for precision farming component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS		PRECISION FARMING (NUTRIENT SUPPORT)						
		AREA TO BE APPLIED (has)						SHARE OF
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	547						547	6.4%
Region II (Cagayan Valley)							0	0.0%
Region III (Central Luzon)	572						572	6.7%
ACPDC							0	0.0%
Region IV-A (CALABARZON)	2,000						2,000	23.6%
Region IV-B (MIMAROPA)	465						465	5.5%
Region V (Bicol Region)	512						512	6.0%
ARC							0	0.0%
Region VI (Western Visayas)	460						460	5.4%
Region VII (Central Visayas)	540						540	6.4%
CVCSPC							0	0.0%
LSF							0	0.0%
Region VIII (Eastern Visayas)	404						404	4.8%
Region IX (Zamboanga Peninsula)	462						462	5.4%
ZRC							0	0.0%
Region X (Northern Mindanao)	500						500	5.9%
Region XI (Davao Region)	478						478	5.6%
DRC							0	0.0%
Region XII (SOCCSKSARGEN)	577						577	6.8%
NCSPC							0	0.0%
Region XIII (Caraga)	500						500	5.9%
BARMM	474						474	5.6%
TOTAL	8,490	0	0	0	0	0	8,490	100%

Table 6.3.1.2. Regional and annual indicative investments for precision farming component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	PRECISION FARMING (NUTRIENT SUPPORT FOR EXISTING COCONUT HYBRIDS)						
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	4.92	-	-	-	-	4.92	6.4%
Region II (Cagayan Valley)	-	-	-	-	-	-	0.0%
Region III (Central Luzon)	5.15	-	-	-	-	5.15	6.7%
ACPDC	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	18.00	-	-	-	-	18.00	23.6%
Region IV-B (MIMAROPA)	4.18	-	-	-	-	4.18	5.5%
Region V (Bicol Region)	4.61	-	-	-	-	4.61	6.0%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	4.14	-	-	-	-	4.14	5.4%
Region VII (Central Visayas)	4.86	-	-	-	-	4.86	6.4%
CVCSPC	-	-	-	-	-	-	0.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	3.64	-	-	-	-	3.64	4.8%
Region IX (Zamboanga Peninsula)	4.15	-	-	-	-	4.15	5.4%
ZRC	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	4.50	-	-	-	-	4.50	5.9%
Region XI (Davao Region)	4.30	-	-	-	-	4.30	5.6%
DRC	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	5.19	-	-	-	-	5.19	6.8%
NCSPC	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	4.50	-	-	-	-	4.50	5.9%
BARMM	4.26	-	-	-	-	4.26	5.6%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	76.41	-	-	-	-	76.41	100%

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Table 6.3.1.3. Regional and annual targets for communal nursery establishment component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS	COMMUNAL NURSERY ESTABLISHMENT						SHARE OF
	NO. OF NURSERY						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	1	1	2	2	3	9	0.6%
Region II (Cagayan Valley)	1	2	3	4	4	14	0.9%
Region III (Central Luzon)	1	4	6	7	8	26	1.6%
ACPDC						0	0.0%
Region IV-A (CALABARZON)	30	93	134	157	177	591	36.9%
Region IV-B (MIMAROPA)	7	23	33	39	44	146	9.1%
Region V (Bicol Region)	8	26	38	44	50	166	10.4%
ARC						0	0.0%
Region VI (Western Visayas)	3	9	13	15	17	57	3.6%
Region VII (Central Visayas)	4	11	16	19	21	71	4.4%
CVCSPC						0	0.0%
LSF						0	0.0%
Region VIII (Eastern Visayas)	6	18	25	30	33	112	7.0%
Region IX (Zamboanga Peninsula)	7	22	32	37	42	140	8.7%
ZRC						0	0.0%
Region X (Northern Mindanao)	4	11	16	19	21	71	4.4%
Region XI (Davao Region)	3	9	13	15	17	57	3.6%
DRC						0	0.0%
Region XII (SOCCSKSARGEN)	4	13	19	22	25	83	5.2%
NCSPC						0	0.0%
Region XIII (Caraga)	2	7	10	12	13	44	2.7%
BARMM	1	2	3	4	4	14	0.9%
TOTAL	82	251	363	426	479	1,601	100%

Table 6.3.1.4. Regional and annual indicative investments for communal nursery establishment component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	COMMUNAL NURSERY ESTABLISHMENT						SHARE OF TOTAL
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	0.69	1.23	1.76	2.14	2.23	8.05	0.6%
Region II (Cagayan Valley)	0.75	1.84	2.63	3.07	3.40	11.69	0.9%
Region III (Central Luzon)	1.57	3.66	5.21	6.11	6.70	23.25	1.8%
ACPDC	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	23.81	64.45	106.90	125.30	141.34	461.81	36.6%
Region IV-B (MIMAROPA)	5.95	16.11	26.72	31.33	35.34	115.45	9.1%
Region V (Bicol Region)	8.39	21.67	30.88	36.23	40.19	137.36	10.9%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	2.26	6.11	10.13	11.87	13.39	43.76	3.5%
Region VII (Central Visayas)	2.82	7.63	12.66	14.84	16.74	54.69	4.3%
CVCSPC	-	-	-	-	-	-	0.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	4.51	12.21	20.26	23.74	26.78	87.51	6.9%
Region IX (Zamboanga Peninsula)	5.64	15.27	25.32	29.68	33.48	109.39	8.7%
ZRC	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	2.82	7.63	12.66	14.84	16.74	54.69	4.3%
Region XI (Davao Region)	2.26	6.11	10.13	11.87	13.39	43.76	3.5%
DRC	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	3.38	9.16	15.19	17.81	20.09	65.63	5.2%
NCSPC	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	1.79	4.83	8.02	9.40	10.60	34.64	2.7%
BARMM	0.60	1.64	2.71	3.18	3.59	11.73	0.9%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	67.25	179.55	291.19	341.41	384.00	1,263.41	100%

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Table 6.3.1.5. Regional and annual targets for hybrid seednut production (PCA in-house and on-farm) Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS	HYBRID SEEDNUT PRODUCTION						SHARE OF
	PALMS TO BE HYBRIDIZED						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)					858	858	0.2%
Region II (Cagayan Valley)						0	0.0%
Region III (Central Luzon)					858	858	0.2%
ACPDC	600	600	600	600	600	3,000	0.7%
Region IV-A (CALABARZON)	5,465	5,465	6,558	6,818	14,516	38,822	8.9%
Region IV-B (MIMAROPA)	1,093	1,093	1,312	2,000	4,716	10,214	2.3%
Region V (Bicol Region)						0	0.0%
ARC						0	0.0%
Region VI (Western Visayas)	2,186	2,186	2,623	2,727	7,694	17,417	4.0%
Region VII (Central Visayas)	1,640	1,640	1,967	2,045	7,358	14,650	3.4%
CVCSPC	5,150	5,150	5,150	5,150	8,018	28,618	6.6%
LSF	200	200	200	200	200	1,000	0.2%
Region VIII (Eastern Visayas)	547	547	656	682	3,597	6,027	1.4%
Region IX (Zamboanga Peninsula)	3,826	3,826	4,591	4,772	10,590	27,605	6.3%
ZRC	5,500	5,500	5,500	5,500	6,930	28,930	6.6%
Region X (Northern Mindanao)	3,279	3,279	3,935	4,091	10,426	25,009	5.7%
Region XI (Davao Region)	3,279	3,279	3,935	4,091	8,710	23,293	5.3%
DRC	750	750	750	750	1,465	4,465	1.0%
Region XII (SOCCSKSARGEN)	15,630	15,630	18,756	19,498	31,822	101,337	23.2%
NCSPC	12,800	12,800	12,800	12,800	15,660	66,860	15.3%
Region XIII (Caraga)	1,640	1,640	1,967	2,045	15,938	23,230	5.3%
BARMM	1,640	1,640	1,967	2,045	6,500	13,792	3.2%
TOTAL	65,223	65,223	73,268	75,814	156,456	435,984	100%

Table 6.3.1.6. Regional and annual indicative investments for hybrid seednut production (PCA in-house and on-farm) component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	HYBRID SEEDNUT PRODUCTION						SHARE OF
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	-	-	-	-	2.93	2.93	0.1%
Region II (Cagayan Valley)	-	-	-	-	-	-	0.0%
Region III (Central Luzon)	-	-	-	-	2.98	2.98	0.1%
ACPDC	4.77	3.07	3.09	3.10	3.06	17.10	0.7%
Region IV-A (CALABARZON)	42.88	46.26	36.55	45.92	79.27	250.87	10.1%
Region IV-B (MIMAROPA)	10.15	9.89	7.47	13.32	25.54	66.38	2.7%
Region V (Bicol Region)	-	-	-	-	-	-	0.0%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	16.45	14.66	13.75	17.31	40.95	103.10	4.1%
Region VII (Central Visayas)	13.13	11.61	10.49	13.18	39.00	87.42	3.5%
CVCSPC	27.81	26.39	26.61	26.63	40.91	148.35	5.9%
LSF	1.07	1.02	1.03	1.03	1.02	5.18	0.2%
Region VIII (Eastern Visayas)	6.34	5.78	3.96	4.96	19.17	40.21	1.6%
Region IX (Zamboanga Peninsula)	27.74	26.51	24.20	30.49	56.92	165.86	6.6%
ZRC	29.61	28.17	28.39	28.40	31.73	146.30	5.9%
Region X (Northern Mindanao)	23.65	21.67	20.52	25.85	55.61	147.31	5.9%
Region XI (Davao Region)	23.43	21.35	20.42	25.73	46.71	137.64	5.5%
DRC	4.07	3.85	3.88	3.88	72.64	88.32	3.5%
Region XII (SOCCSKSARGEN)	103.17	97.75	96.24	121.35	171.98	590.50	23.7%
NCSPC	68.89	65.55	66.07	66.09	15.64	282.24	11.3%
Region XIII (Caraga)	13.35	11.15	10.51	13.21	83.27	131.49	5.3%
BARMM	12.58	10.42	10.19	12.99	34.40	80.59	3.2%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	429.08	405.11	383.39	453.44	823.74	2,494.76	100%

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Table 6.3.1.7. Regional and annual targets for seedfarm development in government lands component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS	SEEDFARM DEVELOPMENT IN GOVERNMENT LANDS						
	AREA TO BE PLANTED (has)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	6	6	6	6	6	30	1.5%
Region II (Cagayan Valley)	6	6	6	6	6	30	1.5%
Region III (Central Luzon)					6	6	0.3%
ACPDC						0	0.0%
Region IV-A (CALABARZON)	30	30	30	30	30	150	7.5%
Region IV-B (MIMAROPA)	12	12	12	12	12	60	3.0%
Region V (Bicol Region)	6	6	6	6	6	30	1.5%
ARC	5	5	5	5	5	25	1.3%
Region VI (Western Visayas)	25	25	25	25	25	125	6.3%
Region VII (Central Visayas)	30	30	30	30	30	150	7.5%
CVCSPC	20	20	20	20	20	100	5.0%
LSF						0	0.0%
Region VIII (Eastern Visayas)	18	18	18	18	18	90	4.5%
Region IX (Zamboanga Peninsula)	24	24	24	24	24	120	6.0%
ZRC	10	10	10	10	10	50	2.5%
Region X (Northern Mindanao)	30	30	30	30	30	150	7.5%
Region XI (Davao Region)	18	18	18	18	18	90	4.5%
DRC	5	5	5	5	5	25	1.3%
Region XII (SOCCSKSARGEN)	18	18	18	18	18	90	4.5%
NCSPC	20	20	20	20	20	100	5.0%
Region XIII (Caraga)	90	90	90	90	90	450	22.6%
BARMM	24	24	24	24	24	120	6.0%
TOTAL	397	397	397	397	403	1,991	100%

Table 6.3.1.8. Regional and annual indicative investments for seedfarm development in government lands Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	SEEDFARM DEVELOPMENT IN GOVERNMENT LANDS						SHARE OF
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	1.30	0.84	0.85	0.95	1.03	4.96	1.5%
Region II (Cagayan Valley)	1.30	0.84	0.85	0.95	1.03	4.96	1.5%
Region III (Central Luzon)	-	-	-	-	1.03	1.03	0.3%
ACPDC	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	6.51	4.20	4.24	4.73	5.13	24.80	7.5%
Region IV-B (MIMAROPA)	2.60	1.68	1.70	1.89	2.05	9.92	3.0%
Region V (Bicol Region)	1.30	0.84	0.85	0.95	1.03	4.96	1.5%
ARC	2.05	0.71	0.72	0.79	0.95	5.22	1.6%
Region VI (Western Visayas)	5.46	3.53	3.56	3.97	4.31	20.83	6.3%
Region VII (Central Visayas)	6.51	4.20	4.24	4.73	5.13	24.80	7.5%
CVCSPC	4.34	2.80	2.83	3.15	3.42	16.53	5.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	3.90	2.52	2.55	2.84	3.08	14.88	4.5%
Region IX (Zamboanga Peninsula)	5.20	3.36	3.39	3.78	4.10	19.84	6.0%
ZRC	2.17	1.40	1.41	1.58	1.71	8.27	2.5%
Region X (Northern Mindanao)	6.51	4.20	4.24	4.73	5.13	24.80	7.5%
Region XI (Davao Region)	3.90	2.52	2.55	2.84	3.08	14.88	4.5%
DRC	1.08	0.70	0.71	0.79	0.85	4.13	1.3%
Region XII (SOCCSKSARGEN)	3.90	2.52	2.55	2.84	3.08	14.88	4.5%
NCSPC	4.34	2.80	2.83	3.15	3.42	16.53	5.0%
Region XIII (Caraga)	19.52	12.59	12.73	14.18	15.38	74.39	22.5%
BARMM	5.20	3.36	3.39	3.78	4.10	19.84	6.0%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	87.09	55.59	56.18	62.56	69.01	330.43	100%

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Table 6.3.1.9. Regional and Annual Targets for Strategic Hybrid Planting/Replanting Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS	STRATEGIC HYBRID PLANTING/REPLANTING AREA TO BE PLANTED (has)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	33	102	148	173	195	651	0.6%
Region II (Cagayan Valley)	49	153	221	259	293	975	0.9%
Region III (Central Luzon)	99	307	443	519	585	1,953	1.7%
ACPDG						0	0.0%
Region IV-A (CALABARZON)	2,081	6,471	9,344	10,953	12,355	41,204	36.8%
Region IV-B (MIMAROPA)	520	1,618	2,336	2,738	3,089	10,301	9.2%
Region V (Bicol Region)	585	1,818	2,625	3,077	3,471	11,576	10.3%
ARC						0	0.0%
Region VI (Western Visayas)	197	613	885	1,038	1,171	3,904	3.5%
Region VII (Central Visayas)	247	766	1,107	1,297	1,463	4,880	4.4%
CVCSPG						0	0.0%
LSF						0	0.0%
Region VIII (Eastern Visayas)	394	1,226	1,771	2,076	2,341	7,808	7.0%
Region IX (Zamboanga Peninsula)	493	1,533	2,313	2,594	2,927	9,860	8.8%
ZRC						0	0.0%
Region X (Northern Mindanao)	247	766	1,107	1,297	1,463	4,880	4.4%
Region XI (Davao Region)	197	613	885	1,038	1,171	3,904	3.5%
DRC						0	0.0%
Region XII (SOCCSKSARGEN)	296	920	1,328	1,557	1,756	5,857	5.2%
NCSPG						0	0.0%
Region XIII (Caraga)	156	485	701	822	927	3,091	2.8%
BARMIM	53	164	237	278	314	1,046	0.9%
TOTAL	5,647	17,555	25,451	29,716	33,521	111,890	100%

Table 6.3.1.10. Regional and Annual Indicative Investments for Strategic Hybrid Planting/Replanting Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	STRATEGIC PLANTING/REPLANTING INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	0.23	0.55	0.83	0.90	1.13	3.64	0.6%
Region II (Cagayan Valley)	0.35	0.83	1.24	1.35	1.70	5.46	0.9%
Region III (Central Luzon)	0.69	1.66	2.48	2.70	3.39	10.92	1.7%
ACPDG	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	14.57	34.94	52.33	56.96	71.66	230.46	36.9%
Region IV-B (MIMAROPA)	3.64	8.74	13.08	14.24	17.92	57.61	9.2%
Region V (Bicol Region)	4.09	9.82	14.70	16.00	20.13	64.74	10.4%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	1.38	3.31	4.96	5.40	6.79	21.84	3.5%
Region VII (Central Visayas)	1.73	4.14	6.20	6.75	8.49	27.29	4.4%
CVCSPG	-	-	-	-	-	-	0.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	2.76	6.62	9.92	10.79	13.58	43.67	7.0%
Region IX (Zamboanga Peninsula)	3.45	8.28	12.40	13.49	16.97	54.59	8.7%
ZRC	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	1.73	4.14	6.20	6.75	8.49	27.29	4.4%
Region XI (Davao Region)	1.38	3.31	4.96	5.40	6.79	21.84	3.5%
DRC	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	2.07	4.97	7.44	8.09	10.18	32.75	5.2%
NCSPG	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	1.09	2.62	3.93	4.27	5.38	17.29	2.8%
BARMIM	0.37	0.89	1.33	1.45	1.82	5.85	0.9%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	39.53	94.80	141.97	154.52	194.42	625.24	100%

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Table 6.3.1.11. Regional and Annual Targets for Professionalizing the Coconut Workforce Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS PHYSICAL TARGETS	PROFESSIONALIZING THE COCONUT WORKFORCE						
	NUMBER OF TRAINEES						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	20		49	122	96	287	0.6%
Region II (Cagayan Valley)	20			188	110	318	0.7%
Region III (Central Luzon)	20		49	400	208	677	1.5%
ACPDC		-	-	-	12	12	0.0%
Region IV-A (CALABARZON)	375	330	272	8,619	4,050	13,646	29.8%
Region IV-B (MIMAROPA)	82	59	209	2,173	1,020	3,543	7.7%
Region V (Bicol Region)	20			2,471	1,007	3,498	7.6%
ARC	-	-	-	-	-	0	0.0%
Region VI (Western Visayas)	94	168	297	799	547	1,905	4.2%
Region VII (Central Visayas)	73	129	292	1,025	612	2,131	4.6%
CVCSPC					60	60	0.1%
LSF					4	4	0.0%
Region VIII (Eastern Visayas)	49	32	175	1,647	783	2,686	5.9%
Region IX (Zamboanga Peninsula)	227	217	331	1,963	1,194	3,931	8.6%
ZRC		-	-	-	277	277	0.6%
Region X (Northern Mindanao)	162	222	292	976	720	2,371	5.2%
Region XI (Davao Region)	162	222	302	756	602	2,043	4.5%
DRC		-	-	-	121	121	0.3%
Region XII (SOCCSKSARGEN)	983	769	263	634	1,759	4,407	9.6%
NCSPC		-	-	-	156	156	0.3%
Region XIII (Caraga)	115	87	1,216	601	726	2,745	6.0%
BARMM	115	87	365	152	312	1,030	2.2%
TOTAL	2,517	2,320	4,110	22,526	14,376	45,849	100%

Table 6.3.1.12. Regional and Annual Indicative Investments for Professionalizing the Coconut Workforce Component of Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	PROFESSIONALIZING THE COCONUT WORKFORCE						SHARE OF
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	0.22	-	-	-	-	0.22	0.8%
Region II (Cagayan Valley)	0.24	-	-	-	-	0.24	0.8%
Region III (Central Luzon)	0.30	-	-	-	-	0.30	1.0%
ACPDC	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	5.84	-	-	-	-	5.84	19.9%
Region IV-B (MIMAROPA)	1.36	-	-	-	-	1.36	4.7%
Region V (Bicol Region)	0.89	-	-	-	-	0.89	3.0%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	1.09	-	-	-	-	1.09	3.7%
Region VII (Central Visayas)	0.96	-	-	-	-	0.96	3.3%
CVCSPC	-	-	-	-	-	-	0.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	0.92	-	-	-	-	0.92	3.1%
Region IX (Zamboanga Peninsula)	2.62	-	-	-	-	2.62	8.9%
ZRC	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	1.74	-	-	-	-	1.74	5.9%
Region XI (Davao Region)	1.68	-	-	-	-	1.68	5.7%
DRC	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	9.02	-	-	-	-	9.02	30.8%
NCSPC	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	1.29	-	-	-	-	1.29	4.4%
BARMM	1.10	-	-	-	-	1.10	3.8%
CENTRAL OFFICE	-	-	-	-	-	-	0.0%
TOTAL	29.26	-	-	-	-	29.26	100%

Note: Skills and certificate trainings from years 2-5 will be requested from TESDA and ATI and for organizational development and strengthening from CDA.

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Table 6.3.1.13. Regional and Annual Indicative Investments for Program Support to Hybridization - Operations, 5 years

HYBRIDIZATION OPERATIONS	SUPPORT TO HYBRIDIZATION						SHARE OF TOTAL
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	0.28	0.28	0.56	0.16	0.56	1.83	1.4%
Region II (Cagayan Valley)	0.28	0.28	0.56	0.24	0.56	1.91	1.5%
Region III (Central Luzon)	0.28	0.28	0.56	0.48	0.56	2.15	1.6%
ACPDC	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	1.39	1.39	2.78	10.18	2.78	18.54	14.2%
Region IV-B (MIMAROPA)	0.28	0.28	0.56	2.55	0.56	4.22	3.2%
Region V (Bicol Region)	0.28	0.28	0.56	2.86	0.56	4.53	3.5%
ARC	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	0.28	0.28	0.56	0.98	0.56	2.65	2.0%
Region VII (Central Visayas)	0.56	0.56	1.11	1.22	1.11	4.56	3.5%
CVCSPC	-	-	-	-	-	-	0.0%
LSF	-	-	-	-	-	-	0.0%
Region VIII (Eastern Visayas)	0.28	0.28	0.56	1.93	0.56	3.61	2.8%
Region IX (Zamboanga Peninsula)	0.28	0.28	0.56	2.42	0.56	4.09	3.1%
ZRC	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	0.28	0.28	0.56	1.22	0.56	2.89	2.2%
Region XI (Davao Region)	0.28	0.28	0.56	0.97	0.56	2.64	2.0%
DRC	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	0.56	0.56	1.11	1.45	1.11	4.79	3.7%
NCSPC	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	0.28	0.28	0.56	0.80	0.56	2.48	1.9%
BARMM	0.28	0.28	0.56	0.27	0.56	1.94	1.5%
CENTRAL OFFICE	15.53	9.10	15.58	10.33	17.13	67.67	51.9%
TOTAL	21.38	14.95	27.28	38.07	28.83	130.50	100%

Table 6.3.1.14. Contribution of the Hybridization Project to the National Targets, 10 years

TARGETS-HYBRIDIZATION (OPERATIONS)	YEAR	ROADMAP TARGETS	CFIDP CONTRIBUTION	% CFIDP CONTRIBUTION TO ACHIEVING TARGETS
Number of hybrid seednuts produced (in million nuts)	2022	11.20	1.00	
	2023	11.20	3.11	
	2024	11.20	4.49	
	2025	11.20	5.26	
	2026	11.20	5.26	
	SUBTOTAL	56.00	19.12	34.1%
	2027	11.20	11.04	
	2028	11.20	10.97	
	2029	11.20	10.76	
	2030	11.20	10.15	
	2031	11.20	10.71	
TOTAL		112.00	72.76	65.0%
Area (ha) planted to hybrids	2022	58,741.00	5,647.00	
	2023	58,741.00	17,555.00	
	2024	58,741.00	25,451.00	
	2025	58,741.00	29,716.00	
	2026	58,741.00	33,521.00	
	SUBTOTAL	293,705.00	111,890.00	38.1%
	2027	58,741.00	64,009.17	
	2028	58,741.00	63,576.75	
	2029	58,741.00	62,387.42	
	2030	58,741.00	58,805.70	
	2031	58,741.00	62,106.00	
TOTAL		587,410.00	422,775.04	72.0%
Nut Production (number of nuts, in billion)	2026	16.75	.05	0.3%
	2031	20.00	1.54	7.7%
	2040	30.00	8.45	28.0%

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Table 6.3.1.15. Projected contribution of hybridization projects to coconut production, 2022-2040

YEAR		PROJECTED SEEDLINGS PLANTED (M)	YIELD OF HYBRIDS (B nuts)	YIELD OF EXISTING PALMS (B nuts)	TOTAL YIELD (B nuts)	PERCENT CONTRIBUTION OF HYBRID
YEAR 1	2022	0.808		15.312	15.312	
YEAR 2	2023	2.510		15.66	15.660	
YEAR 3	2024	3.639		16.008	16.008	
YEAR 4	2025	4.249	0.008	16.356	16.364	0.05
YEAR 5	2026	4.794	0.049	16.704	16.753	0.29
YEAR 6	2027	9.153	0.152	17.052	17.204	0.88
YEAR 7	2028	9.091	0.342	17.4	17.742	1.93
YEAR 8	2029	8.921	0.625	17.748	18.373	3.40
YEAR 9	2030	8.409	1.018	18.096	19.114	5.32
YEAR 10	2031	8.881	1.538	18.444	19.982	7.70
YEAR 11	2032	8.607	2.171	18.792	20.963	10.36
YEAR 12	2033	8.607	2.932	19.14	22.072	13.28
YEAR 13	2034	8.607	3.700	19.488	23.188	15.96
YEAR 14	2035	8.607	4.478	19.836	24.314	18.42
YEAR 15	2036	8.607	5.260	20.184	25.444	20.67
YEAR 16	2037	8.607	6.058	20.532	26.590	22.78
YEAR 17	2038	8.607	6.852	20.88	27.732	24.71
YEAR 18	2039	8.607	7.648	21.228	28.876	26.49
YEAR 19	2040	8.607	8.447	21.576	30.023	28.14

Note:

Yields from existing farms are based on the (PSA 2019) total number of bearing palms (of 348 Million) with an average yield of 44 nuts/ palm increasing by one (1) nut/palm/year, up to 62 nuts/palm by 2040.

Hybrid starts bearing 4 years after planting.

The PCA-RDB has developed 15 hybrids (single-cross) which can yield an average of 80-150 nuts/palm/year under suitable environment and good management.

6.3.2 – ANNEX: HYBRIDIZATION RESEARCH

Monitoring and Evaluation

Together with PCA, DOST-PCAARRD shall conduct monitoring and evaluation of these programs and projects, and impact assessment through the periodic field and table evaluation to identify problems, solutions, and remedial actions to ensure the smooth implementation of the component programs and projects.

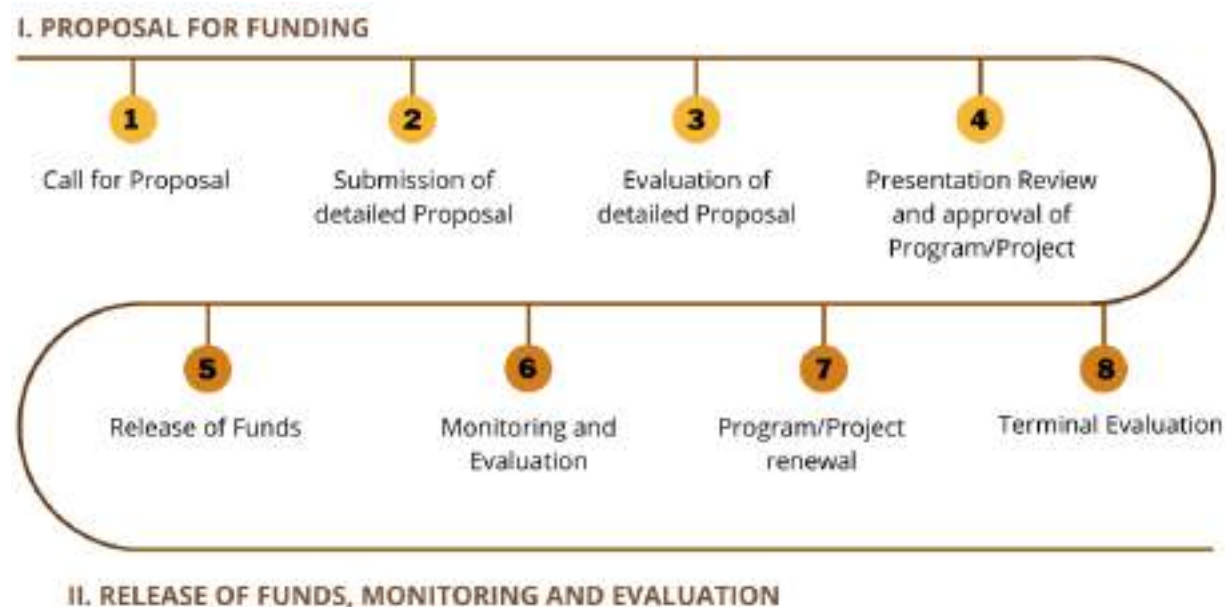


Figure 6.3.2.1. Proposed Proposal packaging and M and E Scheme for the Coconut Hybridization Program

1. Proposal for Funding

Proposals shall be aligned with the Harmonized National Research and Development Agenda (HNRDA) and support the CHP under the Coconut Farmers and Industry Development Plan (CFIDP) of the Republic Act No. 11524.

2. Submission of Detailed Proposals

Proposals are inputted through the DOST Project Management Information System (DPMIS). The DPMIS forwards the proposals to the Online System for Submission and Evaluation of R&D Proposals (OSEP).

Proposals with complete documentary requirements are encoded by the Office of the Deputy Executive Director for R and D (OED-RD) to Palihan (project database of DOST-PCAARRD) to get a system-generated project code. Within five (5) working days, the OED-RD forwards the proposal to the concerned Technical Research Division (TRD) for evaluation.

3. Evaluation of Detailed Proposal

The TRD reviews the technical feasibility and financial viability of the proposal as well as the eligibility of the proponent. The proposal may be subject to review and evaluation by an external evaluator. The TRD submits the consolidated results of the evaluation to OED-RD within seventeen (17) working days.

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For proposals requiring revision, the TRD requests the proponent to revise or provide clarification on the proposal within seven (7) working days from receipt of comments/recommendations. If a revised proposal is not submitted within the given time, such will be dropped by the TRD. If the revised proposal is re-submitted on time, it will be re-evaluated based on the suggestions/recommendations.

If the revised proposal is found acceptable, it is endorsed by the TRD through the OED-RD for presentation of the approving bodies within six (6) working days.

4. Presentation, Review and Approval of Program/Project



All projects to be funded shall be subject to approval of the DOST-PCAARRD's Governing Council (GC) except for projects amounting to five million pesos (PhP5,000,000.00) and below which will be approved by the DOST-PCAARRD's Directors' Council (DC). The project is either approved, conditionally approved or disapproved.

The DOST-PCAARRD GC shall be informed of the projects approved by the DOST-PCAARRD DC.

The TRD through the OED-RD informs the agency head of the implementing agency of the final decision of the approving bodies within ten (10) working days after the meeting.

5. Release of Funds

Within twenty-eight (28) working days upon approval of program/project for funding, the TRD prepares and facilitates the requisite documents for fund processing, and signing notarization of MOA (for new projects), and endorses to OED-RD for the approval of the ED. The OED-RD subsequently forwards the documents of FAD-Accounting for processing and release of funds.

6. Monitoring and Evaluation (M and E)

The TRD prepares the M and E plan for the program/project and conduct the following activities:

- Inception Meeting- within three (3) months upon release of funds;
- Regular field visits every six (6) months as the need arises;
- Annual and pre-completion project review; and
- Monitoring compliance to DOST Grants-in-aid (GIA) guidelines, e.g. submission of financial and technical reports and review thereof; requests for changes in project implementation; request for project renewal, etc.

7. Program/Project Renewal

For continuing program/project: The TRD reviews the technical progress reports based on agreed targets, objectives and expected outputs. Proponent revises reports based on comments and suggestions by the TRD.

Through a reminder letter, the proponent is requested to submit renewal documents in the third quarter of project implementation. The TRD prepares renewal documents and endorses the program/project for renewal, through the OED-RD, to the approving bodies.

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The presentation, review and approval of the program/project by the approving bodies will follow process 4 followed by the Fund Release and M and E.

8. Terminal Evaluation

Upon project completion, a terminal review is conducted to determine the significant findings, identify potential off-shoot R and D initiatives, and classify possible technologies for IP protection, information dissemination as well as policy analyses and advocacy, extension, deployment and commercialization.

The terminal technical report, including the publishable article/s, and the terminal financial report shall be submitted within three (3) months after project completion. DOST-PCAARRD will issue a clearance letter from obligations upon receipt of acceptable reports.

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6.4.1 – ANNEX: INTERCROPPING (COFFEE AND CACAO)

As a guide in the conduct of suitability assessment, the agro-climatic requirements for growth and development of coffee are provided below:

Table 6.4.1.1. Agro-climatic requirements for growth and development of coffee

FACTORS	VARIETIES			
	ROBUSTA	ARABICA	LIBERICA	EXCELSA
Elevation (MASL)	600 – 1,200	900 – 1,800	600 – 1000	600 – 1000
Temperature (°C)	24 – 30	15 – 24	10 - 30	10 – 30
Soil PH	5.5 – 6.5	5.5 – 6.5	5.5 – 6.5	5.5 – 6.5
Soil Depth	1.5	1.5	1.5	1.5
Organic Matter (OM)	Rich in OM	Rich in OM	Rich in OM	Rich in OM
Wind Requirement	Slight	Slight	Slight	Slight
Relative Humidity (%)	75 – 85	75 – 90	70 – 90	70 – 90
Rainfall (mm)	200	200	150	150

Table 6.4.1.2. Agro-climatic requirements for growth and development of cacao

FACTORS	CACAO
Elevation (MASL)	300 – 1,200
Temperature (°C)	Minimum of 18°C and maximum of 30-32°C
Soil PH	5.0 – 7.5
Soil Depth	150
Organic Matter (OM)	Rich in organic matter
Wind Requirement	Slight
Relative Humidity (%)	75-90
Rainfall (mm)	1,250 to 3,000 mm per annum

**A suitable temperature is generally observed at an altitude up to 700 m.*

**Cacao thrives best under Type IV climate which has an evenly distributed rainfall throughout the year.*

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Based on the chemical compositions of the coconut wastes, it is suggested that the frequency of application is 1-2X and 2-3X for coconut chips and coco-coir dusts, respectively. However, when applied at a high rate (5.0 tons/ha), the recommended application is only once a year for both residues.

Table 6.4.1.3. Application rate of coconut wastes, and estimated amount of nutrient applied

APPLICATION RATE	NITROGEN	PHOSPHOROUS	POTASSIUM	FREQUENCY OF APPLICATION
	(kg/ha/application)			
Coconut Coir Dust				
10 kgs per tree	2.5	0.4	6.9	2-3 times a year
15 kgs per tree	3.75	0.6	10.35	2-3 times a year
High Rate (5T/ha)	12.5	2	34.5	Once a year
Coconut Husk/Chips				
10 kgs per tree	3.3	0.4	9.7	1-2 times a year
15 kgs per tree	4.95	0.6	14.55	1-2 times a year
High Rate (5T/ha)	16.5	2	48.5	Once a year

Table 6.4.1.4. Production Support Services (PSS) Regional and Annual Indicative Investments, 5 years

PSS (Production Support Services)	BUDGET ALLOCATION PER MFO (IN MILLION, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	3.00	3.00	3.12	3.26	1.04	13.41	3.03%
Region II (Cagayan Valley)	4.00	3.40	2.98	-	3.87	14.24	3.21%
Region III (Central Luzon)	5.46	5.46	6.66	7.28	8.06	32.92	7.43%
Region IV-A (CALABARZON)	-	1.05	11.58	17.25	10.94	40.82	9.21%
Region IV-B (MIMAROPA)	2.34	1.07	0.81	6.40	11.33	21.95	4.95%
Region V (Bicol Region)	4.42	6.44	8.40	6.78	7.69	33.73	7.61%
Region VI (Western Visayas)	2.99	3.50	7.15	4.68	5.59	23.90	5.39%
Region VII (Central Visayas)	2.34	0.65	2.05	2.40	5.28	12.72	2.87%
Region VIII (Eastern Visayas)	3.44	11.79	14.10	16.20	16.45	61.98	13.99%
Region IX (Zamboanga Peninsula)	3.30	1.70	2.20	2.30	2.30	11.80	2.66%
Region X (Northern Mindanao)	2.86	4.00	3.92	4.78	4.78	20.34	4.59%
Region XI (Davao Region)	3.82	5.00	9.56	9.75	18.59	46.71	10.54%
Region XII (SOCCSKSARGEN)	2.60	5.22	7.23	8.24	11.25	34.54	7.79%
Region XIII (Caraga)	2.60	3.46	6.22	4.85	8.78	25.91	5.85%
BARMM	13.00	13.00	6.60	5.00	10.60	48.20	10.88%
TOTAL	56.16	68.74	92.56	99.16	126.53	443.15	100%

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Table 6.4.1.5. Extension Support, Education and Training Services (ESETS) Regional and Annual Indicative Investments, 5 years

ESETS (Extension Support, Education and Training Services)	BUDGET ALLOCATION PER MFO (IN MILLION, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	-	-	-	-	-	-	0.00%
Region II (Cagayan Valley)	-	-	-	3.10	-	3.10	0.83%
Region III (Central Luzon)	-	-	-	-	-	-	0.00%
Region IV-A (CALABARZON)	16.78	15.90	10.05	10.05	23.04	75.83	20.37%
Region IV-B (MIMAROPA)	4.50	5.40	3.98	-	-	13.88	3.73%
Region V (Bicol Region)	8.50	8.50	8.00	8.00	8.50	41.50	11.15%
Region VI (Western Visayas)	3.81	4.00	0.77	5.51	9.35	23.43	6.29%
Region VII (Central Visayas)	4.50	6.85	5.80	6.90	7.60	31.65	8.50%
Region VIII (Eastern Visayas)	5.45	0.21	0.40	0.40	2.40	8.85	2.38%
Region IX (Zamboanga Peninsula)	8.67	8.67	8.67	8.67	8.67	43.35	11.65%
Region X (Northern Mindanao)	5.50	5.00	5.00	5.00	5.00	25.50	6.85%
Region XI (Davao Region)	9.67	9.67	8.05	10.75	10.75	48.87	13.13%
Region XII (SOCCSKSARGEN)	5.00	4.00	4.00	4.00	5.60	22.60	6.07%
Region XIII (Caraga)	5.00	5.00	4.55	7.55	8.40	30.50	8.19%
BARMM	-	-	1.20	-	2.00	3.20	0.86%
TOTAL	77.37	73.19	60.46	69.93	91.31	372.26	100%

Table 6.4.1.6. Agricultural Machinery, Equipment and Facilities Support Services (AMEFS) Regional and Annual Indicative Investments, 5 years

AMEFS (Agricultural Machinery, Equipment and Facilities Support Services)	BUDGET ALLOCATION PER MFO (IN MILLION, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	-	-	0.48	0.94	4.96	6.39	2.79%
Region II (Cagayan Valley)	-	-	1.22	1.68	3.13	6.03	2.63%
Region III (Central Luzon)	-	-	-	0.40	3.20	3.60	1.57%
Region IV-A (CALABARZON)	3.22	3.05	2.37	0.69	6.01	15.35	6.70%
Region IV-B (MIMAROPA)	1.53	1.80	5.02	5.00	5.17	18.52	8.09%
Region V (Bicol Region)	2.73	0.67	2.04	6.68	14.62	26.74	11.68%
Region VI (Western Visayas)	1.60	0.86	2.03	1.55	1.56	7.60	3.32%
Region VII (Central Visayas)	1.53	0.87	2.20	2.42	3.86	10.88	4.75%
Region VIII (Eastern Visayas)	3.21	-	0.50	1.00	6.47	11.18	4.88%
Region IX (Zamboanga Peninsula)	4.77	6.37	9.47	12.97	23.77	57.35	25.04%
Region X (Northern Mindanao)	1.87	1.00	3.51	4.81	11.42	22.61	9.87%
Region XI (Davao Region)	0.15	-	-	0.04	-	0.19	0.08%
Region XII (SOCCSKSARGEN)	1.70	0.30	0.30	0.30	1.80	4.40	1.92%
Region XIII (Caraga)	1.70	0.70	0.31	0.28	0.84	3.82	1.67%
BARMM	-	-	7.80	13.20	13.40	34.40	15.02%
TOTAL	24.01	15.62	37.25	51.95	100.22	229.05	100%

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Table 6.4.1.7. Farm Production-Related Machinery and Equipment (FPMA) Regional and Annual Indicative Investments, 5 years

FPMA (Farm Production-related Machinery and Equipment)	BUDGET ALLOCATION PER MFO (IN MILLION, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	-	-	-	-	-	-	0.00%
Region II (Cagayan Valley)	-	0.60	0.60	0.83	1.00	3.03	5.45%
Region III (Central Luzon)	0.54	0.54	0.54	0.72	0.74	3.08	5.55%
Region IV-A (CALABARZON)	-	-	-	-	-	-	0.00%
Region IV-B (MIMAROPA)	0.63	0.73	1.00	1.20	1.50	5.06	9.11%
Region V (Bicol Region)	1.35	1.38	1.97	2.34	3.18	10.23	18.42%
Region VI (Western Visayas)	0.61	0.65	0.85	0.88	1.50	4.48	8.07%
Region VII (Central Visayas)	0.63	0.63	0.75	0.88	1.26	4.15	7.47%
Region VIII (Eastern Visayas)	0.91	1.00	0.60	0.60	0.69	3.80	6.83%
Region IX (Zamboanga Peninsula)	1.26	1.26	1.26	1.26	1.26	6.30	11.34%
Region X (Northern Mindanao)	0.77	1.00	0.77	0.81	0.80	4.15	7.48%
Region XI (Davao Region)	1.03	-	-	-	-	1.03	1.85%
Region XII (SOCCSKSARGEN)	0.70	0.48	0.47	1.46	1.35	4.46	8.04%
Region XIII (Caraga)	0.70	0.84	0.92	1.32	1.99	5.77	10.39%
BARMM	-	-	-	-	-	-	0.00%
TOTAL	9.13	9.11	9.73	12.30	15.27	55.54	100%

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ATI learning sites establishment for training on package of technology

Table 6.4.1.8. ATI Regional and Annual Learning Sites Establishment for Training on Package of Technology for Coffee and Cacao Intercropping, 5 Years

REGIONS	NUMBER OF LEARNING SITES ESTABLISHED						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region II (Cagayan Valley)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region III (Central Luzon)			1	2	2	5	-	-	0.15	0.30	0.30	0.75	3.50%
Region IV-A (CALABARZON)			4	8	8	20	-	-	0.60	1.20	1.20	3.00	13.99%
Region IV-B (MIMAROPA)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region V (Bicol Region)			2	4	4	10	-	-	0.30	0.60	0.60	1.50	6.99%
Region VI (Western Visayas)	2	5	5	1	3	16	0.30	0.75	0.75	0.15	0.45	2.40	11.19%
Region VII (Central Visayas)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region VIII (Eastern Visayas)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region IX (Zamboanga Peninsula)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region X (Northern Mindanao)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XI (Davao Region)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XII (SOCCSKSARGEN)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XIII (Caraga)	2	2	3	5	4	16	0.30	0.30	0.45	0.75	0.60	2.40	11.19%
BARMM			10	10	10	30	-	-	1.50	1.50	1.50	4.50	20.98%
TOTAL	4	7	35	48	49	143	0.60	1.05	5.25	7.20	7.35	21.45	100%

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Coffee and Cacao Intercropping Trainings Under ATI

Table 6.4.1.9. Regional and Annual Target Beneficiaries and Indicative Investment for Training on Package Of Technology for Coffee and Cacao Intercropping Under ATI, 5 Years

REGIONS	NUMBER OF PARTICIPANTS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	200	200	200	200	200	1,000	0.20	0.20	0.20	0.20	0.20	1.00	1.58%
Region II (Cagayan Valley)	200	300	400	400	600	1,900	0.20	0.30	0.40	0.40	0.60	1.90	3.00%
Region III (Central Luzon)	500	500	500	500	500	2,500	0.50	0.50	0.50	0.50	0.50	2.50	3.95%
Region IV-A (CALABARZON)	1,600	1,600	800	800	300	5,100	1.60	1.60	0.80	0.80	0.30	5.10	8.06%
Region IV-B (MIMAROPA)	900	350	500	900	950	3,600	0.90	0.35	0.50	0.90	0.95	3.60	5.69%
Region V (Bicol Region)	1,000	1,000	1,000	1,000	1,000	5,000	1.00	1.00	1.00	1.00	1.00	5.00	7.91%
Region VI (Western Visayas)	500	1,650	1,000	1,650	2,100	6,900	0.50	1.65	1.00	1.65	2.10	6.90	10.91%
Region VII (Central Visayas)	500	500	500	500	500	2,500	0.50	0.50	0.50	0.50	0.50	2.50	3.95%
Region VIII (Eastern Visayas)	1,150	700	1,950	1,500	2,450	7,750	1.15	0.70	1.95	1.50	2.45	7.75	12.25%
Region IX (Zamboanga Peninsula)	450	400	550	700	1,100	3,200	0.45	0.40	0.55	0.70	1.10	3.20	5.06%
Region X (Northern Mindanao)	1,100	1,400	1,400	1,400	1,400	6,700	1.10	1.40	1.40	1.40	1.40	6.70	10.59%
Region XI (Davao Region)	200	300	150	250	500	1,400	0.20	0.30	0.15	0.25	0.50	1.40	2.21%
Region XII (SOCCSKSARGEN)	400	400	400	400	400	2,000	0.40	0.40	0.40	0.40	0.40	2.00	3.16%
Region XIII (Caraga)	100	500	150	250	200	1,200	0.10	0.50	0.15	0.25	0.20	1.20	1.90%
BARMM	2,500	2,500	2,500	2,500	2,500	12,500	2.50	2.50	2.50	2.50	2.50	12.50	19.76%
TOTAL	11,300	12,300	12,000	12,950	14,700	63,250	11.30	12.30	12.00	12.95	14.70	63.25	100%

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Table 6.4.1.10. Regional and Annual Target Beneficiaries and Indicative Investment for Training on Agricultural Production NCI/II Under TESDA, 5 Years

REGIONS	NUMBER OF PARTICIPANTS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region II (Cagayan Valley)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region III (Central Luzon)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region IV-A (CALABARZON)	400	400	800	800	800	3,200	6.00	6.00	12.00	12.00	12.00	48.00	19.65%
Region IV-B (MIMAROPA)	100	100	200	200	400	1,000	1.50	1.50	3.00	3.00	6.00	15.00	6.14%
Region V (Bicol Region)	400	400	400	400	400	2,000	6.00	6.00	6.00	6.00	6.00	30.00	12.28%
Region VI (Western Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region VII (Central Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region VIII (Eastern Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region IX (Zamboanga Peninsula)	400	400	400	400	400	2,000	6.00	6.00	6.00	6.00	6.00	30.00	12.28%
Region X (Northern Mindanao)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region XI (Davao Region)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region XII (SOCCSKSARGEN)	125	125	125	125	125	625	1.88	1.88	1.88	1.88	1.88	9.38	3.84%
Region XIII (Caraga)	200	200	200	200	200	1,000	3.00	3.00	3.00	3.00	3.00	15.00	6.14%
BARMM	60	100	100	200	200	660	0.90	1.50	1.50	3.00	3.00	9.90	4.05%
TOTAL	2,335	2,375	3,025	4,175	4,375	16,285	35.03	35.63	45.38	62.63	65.63	244.28	100%

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Table 6.4.1.11. DA-HVCDP Convergence with Partner Implementing Agencies for Coffee and Cacao Intercropping Programs

IMPLEMENTING AGENCIES	PROGRAM ACTIVITIES PROJECTS	UNIT	INDICATIVE TARGETS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						PERCENT CONTRIBUTION
			YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
DA-HVCDP	Intercropping (Coffee and Coconut)								166.67	166.67	200.00	233.33	333.33	1,100.00	49.5%
	Production Support Services (PSS)	Beneficiaries (group)	688	784	696	703	913	3,784	56.16	68.74	92.56	99.16	126.53	443.15	
	Extension Support, Education and Training Services (ESETS)								77.37	73.19	60.46	69.93	91.31	372.26	
	Agricultural Machinery, Equipment and Facilities Support Services (AMEFS)								24.01	15.62	37.25	51.95	100.22	229.05	
	Farm Production-related Machinery and Equipment Distribution (FPMA)	Beneficiaries (group)	293	257	361	1,485	1,401	3,797	9.13	9.11	9.73	12.30	15.27	55.54	
PHilMech (Shared Facilities)	Postharvest & processing facilities, hauling trucks, other equipment, etc.	Beneficiaries (group)	740	787	846	871	976	4,220	69.93	118.56	175.99	166.02	257.60	788.10	35.5%
LBP and DBP (Credit Programs)	Farm improvement loan program and enterprise operating capital								-	2.00	2.00	-		4.00	0.2%
	Farm Improvement Loan Program (PHP 1 Million/farm)	Number of individuals	0	0	2	0		2	-	-	2.00	-	-	2.00	
		Number of organizations	0	0	0	0	0	-						-	
	Enterprise Operating Capital (P1M- 5M/Application)	No. of individuals / organizations	0	2	0	0	1	3	-	2.00	-	-	-	2.00	
ATI (Training)	Training on package of technology for coffee and cacao intercropping and learning site establishment	No. of participants	11,300	12,300	12,000	12,950	14,700	63,250	11.90	13.35	17.25	20.15	22.05	84.70	3.8%
TESDA (Training)	Training on agricultural production NCI/II	No. of participants	2,335	2,375	3,025	4,175	4,375	16,285	35.03	35.63	45.38	62.63	65.63	244.28	11.0%
TOTAL									283.52	336.20	440.61	482.13	678.61	2,221.07	100%

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ATI learning sites establishment for training on package of technology

Table 6.4.1.8. ATI Regional and Annual Learning Sites Establishment for Training on Package of Technology for Coffee And Cacao Intercropping, 5 Years

REGIONS	NUMBER OF LEARNING SITES ESTABLISHED						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region II (Cagayan Valley)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region III (Central Luzon)			1	2	2	5	-	-	0.15	0.30	0.30	0.75	3.50%
Region IV-A (CALABARZON)			4	8	8	20	-	-	0.60	1.20	1.20	3.00	13.99%
Region IV-B (MIMAROPA)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region V (Bicol Region)			2	4	4	10	-	-	0.30	0.60	0.60	1.50	6.99%
Region VI (Western Visayas)	2	5	5	1	3	16	0.30	0.75	0.75	0.15	0.45	2.40	11.19%
Region VII (Central Visayas)				2	2	4	-	-	-	0.30	0.30	0.60	2.80%
Region VIII (Eastern Visayas)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region IX (Zamboanga Peninsula)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region X (Northern Mindanao)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XI (Davao Region)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XII (SOCCSKSARGEN)			2	2	2	6	-	-	0.30	0.30	0.30	0.90	4.20%
Region XIII (Caraga)	2	2	3	5	4	16	0.30	0.30	0.45	0.75	0.60	2.40	11.19%
BARMM			10	10	10	30	-	-	1.50	1.50	1.50	4.50	20.98%
TOTAL	4	7	35	48	49	143	0.60	1.05	5.25	7.20	7.35	21.45	100%

Chapter 6.4.1 - Annex

Coffee and Cacao Intercropping Trainings Under ATI

Table 6.4.1.9. Regional and Annual Target Beneficiaries and Indicative Investment for Training On Package Of Technology for Coffee and Cacao Intercropping Under ATI, 5 Years

REGIONS	NUMBER OF PARTICIPANTS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	200	200	200	200	200	1,000	0.20	0.20	0.20	0.20	0.20	1.00	1.58%
Region II (Cagayan Valley)	200	300	400	400	600	1,900	0.20	0.30	0.40	0.40	0.60	1.90	3.00%
Region III (Central Luzon)	500	500	500	500	500	2,500	0.50	0.50	0.50	0.50	0.50	2.50	3.95%
Region IV-A (CALABARZON)	1,600	1,600	800	800	300	5,100	1.60	1.60	0.80	0.80	0.30	5.10	8.06%
Region IV-B (MIMAROPA)	900	350	500	900	950	3,600	0.90	0.35	0.50	0.90	0.95	3.60	5.69%
Region V (Bicol Region)	1,000	1,000	1,000	1,000	1,000	5,000	1.00	1.00	1.00	1.00	1.00	5.00	7.91%
Region VI (Western Visayas)	500	1,650	1,000	1,650	2,100	6,900	0.50	1.65	1.00	1.65	2.10	6.90	10.91%
Region VII (Central Visayas)	500	500	500	500	500	2,500	0.50	0.50	0.50	0.50	0.50	2.50	3.95%
Region VIII (Eastern Visayas)	1,150	700	1,950	1,500	2,450	7,750	1.15	0.70	1.95	1.50	2.45	7.75	12.25%
Region IX (Zamboanga Peninsula)	450	400	550	700	1,100	3,200	0.45	0.40	0.55	0.70	1.10	3.20	5.06%
Region X (Northern Mindanao)	1,100	1,400	1,400	1,400	1,400	6,700	1.10	1.40	1.40	1.40	1.40	6.70	10.59%
Region XI (Davao Region)	200	300	150	250	500	1,400	0.20	0.30	0.15	0.25	0.50	1.40	2.21%
Region XII (SOCCSKSARGEN)	400	400	400	400	400	2,000	0.40	0.40	0.40	0.40	0.40	2.00	3.16%
Region XIII (Caraga)	100	500	150	250	200	1,200	0.10	0.50	0.15	0.25	0.20	1.20	1.90%
BARMM	2,500	2,500	2,500	2,500	2,500	12,500	2.50	2.50	2.50	2.50	2.50	12.50	19.76%
TOTAL	11,300	12,300	12,000	12,950	14,700	63,250	11.30	12.30	12.00	12.95	14.70	63.25	100%

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Table 6.4.1.10. Regional and Annual Target Beneficiaries and Indicative Investment for Training On Agricultural Production NCI/II Under TESDA, 5 Years

REGIONS	NUMBER OF PARTICIPANTS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region II (Cagayan Valley)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region III (Central Luzon)	50	50	100	200	200	600	0.75	0.75	1.50	3.00	3.00	9.00	3.68%
Region IV-A (CALABARZON)	400	400	800	800	800	3,200	6.00	6.00	12.00	12.00	12.00	48.00	19.65%
Region IV-B (MIMAROPA)	100	100	200	200	400	1,000	1.50	1.50	3.00	3.00	6.00	15.00	6.14%
Region V (Bicol Region)	400	400	400	400	400	2,000	6.00	6.00	6.00	6.00	6.00	30.00	12.28%
Region VI (Western Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region VII (Central Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region VIII (Eastern Visayas)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region IX (Zamboanga Peninsula)	400	400	400	400	400	2,000	6.00	6.00	6.00	6.00	6.00	30.00	12.28%
Region X (Northern Mindanao)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region XI (Davao Region)	100	100	100	250	250	800	1.50	1.50	1.50	3.75	3.75	12.00	4.91%
Region XII (SOCCSKSARGEN)	125	125	125	125	125	625	1.88	1.88	1.88	1.88	1.88	9.38	3.84%
Region XIII (Caraga)	200	200	200	200	200	1,000	3.00	3.00	3.00	3.00	3.00	15.00	6.14%
BARMM	60	100	100	200	200	660	0.90	1.50	1.50	3.00	3.00	9.90	4.05%
TOTAL	2,335	2,375	3,025	4,175	4,375	16,285	35.03	35.63	45.38	62.63	65.63	244.28	100%

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Table 6.4.1.11. DA-HVCDP Convergence with Partner Implementing Agencies for Coffee and Cacao Intercropping Programs

IMPLEMENTING AGENCIES	PROGRAM ACTIVITIES PROJECTS	UNIT	INDICATIVE TARGETS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						PERCENT CONTRIBUTION
			YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
DA-HVCDP	Intercropping (Coffee and Coconut)								166.67	166.67	200.00	233.33	333.33	1,100.00	49.5%
	Production Support Services (PSS)	Beneficiaries (group)	688	784	696	703	913	3,784	56.16	68.74	92.56	99.16	126.53	443.15	
	Extension Support, Education and Training Services (ESETS)								77.37	73.19	60.46	69.93	91.31	372.26	
	Agricultural Machinery, Equipment and Facilities Support Services (AMEFS)								24.01	15.62	37.25	51.95	100.22	229.05	
	Farm Production-related Machinery and Equipment Distribution (FPMA)	Beneficiaries (group)	293	257	361	1,485	1,401	3,797	9.13	9.11	9.73	12.30	15.27	55.54	
PHilMech (Shared Facilities)	Postharvest & processing facilities, hauling trucks, other equipment, etc.	Beneficiaries (group)	740	787	846	871	976	4,220	69.93	118.56	175.99	166.02	257.60	788.10	35.5%
LBP and DBP (Credit Programs)	Farm improvement loan program and enterprise operating capital								-	2.00	2.00	-		4.00	0.2%
	Farm Improvement Loan Program (PHP 1 Million/farm)	Number of individuals	0	0	2	0		2	-	-	2.00	-	-	2.00	
		Number of organizations	0	0	0	0	0	-						-	
	Enterprise Operating Capital (P1M-5M/Application)	No. of individuals / organizations	0	2	0	0	1	3	-	2.00	-	-	-	2.00	
ATI (Training)	Training on package of technology for coffee and cacao intercropping and learning site establishment	No. of participants	11,300	12,300	12,000	12,950	14,700	63,250	11.90	13.35	17.25	20.15	22.05	84.70	3.8%
TESDA (Training)	Training on agricultural production NCI/II	No. of participants	2,335	2,375	3,025	4,175	4,375	16,285	35.03	35.63	45.38	62.63	65.63	244.28	11.0%
TOTAL									283.52	336.20	440.61	482.13	678.61	2,221.07	100%

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6.4.3 – ANNEX: DAIRY INTEGRATION

Table 6.4.3.1. Unit and total costs of 3 dairy cow/carabao module for coconut farmers (in PHP)

3 DAIRY COW/CARABAO MODULE			
PARTICULARS	UNIT COST (PHP)	TOTAL COST (PHP)	REMARKS
Dairy Animals (3 Pregnant heifers)	150,000	450,000	Payment in Kind Scheme (palit-baka/kalabaw)
SUBTOTAL	150,000	450,000	
Cow Shed (3-5 sqm/head)			Can be built using indigenous materials that are readily available in the area. Equity of the farmer.
Area for Milking (0.80 sq.m/head)			
Milk Cans/pails (20 li. capacity 2 units)	6,400	12,800	Equity of the farmer
Pasture Development (1 ha)	45,300	45,300	Equity of the farmer
Initial Capital Requirements (3 month period estimates)	45,000	45,000	Equity of the farmer
SUBTOTAL	96,700	103,100	
TOTAL	246,700	553,100	

Table 6.4.3.2. Unit and total costs of 10 dairy goat module for coconut farmers (in PHP)

10 DAIRY GOAT MODULE			
PARTICULARS	UNIT COST (PHP)	TOTAL COST (PHP)	REMARKS
Dairy Animals (10 breedable Does)	80,000	800,000	Payment in Kind Scheme (palit-kambing)
SUBTOTAL	80,000	800,000	
Goat Shed (6-10 sq.m for 10 heads)			Can be built using indigenous materials that are readily available in the area. Equity of the farmer.
Area for Milking (4 sq.m for 10 heads)			
Milk pails (2 units)	4,000	8,000	Equity of the farmer
Pasture Development (1 ha)	45,300	45,300	Equity of the farmer
Initial Capital Requirements (3 month period estimates)	45,000	45,000	Equity of the farmer
SUBTOTAL	94,300	98,300	
TOTAL	174,300	898,300	

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Table 6.4.3.3. Regional Indicative Investment per Component of Dairy Integration Programs, 5 years

REGIONS	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	24,440	28,468	33,906	3,599	4,367	94,780
Provision of Dairy Animals	15,000	18,000	22,500	-	-	55,500
Provision of Technical Support Service	9,198	10,171	11,166	3,419	4,203	38,157
Monitoring & Evaluation	242	298	240	179	164	1,124
Region II (Cagayan Valley)	-	-	-	38,145	53,428	91,573
Provision of Dairy Animals	-	-	-	30,000	45,000	75,000
Provision of Technical Support Service	-	-	-	7,966	8,264	16,230
Monitoring & Evaluation	-	-	-	179	164	343
Region IV-A (CALABARZON)	7,496	15,470	3,934	3,626	12,621	43,147
Provision of Dairy Animals	900	9,280	-	-	7,500	17,680
Provision of Technical Support Service	5,607	5,085	2,977	2,663	4,110	20,443
Monitoring & Evaluation	989	1,105	956	963	1,010	5,024
Region IV-B (MIMAROPA)	2,533	2,601	14,237	25,847	14,765	59,984
Provision of Dairy Animals	-	-	6,750	17,250	7,500	31,500
Provision of Technical Support Service	2,316	2,199	6,965	7,855	6,632	25,967
Monitoring & Evaluation	217	403	521	742	633	2,517
Region V (Bicol Region)	13,419	4,920	9,275	4,058	23,708	55,381
Provision of Dairy Animals	8,240	-	5,250	-	17,320	30,810
Provision of Technical Support Service	4,889	4,528	3,684	3,662	5,958	22,721
Monitoring & Evaluation	289	393	341	396	430	1,850
Region VI (Western Visayas)	38,196	4,191	3,647	35,492	26,964	108,489
Provision of Dairy Animals	25,900	-	-	26,000	18,000	69,900
Provision of Technical Support Service	11,649	3,798	3,183	8,804	8,239	35,673
Monitoring & Evaluation	647	393	464	688	725	2,916
Region VII (Central Visayas)	-	-	39,860	3,571	25,176	68,606
Provision of Dairy Animals	-	-	31,500	-	18,000	49,500
Provision of Technical Support Service	-	-	7,940	3,194	6,717	17,851
Monitoring & Evaluation	-	-	420	377	458	1,255
Region VIII (Eastern Visayas)	-	33,248	3,560	15,003	26,520	78,331
Provision of Dairy Animals	-	25,500	-	9,750	18,000	53,250
Provision of Technical Support Service	-	7,250	3,183	4,838	8,030	23,301
Monitoring & Evaluation	-	498	377	415	491	1,781
Region IX (Zamboanga Peninsula)	38,196	2,521	2,603	32,182	4,413	79,914
Provision of Dairy Animals	28,950	-	-	26,250	-	55,200
Provision of Technical Support Service	8,119	2,138	2,288	4,820	3,911	21,276
Monitoring & Evaluation	1,127	383	315	1,112	501	3,439
Region X (Northern Mindanao)	-	-	40,320	17,752	33,597	91,670
Provision of Dairy Animals	-	-	32,550	12,000	25,500	70,050
Provision of Technical Support Service	-	-	6,707	5,440	7,396	19,543
Monitoring & Evaluation	-	-	1,063	312	701	2,076
Region XI (Davao Region)	39,625	2,576	43,390	2,877	36,143	124,611
Provision of Dairy Animals	28,500	-	33,000	-	24,750	86,250
Provision of Technical Support Service	10,491	1,845	9,707	2,175	10,745	34,962
Monitoring & Evaluation	634	731	684	702	648	3,399
Region XII (SOCCSKSARGEN)	3,094	36,715	2,675	47,795	36,295	126,574
Provision of Dairy Animals	-	26,250	-	36,000	24,750	87,000
Provision of Technical Support Service	2,460	9,734	1,992	11,093	10,897	36,175
Monitoring & Evaluation	634	731	684	702	648	3,399
Region XIII (Caraga)	-	36,289	2,593	3,054	35,003	76,940
Provision of Dairy Animals	-	28,500	-	-	27,750	56,250
Provision of Technical Support Service	-	6,606	2,278	2,742	6,152	17,779
Monitoring & Evaluation	-	1,183	315	312	1,101	2,911
TOTAL	167,000	167,000	200,000	233,000	333,000	1,100,000

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Table 6.4.3.4. Dairy Integration Training Beneficiaries and Indicative Investment Under ATI and TESDA, 5 years

DAIRY INTEGRATION TRAININGS	BENEFICIARIES						INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	180	135	90			405	0.136	0.080	0.056	0.016		0.288	0.9%
Region II (Cagayan Valley)	180	180	180	180	90	810	0.096	0.096	0.096	0.096	0.600	0.984	2.9%
Region III (Central Luzon)						-	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	18	24	8			50	1.080	1.320	0.960			3.360	10.0%
Region IV-B (MIMAROPA)	6	10	16	14	10	56	0.240	0.560	0.900	1.080	0.760	3.540	10.6%
Region V (Bicol Region)	6	4		6	10	26	0.960	0.800		0.360	0.780	2.900	8.7%
Region VI (Western Visayas)	80	165	165	165	180	755	2.050	1.000	1.250	1.100	1.100	6.500	19.4%
Region VII (Central Visayas)	80	165	165	165	180	755	2.075	0.300	0.825	0.625	0.625	4.450	13.3%
Region VIII (Eastern Visayas)	80	165	165	165	180	755	0.200	0.550	0.550	0.450	0.300	2.050	6.1%
Region IX (Zamboanga Peninsula)	304	300	300	600	700	2,204	0.270	0.270	0.270	0.540	0.630	1.980	5.9%
Region X (Northern Mindanao)	550	550	500	600	935	3,135	0.413	0.450	0.450	0.540	0.765	2.618	7.8%
Region XI (Davao Region)	800		600	600	450	2,450	0.504		0.672	0.672	0.504	2.352	7.0%
Region XII (SOCCSKSARGEN)		740			390	1,130		0.504			0.504	1.008	3.0%
Region XIII (Caraga)	330	330	275	275	616	1,826	0.270	0.270	0.225	0.225	0.504	1.494	4.5%
BARMM												-	0.0%
TOTAL	2,614	2,768	2,464	2,770	3,741	14,357	8.294	6.200	6.254	5.704	7.072	33.524	100%

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Table 6.4.3.5. NDA Convergence with Partner Implementing Agencies for Dairy Integration Programs

FOR FUNDING OF OTHER AGENCIES		PHYSICAL TARGETS						INDICATIVE INVESTMENT (IN MILLIONS, PHP)					PERCENT CONTRIBUTION	
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Dairy Integration (NDA)														
Provision of Dairy Animals (cattle, carabao, goat)								107.490	107.530	131.550	157.250	234.070	737.890	
Provision of Technical Support Services								54.729	53.353	62.068	68.673	91.255	330.078	
Monitoring and Evaluation								4.781	6.117	6.382	7.077	7.675	32.032	
SUBTOTAL								167.000	167.000	200.000	233.000	333.000	1,100.000	74.5%
Shared Facilities (PHilMech)														
Establishment of Facilities														
Number of Milk Collection Center established		3	7	11	11	11	43	0.900	2.100	3.300	3.300	3.300	12.900	
Number of milk processing plants established		-	1	6	6	11	24	-	20.000	60.000	60.000	110.000	250.000	
SUBTOTAL								0.900	22.100	63.300	63.300	113.300	262.900	17.8%
Animal Insurance (PICIC)														
Cattle		653	700	877	995	1,505	4,730	5.22	5.60	7.02	7.96	12.04	37.840	
Goat		10	5				15	0.06	0.03	-	-	-	0.084	
Buffalo		108	26		100	104	338	0.49	0.12	-	0.45	0.47	1.521	
SUBTOTAL								5.766	5.745	7.016	8.410	12.508	39.445	2.7%
Marketing Support														
TV ads		1	1	1	1	1	5	2.000	2.000	2.000	2.000	2.000	10.000	
Radio		5	5	5	5	5	25	2.500	2.500	2.500	2.500	2.500	12.500	
Print ads								2.000	2.000	2.000	2.000	2.000	10.000	
Chest Type Freezers		37	30	29	30	22	148	1.110	0.900	0.870	0.900	0.660	4.440	
SUBTOTAL								7.610	7.400	7.370	7.400	7.160	36.940	2.5%
Training (ATI & TESDA)														
Beneficiaries and Cost of Training		2,614	2,768	2,464	2,770	3,741	14,357	8.294	6.200	6.254	5.704	7.072	33.524	
SUBTOTAL								8.294	6.200	6.254	5.704	7.072	33.524	2.3%
Farmers Organization and Development (CDA)														
Values Training (VOICE), PMES, Cooperative Basic Education Seminar								0.240	2.330	0.780	0.520	0.520	4.390	
SUBTOTAL								0.240	2.330	0.780	0.520	0.520	4.390	0.3%
GRAND TOTAL								189.810	210.775	284.720	318.334	473.560	1,477.199	100%

6.4.2 – ANNEX: NATIVE LIVESTOCK AND POULTRY INTEGRATION

Table 6.4.2.1. Regional and Annual Indicative Targets for *Manukan sa Niyugan* component, 5 years

REGIONAL NUMBER OF FARMER BENEFICIARIES	MANUKAN SA NIYUGAN (15 MEMBERS/CLUSTER)						
	NUMBER OF FARMER BENEFICIARIES						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	60	60	120	90	120	450	2.9%
Region II (Cagayan Valley)	60	60	120	90	120	450	2.9%
Region III (Central Luzon)	60	60	120	90	120	450	2.9%
Region IV-A (CALABARZON)	390	390	450	540	780	2,550	16.2%
Region IV-B (MIMAROPA)	330	330	390	465	660	2,175	13.8%
Region V (Bicol Region)	60	60	105	120	120	465	3.0%
Region VI (Western Visayas)	330	330	420	510	660	2,250	14.3%
Region VII (Central Visayas)	150	150	210	360	300	1,170	7.4%
Region VIII (Eastern Visayas)	150	150	210	270	300	1,080	6.9%
Region IX (Zamboanga Peninsula)	15	15	75	105	30	240	1.5%
Region X (Northern Mindanao)	15	15	75	105	30	240	1.5%
Region XI (Davao Region)	255	255	315	390	510	1,725	11.0%
Region XII (SOCCSKSARGEN)	0	0	0	0	0	0	0.0%
Region XIII (Caraga)	255	255	285	300	510	1,605	10.2%
BARMM	120	120	180	240	240	900	5.7%
TOTAL	2,250	2,250	3,075	3,675	4,500	15,750	100%

Table 6.4.2.2. Regional and Annual Indicative Investment for *Manukan sa Niyugan* component, 5 years

REGIONAL INDICATIVE INVESTMENTS	MANUKAN SA NIYUGAN						SHARE OF TOTAL
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	1.00	1.00	2.00	1.50	2.00	7.50	2.9%
Region II (Cagayan Valley)	1.00	1.00	2.00	1.50	2.00	7.50	2.9%
Region III (Central Luzon)	1.00	1.00	2.00	1.50	2.00	7.50	2.9%
Region IV-A (CALABARZON)	6.50	6.50	7.50	9.00	13.00	42.50	16.2%
Region IV-B (MIMAROPA)	5.50	5.50	6.50	7.75	11.00	36.25	13.8%
Region V (Bicol Region)	1.00	1.00	1.75	2.00	2.00	7.75	3.0%
Region VI (Western Visayas)	5.50	5.50	7.00	8.50	11.00	37.50	14.3%
Region VII (Central Visayas)	2.50	2.50	3.50	6.00	5.00	19.50	7.4%
Region VIII (Eastern Visayas)	2.50	2.50	3.50	4.50	5.00	18.00	6.9%
Region IX (Zamboanga Peninsula)	0.25	0.25	1.25	1.75	0.50	4.00	1.5%
Region X (Northern Mindanao)	0.25	0.25	1.25	1.75	0.50	4.00	1.5%
Region XI (Davao Region)	4.25	4.25	5.25	6.50	8.50	28.75	11.0%
Region XII (SOCCSKSARGEN)	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	4.25	4.25	4.75	5.00	8.50	26.75	10.2%
BARMM	2.00	2.00	3.00	4.00	4.00	15.00	5.7%
TOTAL	37.50	37.50	51.25	61.25	75.00	262.50	100%
BUDGET ALLOCATION PER YEAR	166.67	166.67	200.00	233.33	333.33	1,100.00	
SHARE OF BUDGET ALLOCATION	22.5%	22.5%	25.6%	26.3%	22.5%	23.9%	

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Table 6.4.2.3. Regional and Annual Targets for *Babuyan sa Niyugan* component, 5 years

REGIONAL NUMBER OF FARMER BENEFICIARIES	BABUYAN SA NIYUGAN (10 MEMBERS/CLUSTER)						
	NUMBER OF FARMER BENEFICIARIES						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	0	0	0	0	0	0	0.0%
Region II (Cagayan Valley)	0	0	0	0	0	0	0.0%
Region III (Central Luzon)	0	0	0	0	0	0	0.0%
Region IV-A (CALABARZON)	270	270	350	380	540	1,810	38.6%
Region IV-B (MIMAROPA)	230	230	280	320	460	1,520	32.4%
Region V (Bicol Region)	0	0	0	0	0	0	0.0%
Region VI (Western Visayas)	0	0	0	0	0	0	0.0%
Region VII (Central Visayas)	200	200	260	300	400	1,360	29.0%
Region VIII (Eastern Visayas)	0	0	0	0	0	0	0.0%
Region IX (Zamboanga Peninsula)	0	0	0	0	0	0	0.0%
Region X (Northern Mindanao)	0	0	0	0	0	0	0.0%
Region XI (Davao Region)	0	0	0	0	0	0	0.0%
Region XII (SOCCSKSARGEN)	0	0	0	0	0	0	0.0%
Region XIII (Caraga)	0	0	0	0	0	0	0.0%
BARMM	0	0	0	0	0	0	0.0%
TOTAL	700	700	890	1,000	1,400	4,690	100%

Table 6.4.2.4. Regional and Annual Indicative Investment for *Babuyan sa Niyugan* component, 5 years

BABUYAN SA NIYUGAN							
REGIONAL INDICATIVE INVESTMENTS	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						SHARE OF
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	TOTAL
Region I (Ilocos Region)	-	-	-	-	-	-	0.0%
Region II (Cagayan Valley)	-	-	-	-	-	-	0.0%
Region III (Central Luzon)	-	-	-	-	-	-	0.0%
Region IV-A (CALABARZON)	6.75	6.75	8.75	9.50	13.50	45.25	38.6%
Region IV-B (MIMAROPA)	5.75	5.75	7.00	8.00	11.50	38.00	32.4%
Region V (Bicol Region)	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	-	-	-	-	-	-	0.0%
Region VII (Central Visayas)	5.00	5.00	6.50	7.50	10.00	34.00	29.0%
Region VIII (Eastern Visayas)	-	-	-	-	-	-	0.0%
Region IX (Zamboanga Peninsula)	-	-	-	-	-	-	0.0%
Region X (Northern Mindanao)	-	-	-	-	-	-	0.0%
Region XI (Davao Region)	-	-	-	-	-	-	0.0%
Region XII (SOCCSKSARGEN)	-	-	-	-	-	-	0.0%
Region XIII (Caraga)	-	-	-	-	-	-	0.0%
BARMM	-	-	-	-	-	-	0.0%
TOTAL	17.50	17.50	22.25	25.00	35.00	117.25	100%
BUDGET ALLOCATION PER YEAR	166.67	166.67	200.00	233.33	333.33	1,100.00	
SHARE OF BUDGET ALLOCATION	10.5%	10.5%	11.1%	10.7%	10.5%	10.7%	

Note: Recurring cost are feeds and biological supplements, and technical services. Animals for dispersal are considered as non-recurring costs.

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Table 6.4.2.5. Regional and Annual Targets for *Kambingan sa Niyugan* component, 5 years

REGIONAL NUMBER OF FARMER BENEFICIARIES	KAMBINGAN SA NIYUGAN (15 MEMBERS/CLUSTER)							SHARE OF TOTAL
	NUMBER OF FARMER BENEFICIARIES							
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL		
Region I (Ilocos Region)	45	45	60	90	90	330	2.8%	
Region II (Cagayan Valley)	45	45	60	90	90	330	2.8%	
Region III (Central Luzon)	45	45	60	90	90	330	2.8%	
Region IV-A (CALABARZON)	0	0	0	0	0	0	0.0%	
Region IV-B (MIMAROPA)	0	0	0	0	0	0	0.0%	
Region V (Bicol Region)	0	0	0	0	0	0	0.0%	
Region VI (Western Visayas)	315	315	360	405	630	2,025	17.2%	
Region VII (Central Visayas)	405	405	450	450	810	2,520	21.4%	
Region VIII (Eastern Visayas)	405	405	450	495	810	2,565	21.8%	
Region IX (Zamboanga Peninsula)	60	60	60	60	120	360	3.1%	
Region X (Northern Mindanao)	60	60	60	60	120	360	3.1%	
Region XI (Davao Region)	180	180	225	285	360	1,230	10.4%	
Region XII (SOCCSKSARGEN)	75	75	90	105	150	495	4.2%	
Region XIII (Caraga)	75	75	105	150	150	555	4.7%	
BARMM	90	90	150	180	180	690	5.9%	
TOTAL	1,800	1,800	2,130	2,460	3,600	11,790	100%	

Table 6.4.2.6. Regional and Annual Indicative Investment for *Kambingan sa Niyugan* component, 5 years

REGIONAL INDICATIVE INVESTMENTS	KAMBINGAN SA NIYUGAN						SHARE OF
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	1.01	1.01	1.34	2.02	2.02	7.39	2.8%
Region II (Cagayan Valley)	1.01	1.01	1.34	2.02	2.02	7.39	2.8%
Region III (Central Luzon)	1.01	1.01	1.34	2.02	2.02	7.39	2.8%
Region IV-A (CALABARZON)	-	-	-	-	-	-	0.0%
Region IV-B (MIMAROPA)	-	-	-	-	-	-	0.0%
Region V (Bicol Region)	-	-	-	-	-	-	0.0%
Region VI (Western Visayas)	7.06	7.06	8.06	9.07	14.11	45.36	17.2%
Region VII (Central Visayas)	9.07	9.07	10.08	10.08	18.14	56.45	21.4%
Region VIII (Eastern Visayas)	9.07	9.07	10.08	11.09	18.14	57.46	21.8%
Region IX (Zamboanga Peninsula)	1.34	1.34	1.34	1.34	2.69	8.06	3.1%
Region X (Northern Mindanao)	1.34	1.34	1.34	1.34	2.69	8.06	3.1%
Region XI (Davao Region)	4.03	4.03	5.04	6.38	8.06	27.55	10.4%
Region XII (SOCCSKSARGEN)	1.68	1.68	2.02	2.35	3.36	11.09	4.2%
Region XIII (Caraga)	1.68	1.68	2.35	3.36	3.36	12.43	4.7%
BARMM	2.02	2.02	3.36	4.03	4.03	15.46	5.9%
TOTAL	40.32	40.32	47.71	55.10	80.64	264.10	100%
BUDGET ALLOCATION PER YEAR	166.67	166.67	200.00	233.33	333.33	1,100.00	
SHARE OF BUDGET ALLOCATION	24.2%	24.2%	23.9%	23.6%	24.2%	24.0%	

Note: Recurring cost are feeds and biological supplements, and technical services. Animals for dispersal are considered as non-recurring costs.

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Table 6.4.2.7. Regional and Annual Targets for *Bakahan sa Niyugan* component, 5 years

REGIONAL NUMBER OF FARMER BENEFICIARIES	BAKAHAN SA NIYUGAN (15 MEMBERS/CLUSTER)						
	NUMBER OF FARMER BENEFICIARIES						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	120	120	120	150	240	750	6.2%
Region II (Cagayan Valley)	120	120	120	150	240	750	6.2%
Region III (Central Luzon)	120	120	120	150	240	750	6.2%
Region IV-A (CALABARZON)	0	0	0	0	0	0	0.0%
Region IV-B (MIMAROPA)	0	0	0	0	0	0	0.0%
Region V (Bicol Region)	75	75	75	90	150	465	3.9%
Region VI (Western Visayas)	0	0	0	0	0	0	0.0%
Region VII (Central Visayas)	165	165	195	225	330	1,080	9.0%
Region VIII (Eastern Visayas)	180	180	225	270	360	1,215	10.1%
Region IX (Zamboanga Peninsula)	165	165	180	210	330	1,050	8.7%
Region X (Northern Mindanao)	165	165	180	210	330	1,050	8.7%
Region XI (Davao Region)	345	345	405	450	690	2,235	18.6%
Region XII (SOCCSKSARGEN)	75	75	90	105	150	495	4.1%
Region XIII (Caraga)	0	0	0	0	0	0	0.0%
BARMM	345	345	375	420	690	2,175	18.1%
TOTAL	1,875	1,875	2,085	2,430	3,750	12,015	100%

Table 6.4.2.8. Regional and Annual Indicative Investment for *Bakahan sa Niyugan* component, 5 years

REGIONAL INDICATIVE INVESTMENTS	BAKAHAN SA NIYUGAN						SHARE OF TOTAL
	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	4.53	4.53	4.53	5.66	9.06	28.30	6.2%
Region II (Cagayan Valley)	4.53	4.53	4.53	5.66	9.06	28.30	6.2%
Region III (Central Luzon)	4.53	4.53	4.53	5.66	9.06	28.30	6.2%
Region IV-A (CALABARZON)	-	-	-	-	-	-	0.0%
Region IV-B (MIMAROPA)	-	-	-	-	-	-	0.0%
Region V (Bicol Region)	2.83	2.83	2.83	3.40	5.66	17.55	3.9%
Region VI (Western Visayas)	-	-	-	-	-	-	0.0%
Region VII (Central Visayas)	6.23	6.23	7.36	8.49	12.45	40.75	9.0%
Region VIII (Eastern Visayas)	6.79	6.79	8.49	10.19	13.58	45.85	10.1%
Region IX (Zamboanga Peninsula)	6.23	6.23	6.79	7.92	12.45	39.62	8.7%
Region X (Northern Mindanao)	6.23	6.23	6.79	7.92	12.45	39.62	8.7%
Region XI (Davao Region)	13.02	13.02	15.28	16.98	26.04	84.33	18.6%
Region XII (SOCCSKSARGEN)	2.83	2.83	3.40	3.96	5.66	18.68	4.1%
Region XIII (Caraga)	-	-	-	-	-	-	0.0%
BARMM	13.02	13.02	14.15	15.85	26.04	82.07	18.1%
TOTAL	70.75	70.75	78.67	91.69	141.50	453.37	100%
BUDGET ALLOCATION PER YEAR	166.67	166.67	200.00	233.33	333.33	1,100.00	
SHARE OF BUDGET ALLOCATION	42.4%	42.4%	39.3%	39.3%	42.5%	41.2%	

Note: Recurring cost are feeds and biological supplements, and technical services. Animals for dispersal are considered as non-recurring costs.

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Table 6.4.2.9. Regional and Annual Total Indicative Investment for All Native Animal and Poultry Integration Components, 5 years

REGIONAL NUMBER OF FARMER BENEFICIARIES	REGIONAL TOTAL NUMBER OF FARMER BENEFICIARIES FROM NATIVE ANIMAL AND POULTRY INTEGRATION						SHARE OF TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Region I (Ilocos Region)	225	225	300	330	450	1,530	3.5%
Region II (Cagayan Valley)	225	225	300	330	450	1,530	3.5%
Region III (Central Luzon)	225	225	300	330	450	1,530	3.5%
Region IV-A (CALABARZON)	660	660	800	920	1,320	4,360	9.9%
Region IV-B (MIMAROPA)	560	560	670	785	1,120	3,695	8.4%
Region V (Bicol Region)	135	135	180	210	270	930	2.1%
Region VI (Western Visayas)	645	645	780	915	1,290	4,275	9.7%
Region VII (Central Visayas)	920	920	1,115	1,335	1,840	6,130	13.9%
Region VIII (Eastern Visayas)	735	735	885	1,035	1,470	4,860	11.0%
Region IX (Zamboanga Peninsula)	240	240	315	375	480	1,650	3.7%
Region X (Northern Mindanao)	240	240	315	375	480	1,650	3.7%
Region XI (Davao Region)	780	780	945	1,125	1,560	5,190	11.7%
Region XII (SOCCSKSARGEN)	150	150	180	210	300	990	2.2%
Region XIII (Caraga)	330	330	390	450	660	2,160	4.9%
BARMM	555	555	705	840	1,110	3,765	8.5%
TOTAL	6,625	6,625	8,180	9,565	13,250	44,245	100%

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Table 6.4.2.10. BAI Convergence with Partner Implementing Agencies for Native Livestock and Poultry Programs

Implementing Agencies	Programs/Activities/Projects	Unit	Indicative Targets							Indicative Investment (in Millions, PHP)						Percent Contribution
			Year 1	Year 2	Year 3	Year 4	Year 5	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Total		
DA-BAI	Provision of animals, technical support services, including monitoring and evaluation	Number of farmer beneficiaries across 4 modules	6,625	6,625	8,180	9,565	13,250	44,245	167.00	167.00	200.00	233.00	333.00	1,100.00	59.08%	
PhilMech	Slaughter house and meat processing equipment	Number of region beneficiaries	15	15	15	15	15	75	90.00	90.00	90.00	90.00	90.00	450.00	24.17%	
DTI	Marketing support; chest type freezer	Number of farmers groups	600	600	600	600	600	3,000	30.00	30.00	30.00	30.00	30.00	150.00	8.06%	
PCIC	Livestock insurance	Number of farmer beneficiaries insured	6,625	6,625	8,180	9,565	13,250	44,245	16.70	16.70	20.00	23.30	33.30	110.00	5.91%	
ATI	BAI native animal breeder production and management modules; egg and meat processing modules	Number of farmer beneficiaries trained	6,625	6,625	8,180	9,565	13,250	44,245	6.63	6.63	8.18	9.57	13.25	44.25	2.38%	
CDA	Values training (VOICE), PMES, coop basic educ seminar	Number of farmer cooperative trained	50	50	50	50	50	250	0.50	0.50	0.50	0.50	0.50	2.50	0.13%	
TESDA	Leadership/supervisory training entrepreneurship, business/marketing plan preparation, artificial insemination and pregnancy diagnosis training, upgrading program orientation	Number of trainers trained	50	50	50	50	50	250	1.00	1.00	1.00	1.00	1.00	5.00	0.27%	
TOTAL									311.825	311.825	349.680	387.365	501.050	1,861.745	100%	

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Table 6.4.2.11. Native Animal Breeder Production and Management Training under ATI, 5 years

REGIONS	INDICATIVE BUDGET (IN MILLIONS, PHP)						NUMBER OF FARMER BENEFICIARIES					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Region I (Ilocos Region)	0.225	0.225	0.300	0.330	0.450	1.530	225	225	300	330	450	1,530
Region II (Cagayan Valley)	0.225	0.225	0.300	0.330	0.450	1.530	225	225	300	330	450	1,530
Region III (Central Luzon)	0.225	0.225	0.300	0.330	0.450	1.530	225	225	300	330	450	1,530
Region IV-A (CALABARZON)	0.660	0.660	0.800	0.920	1.320	4.360	660	660	800	920	1,320	4,360
Region IV-B (MIMAROPA)	0.560	0.560	0.670	0.785	1.120	3.695	560	560	670	785	1,120	3,695
Region V (Bicol Region)	0.135	0.135	0.180	0.210	0.270	0.930	135	135	180	210	270	930
Region VI (Western Visayas)	0.645	0.645	0.780	0.915	1.290	4.275	645	645	780	915	1,290	4,275
Region VII (Central Visayas)	0.920	0.920	1.115	1.335	1.840	6.130	920	920	1,115	1,335	1,840	6,130
Region VIII (Eastern Visayas)	0.735	0.735	0.885	1.035	1.470	4.860	735	735	885	1,035	1,470	4,860
Region IX (Zamboanga Peninsula)	0.240	0.240	0.315	0.375	0.480	1.650	240	240	315	375	480	1,650
Region X (Northern Mindanao)	0.240	0.240	0.315	0.375	0.480	1.650	240	240	315	375	480	1,650
Region XI (Davao Region)	0.780	0.780	0.945	1.125	1.560	5.190	780	780	945	1,125	1,560	5,190
Region XII (SOCCSKSARGEN)	0.150	0.150	0.180	0.210	0.300	0.990	150	150	180	210	300	990
Region XIII (Caraga)	0.330	0.330	0.390	0.450	0.660	2.160	330	330	390	450	660	2,160
BARMM	0.555	0.555	0.705	0.840	1.110	3.765	555	555	705	840	1,110	3,765
TOTAL	6.625	6.625	8.180	9.565	13.250	44.245	6,625	6,625	8,180	9,565	13,250	44,245

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Table 9.1. CFIDP results matrices: output level targets, 5 years

Component Outputs	Indicator	Annual Targets					5-Year Target	Means of Verification
		2022	2023	2024	2025	2026		
1. Social Protection Component								
A. Training of farmers and their families: ATI & TESDA								ATI & TESDA Progress Reports
Training program for coconut farmers and beneficiaries thru Farmers Field Schools/TOT	No. of CF and beneficiaries trained by ATI Training of Trainers under CFIDP program	7,500	7,500	7,500	7,500	30,000	60,000	ATI Progress Reports
	No. of CF and beneficiaries of ATI School on the Air	1,260	3,060	4,560	4,800	13,680	27,360	ATI Progress Reports
	No. of e-courses developed and administered		2	2	2	2	8	ATI Progress Reports
Training of coconut farmers and beneficiaries on technical and vocational skills	No. of CF farmers and beneficiaries trained on technical vocational courses	8,884	9,058	10,881	12,703	18,172	59,698	TESDA Progress Reports
	No. of TR/CS/CBC/ CAT Developed/ Promulgated AF		4	4	4	4	16	TESDA Progress Reports
B. Crop Insurance: PCIC								
Coconut crop insurance program expanded	No. of CF covered by Crop insurance funded by coco levy funds	200,000	200,000	240,000	280,000	400,000	1,320,000	PCIC Progress Reports
	No. of ha Coconut Farms with crop insurance (estimate based on Amt of premium per ha)	200,000	200,000	240,000	280,000	400,000	1,320,000	PCIC Progress Reports
Coconut farmers coconut farms insured with PCIC (less than 5 ha) increased	No. of CF farmers covered by crop insurance funded by other government programs	200,000	200,000	240,000	280,000	400,000	1,320,000	PCIC Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
Prioritized list of coconut farmers for coverage by crop Insurance	No. CF provided/granted crop insurance claims	200,000	200,000	240,000	280,000	400,000	1,320,000	PCIC Progress Reports
	Amount of claims paid by PCIC (PHP)	10 B	10 B	12 B	14 B	20 B	66 B	PCIC Progress Reports
C. Scholarship programs								
Scholarship program for coconut farmers supported by coco levy funds	No. of CF and beneficiaries supported by CFIDP scholarship program	3,529	4,160	4,292	4,179	7,175	10,720	CHED Progress Reports
Support to CF and beneficiaries in accessing other scholarship programs of the government	No. of CF farmers and beneficiaries assisted in availing other scholarship programs		414	1,237	1,894	631	4,176	CHED Progress Reports
D. Health and medical programs								
Roster of coconut farmers for coverage by medical insurance	No. of CF covered by PhilHealth insurance funded by coco levy funds	138,888	104,166	111,111	116,666	166,666	637,497	PCIC Progress Reports
Prioritized list of coconut farmers	No. of coconut farmers (NCFRS registered) covered by PCA administered health support programs							
Coconut farmers covered by PhilHealth	No. of CF farmers covered by PhilHealth funded by other government programs							
	No. CF provided/granted insurance claims							
	(PM) amount of claims paid by PhilHealth							

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Component Outputs	Indicator	Annual Targets					5-Year Target	Means of Verification
		2022	2023	2024	2025	2026		
2. Organizing and Empowerment of Farmers Organizations and Cooperatives: CDA								
Training program for coconut farmers organizations (CFO) officers on basics of cooperative operations	No. of training conducted for officers of coconut farmer organizations	448	530	529	652	877	3,036	CDA Progress Reports
	No. of CFO officers trained	830	950	1,160	1,280	1,623	5,843	CDA Progress Reports
Support to CFOs in their registration with SEC	No. of CFOs assisted in registration with SEC	282	347	352	419	419	1,819	CDA Progress Reports
	No. of SEC registered cooperatives (new)	247	230	215	214	224	1,130	CDA Progress Reports
	No. of CF cooperatives engaged in business/ enterprises with good financial track record							
3. Development of Hybrid Coconut Seedling Farms and Nursery for Planting and Replanting: PCA and DOST-PCAARRD								
Operations								
Production of hybrid seedlings in the modernized/expanded PCA seed gardens	No. of seednuts produced	1,000,000	1,500,000	1,875,000	2,125,000	2,125,000	8,625,000	PCA Progress Reports
	No. of mother palms hybridized	25,000	25,000	25,000	25,000	32,315	32,315	PCA Progress Reports
	No. ha planted to hybrid and improved variety							
On-farm hybridization with selected dwarfs and pollen from selected tall for planting materials	No. of seednuts produced		1,608,932	2,614,515	3,137,418	3,811,053	11,171,918	PCA Progress Reports
	No. of mother palms hybridized	40,223	40,223	48,268	50,814	123,583	123,583	PCA Progress Reports
	No. of hybrid coconut farms rented							
Established coconut seed farms and communal nurseries in	No. ha of seedfarms established	397	397	397	397	403	403	PCA Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
government lands in partnership with LGUs and SUCs the long term.	No. of seedfarms	79	79	79	79	81	81	
	No. of seedling distributed planted							
	No. of communal nurseries	82	251	363	426	479	1,601	PCA Progress Reports
	No. of seedlings raised	5,244,755	16,305,587	23,546,407	27,600,094	31,133,145	103,829,988	PCA Progress Reports
Pollen Processing	Pollen processing facility established (No)	12	12	12	12	12	12	PCA Progress Reports
	Male parental palms Tagged and Certified	13,379	13,379	1,650	522	31,979	60,909	PCA Progress Reports
	Quantity of pollen produced	2,087	2,087	2,345	2,426	7,415	16,360	PCA Progress Reports
	Quantity of pollen utilized							
Establish new coconut farms (hybrid & improved varieties)	No. of ha farms planted of hybrid (yield nuts/tree/year)							
Rehabilitation of coconut farms (replanting with hybrids and improved varieties)	No. of ha rehabilitated	5,250	16,300	23,550	27,600	31,130	103,830	PCA Progress Reports
	No. of farmers benefited	5,250	16,300	23,550	27,600	31,130	103,830	PCA Progress Reports
Nutrient Support for Existing Hybrids	Area fertilized (ha)							
Professionalization of coconut workforce through skills training in hybridization farms and creation of farm service crew teams.	No. of CFs trained	2,500	2,300	4,100	22,500	14,370	45,770	PCA Progress Reports
	No. of teams of farm service crew	8,490					8,490	PCA Progress Reports
<u>Research and Development</u>								
Developed hybrid coconut variety tested for yield and	No. of hybridization research (new/completed/ongoing)	25	10	27	17	9	88	DOST-PCAARRD Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
productivity ready for mass propagation	No. of hybrids developed and approved for planting and replanting							
Technology transfer, promotion campaigns and IEC materials produced	No. of campaigns conducted and IEC materials produced and distributed							
	No. of coconut breeders and other researchers supported (trained/ advance degree)							
4. Farm Improvements thru Coconut Based Farming System (CBFS)								
A. Dairy Production: DA-NDA								
Coconut-based Farming Systems/ Diversification-Dairy Integration (NDA)	No. ha farms with coco-dairy farming							
	No. of CF Cooperatives with coco dairy farming	37	67	96	126	148	474	NDA Progress Reports
	No. of ha, of coconut farms integrated with dairy	232	238	292	342	512	1,615	NDA Progress Reports
	No. of liters of milk produced (000)	-	2	3	5	7	17	NDA Progress Reports
	No. of milk collection center established	3	7	11	11	11	43	NDA Progress Reports
	No. of milk processing plants established		1	6	6	11	24	NDA Progress Reports
	No. of dairy animals distributed	771	731	877	1,095	1,609	5,083	NDA Progress Reports
	No. of animals insured	771	731	877	1,095	1,609	5,083	
	No. of animals bred	391	818	1,632	2,680	6,271	11,792	NDA Progress Reports
	No. of animals provided with supplementation	819	858	1,172	1,577	2,516	6,942	NDA Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
	Ha of forage developed	210	195	338	385	463	1,591	NDA Progress Reports
B. CBFS-Native Animal Breeder Production Program: BAI								
Coconut-based Farming Systems/ Native animal breeding and production	Annual HH Income of coconut farmers from dairy and native animal production	baseline data to be gathered						
	No. of CF engaged in integrated native animal breeding farming system	6,625	6,625	8,180	9,565	13,250	44,245	DA-BAI Progress Reports
	No. of farmers benefited in native livestock and poultry modules	6,625	6,625	8,180	9,565	13,250	44,245	DA-BAI Progress Reports
	<i>Manukan sa niyugan</i>	2,250	2,250	3,075	3,675	4,500	15,750	
	<i>Babuyan sa niyugan</i>	700	700	890	1,000	1,400	4,690	
	<i>Kambingan sa niyugan</i>	1,800	1,800	2,130	2,460	3,600	11,790	
	<i>Bakahan sa niyugan</i>	1,875	1,875	2,085	2,430	3,750	12,015	
	No. of native animals distributed	123,400	123,400	166,814	198,722	246,800	859,136	DA-BAI Progress Reports
C. CBFS-Coffee and Cacao Production Program: DA-HVCDP								
Coconut-Based Farming System- coffee and cacao production	No. of ha intercropped with coffee and cacao	2,100	2,300	2,200	2,500	3,600	12,700	DA-HVCDP Progress Reports
	Annual HH Income of coconut farmers from coffee and cacao production	baseline data to be gathered						
	No. of coffee planting materials distributed	441,300	439,300	436,800	558,500	628,500	2,504,400	DA-HVCDP Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
	No. of cacao planting materials distributed	603,724	465,220	771,660	736,447	1,220,500	3,797,551	DA-HVCDP Progress Reports
	No. of coffee trees rehabilitated	310,787	279,588	379,513	385,063	501,700	1,856,651	DA-HVCDP Progress Reports
	No. of cacao trees rehabilitated	665,067	663,141	419,271	535,460	709,737	2,982,676	DA-HVCDP Progress Reports
Volume of production	Increase in coffee volume of production (mt)	311	590	970	1,796	2,737	6,405	DA-HVCDP Progress Reports
	Increase in cacao volume of production (mt)	328	659	1,028	2,031	3,793	7,838	DA-HVCDP Progress Reports
Area harvested (ha)	Increase in area harvested (coconut farms diversified), coffee				883	879	1,761	DA-HVCDP Progress Reports
	Increase in area harvested (coconut farms diversified), cacao				1,197	930	2,128	DA-HVCDP Progress Reports
Nursery Establishment	No. of sites	30	15	41	53	84	223	DA-HVCDP Progress Reports
Postharvest and processing facilities	No. of facilities	4	15	25	26	39	109	DA-HVCDP Progress Reports
5. Shared Facilities for Processing Program: PhilMech								
Partner IAs: CDA, ATI, TESDA, DTI, DPWH, LBP, DBP, PCA, PLGUs and LGUs								
Established shared coconut processing facilities (SCPF) for CF cooperatives operation as an enterprise	No. of SCPFs completed by type/classification	181	176	182	198	208	945	PhilMech Progress Reports

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
Established village level SCPF in operation (capacity building, technical training, O&M training, entrepreneurship training, etc.)	No. of SCPFs completed by type/classification turned over to CF cooperatives	181	176	182	198	208	945	PHilMech Progress Reports
Establish integrated central processing system for multiple products with modern processing facilities and equipment	No. of village level SCPF in operation as a business enterprise							
	Volume by type of products produced by the SCPF (output)							
	No. of coconut farmers using the services of the SCPF	25,340	25400	27,300	29,700	49,920	157,660	PHilMech Progress Reports
	Volume (in kgs) of coconut products (copra, white meat etc.) processed in the SCPFs (input)							
6. Research, Marketing and Promotions: DTI								
Conduct of market / industry research for high-value coconut products	No. of research for high value coconut products conducted							
Develop export promotion programs for high-value coconut products	No. of export promotion program for high-value coconut products developed							
	No. of high-value coconut products promoted and exported							
	No. of exporters provided access and exposure to new or traditional markets							
	No. of business matches arranged for producers of high-value coconut products							

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
	No. of companies with increased export performance/revenue generation							
Provide export marketing assistance for high-value coconut products	No. of export marketing activities for high-value coconut products conducted							
	No. of new exporters capacitated with market entry and product quality requirements							
	No. of coconut farmers capacitated with market entry and product quality requirements							
Develop market certifications policy advocacy for the coconut industry	No. of policy studies developed (with recommendations discussed with DA, PCA and DTI)							
Promote investments in the coconut industry	No. of IEC and investment promotion materials developed							
	No. of market matching activities conducted							
	No. of supply contracts facilitated							
Provide marketing support for the coconut industry	No. of trade fairs and Bagsakan events showcasing coconut-based products conducted							
	No. of permanent stores with special settings of coconut-based products established							
	Amount of sales generated							
	No. of promotional materials on MSMEs with coconut-based products developed							

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COMPONENT OUTPUTS	INDICATOR	ANNUAL TARGETS					5-YEAR TARGET	MEANS OF VERIFICATION
		2022	2023	2024	2025	2026		
	No. of MSMEs with coconut-based products onboarded to e-commerce platforms							
7. Credit Programs: DBP and LBP								
Credit program support for coconut farmers under CFIDP developed and expanded	No. of CF cooperatives provided with loans							
	Amount (Php) of loans provided to CF cooperatives							
	No. of CF cooperatives rated with good standing, or with past due accounts							
8. Infrastructure Development: DPWH								
Infrastructure support to coconut processing and value adding activities:	No. of CF cooperatives provided with support infrastructure							
Transport link to farms and buildings and utilities for the shared coconut processing facilities	No. of CF using the support infrastructures (roads and buildings)							
	No. kms of FMR roads completed							
	No. of buildings/utilities for shared facilities							
	No. of buildings for trading posts, area in sq.m.							
	No. of buildings for training centers (+sq.m.)							
	No. of fertigation facilities (+sq.m.)							
	No. of bridges, spillway type							
	No. of processing buildings (+sq.m.)							

Note: Output Targets for the Indicators not yet filled in will be completed during the Inception Workshop

ADDENDUM TO THE COCONUT FARMERS AND INDUSTRY DEVELOPMENT PLAN (CFIDP) - CHAPTER 6.6 (INNOVATIVE RESEARCH PROJECTS AND THEIR APPLICATION ON COCONUT PROCESSING, PRODUCTION, AND DISTRIBUTION) AS RECOMMEND BY DOST

Addendum No. 1. On R & D Infrastructure

In support of the CFIDP, PCA will develop an infrastructure investment plan that amounts to PHP 429,450,000 to be sourced from GAA funds for the upgrading and improvement of PCA R&D centers and laboratories. This is to improve the existing facilities in order to guarantee that the R & D outputs of PCA will be utilized and eventually contribute to the development of the coconut sector. (See Addendum Annexes 1-4)

Addendum No. 2. On Additional Research Areas

PCA will include in their research agenda the development of the following coconut value added products such as activated carbon, methyl ester, anti-corrosive coatings, functionalized polyols for industrial polyurethane applications, and food products such as coconut butter, coconut aminos and keto-diet products.

Additionally, the replacement of senile coconut trees provides an opportunity on the utilization of various coconut parts for economic purposes such as coconut fibers, coco lumber and derivatives for construction materials, as well as opportunity to study the different options for processing felled trees (intentionally or by hazard events like typhoons) by scaling up certain technologies in the likeness of coco-geonets (which is well-studied, industry adopted) and others like coco coir as architectural forms and linings.

Further, the following specific priority projects such as:

- 2a. Feasibility study on the increase of the CME blend from 2% to 5%
- 2b. Study on the use of coconut water as feedstock for the development of bioplastics such as polyhydroxyalkanoates (PHA)
- 2c. Study on the reduction of processing cost and equipment improvement in the production of Medium Chain Triglycerides (MCT)

Addendum No. 3. On R&D with Participation of the Private Sector

DOST commits to support the coconut industry through the Science for Change sub-programs on Collaborative Research and Development to Leverage Philippine Economy (CRADLE) and the Business Innovation through S&T for Industry (BIST).

CRADLE provides support of up to PHP 5 M to a university or R&D institute to undertake research to solve a problem for a private company whereas the private company is expected to provide a 20% contribution, in cash or in kind, and adopt the research output. BIST provides up to 70% of the costs of acquiring technology, license, hardware or software, for a private company to pursue R&D activities.

Addendum

Addendum- Annex

Annex 1. DOST Projects and Programs on the Development of Value-Added Products for Coconut ITDD Process Sector

PLANS AND PROGRAMS	STATUS	REMARKS
Project 1. Physico-chemical factors which affect the quality of VCO	Completed (01 Jan 2019 to 30 June 2021)	Under the program: Upgrading the PNS for Virgin Coconut Oil (VCO) and the Philippine VCO Industry
Project 2. Investigation of the Microbiological factors which affect the quality of VCO	Completed (01 Jan 2019 to 30 June 2021)	
Project 3. Investigation of factors affecting the sensory properties and acceptability of VCO	Completed (01 Jan 2019 to 30 June 2021)	
Project 4. Assessment of VCO Production: GMP and HACCP	Completed (01 Jan 2019 to 30 June 2021)	Implemented by Ateneo de Manila University and UP Diliman in partnership with Virgin Coconut Oil Producers and Traders Association of the Philippines, Inc. (VCOP)
Project 5. Water Activity and Percent Moisture: Effect on VCO Stability	Completed (01 Jan 2019 to 30 June 2021)	
Development of Polyurethane- Based Packing Materials and Anti- Corrosive Coatings from Vegetable Oil	Completed (01 Nov 2017 to 30 Apr 2021)	Under the program: Processing of Bio-based Polyols and Polyurethanes for Industrial Applications Implemented by MSU IIT in partnership with Chemrez Technologies Inc.
Processing of Coconut Monoglycerides (CMG) into Functionalized Polyols for Industrial Polyurethane Applications	On-going	Under the NICER Program: Center for Sustainable Polymers Implemented by MSU IIT in partnership with MSU - Marawi, Chemrez Technologies, Inc, Hydronet Consultants, Multiflex RNC Philippines (Uratex), Caraga State University, Ateneo de Davao University, Nuevochem Specialties, Inc, Phoenix Petroleum
Production of Polyurethane- Modified Concrete (PMC) – Nanomaterial Composite from Crude Glycerol for Industrial Flooring System Application	On-going	

Addendum

Annex 2. Food Sector: Emerging Coconut Products (Condiments, Butter, others)

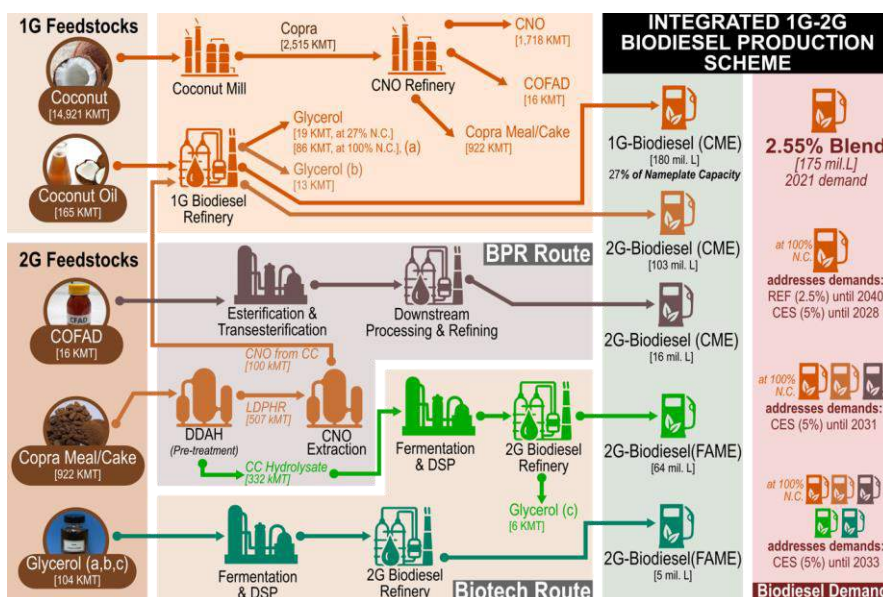
INDUSTRY NEEDS	POSSIBLE S & T INTERVENTIONS	STAKEHOLDERS / AGENCIES INVOLVED
Capacity building, including education of processors		
Other variants of products for specific applications and target market (e.g., Desiccated coconut mixed with enhancers for existing dishes; DCN as food ingredient/different applications of DCN)	Utilization of coconut processing by-products as functional food (low fat DC, cheese, skimmed milk)	MSMEs, ADMU
Valorization of coconut water wastes	Toll processing facility for by-products	
Difference of the overall quality (including taste profile and acidity of coconut vinegar) of Philippine coconut vinegar compared to apple cider vinegar for global competitiveness	Clinical studies for the coconut vinegar to reposition it and to compete with apple cider vinegar	ITDI, DTI-EMB,
	Use of concentrated coconut water (high °Brix) to appropriate levels (could be sweeter or more acidic) for product variation	
	Consider product's commercial viability and economic aspect (pricing, costing)	
	Taste profile of coconut water compared to coco sap	
Clarification on Addition of Glacial Acetic Acid in Vinegar Products	Prioritize the review of national standards for vinegar and glacial acetic acid	BAFS, PCA, FDA, DTI-EMB
	Strengthen characterization studies in support to the review of PNS (Others)	
	<i>Clarification by BAFS/PCA: not encouraged in organically/naturally produced vinegar</i>	
	<i>Disaggregate glacial acetic acid from the food group to industrial acids</i>	
	<i>To lobby/promote naturally fermented vinegar (possible study to show health benefits of natural vinegar vs synthetic)</i>	
Marketing as low fat, high fiber; as part of keto-diet	Product development	DOST FNRI for testing needs

Addendum

Annex 2. (continued) Food Sector: Emerging Coconut Products (Condiments, Butter, others)

INDUSTRY NEEDS	POSSIBLE S & T INTERVENTIONS	STAKEHOLDERS / AGENCIES INVOLVED
Possible challenges in packaging of products	Process improvement (Others)	
Educate exporters on the difference of Coconut Vinegar (natural) and glacial acetic acid	Labelling of products to include nutritional facts DTI-EMB Condiments Cluster to send request letter to DOST for the comparison of cocovinegar and glacial acetic acid	DTI-EMB, DOST
Coconut butter process/product improvement to compete with global market	Maximization of % recovery Physicochemical parameters of coconut butter and margarine	
Standards for coconut products	S&T Intervention / Research / Technical Data:	
Develop: <i>Butter vs margarine</i> <i>Vinegar</i> <i>Others</i>	Updating of characteristics / profile of products	FDA, PCA
Revisit: <i>Coco sugar</i> <i>Coco vinegar</i>	Identification of parameters needed for the characteristics needed (e.g., adulteration) in the standards FDA should be onboard since processed coconut products are within their jurisdiction	Research Bodies
Development of ethnic product: burnt / charred coconut product (used for chicken pianggang/barbecue used by Tausug / Bicolanos)	Toxicity studies Quality assessment, physicochemical, nutritional / safety characterization Development of burnt coconut as ingredient	DOST, PCA, FIC Zamboanga
Coconut aminos	Product characterization and development Process Optimization	

Annex 3. Reference for the Feasibility Study Project- Proposed Study Programs for Coconut Biodiesel Integrated 1G-2G Biodiesel Production Scheme (preliminary) (by PCIEERD S&T Fellow Dr. Ian Dominic Tabañag)



A program study can be pursued to valorize the coconut residues to augment the country's capacity in biodiesel production to meet the blending mandates, as illustrated in the above figure.

1. Copra cake is hydrolyzed, a sugar-rich hydrolysate (SRH) along with a lipid-dense post-hydrolysis residue (LDPHR) are obtained.
2. Coco-methyl esters (CME) can be directly produced via the transesterification of the lipid that can be easily extracted from the LDPHR (BPR Route).
3. CME can be directly produced from coco-fatty acid distillate (COFAD) via an integrated esterification and transesterification approach (BPR Route).
4. Fatty acid methyl esters (FAME) can be derived from the sugar rich hydrolysate, and glycerol (a by-product of the transesterification reaction of CNO) via fermentation (Biotech Route) using oleaginous yeasts. This a biotechnology approach route.

Therefore, the biodiesel (in the specific CME or generic FAME) derived from the copra processing residues can somehow augment the country's biodiesel production capacity. Moreover, this approach in producing biodiesel from 2G (2nd Generation) feedstocks can be easily integrated into the existing 1st Generation (1st Generation) biodiesel production infrastructure thus eliminating the need for 2G feedstock transport and storage.

Rationale/Benefit: This is intended to increase income to the coconut farmers via the additional income from producing more biodiesel derived from copra and its processing residues.

Proposed Period: These suites of studies can be done in 3 years' time which can result into a conceptual process design output that can be used as a basis for a front-end engineering design. Biotech route, similar with the utilization of sugarcane residues, it would take maybe more than 5 years as we currently do not have the biotech infrastructure for enzyme and cellular engineering. we may have identified and establish linkages with this part.

Addendum

Annex 4. Proposed Indicative Investment on the upgrading PCA Research Facilities

Annex 4.1. Proposed Development Plan Indicative Investment on Upgrading PCA Research Facilities

PCA RESEARCH CENTER / UNIT	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	TOTAL
Albay Research Center	25.00	13.00	13.00	13.00	3.00	3.00	70.00
Davao Research Center	12.60	12.50	12.00	12.00	7.50	4.00	60.60
Zamboanga Research Center	49.00	45.55	38.00	25.50	25.50	21.50	205.05
Laboratory Services Division	12.00	35.95	21.10	11.20	11.20	-	91.45
Office of the DA (GIS-RS Lab)	2.35	-	-	-	-	-	2.35
TOTAL	100.95	107.00	84.10	61.70	47.20	28.50	429.45

Annex 4.2. Albay Research Center – Breakdown of Indicative Investment

MANDATED R&D PROJECT / RESPONSIBLE UNIT	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	TOTAL
Component 1. Improvement and Upgrading of the Biotechnology Division (BD) Facilities	10.00	5.00	5.00	5.00	-	-	25.00
CO Building							
CO Equipment							
Component 2. Improvement and Upgrading of the Food Product Development (FPDD) Facilities	10.00	5.00	5.00	5.00	-	-	25.00
CO Building							
CO Equipment							
Component 3. Improvement of PCA-ARC General Facilities							
CO Building							
CO Equipment	5.00	3.00	3.00	3.00	3.00	3.00	20.00
TOTAL	25.00	13.00	13.00	13.00	3.00	3.00	70.00

Addendum

Annex 4.3. Davao Research Center – Breakdown of Indicative Investment

EQUIPMENT FOR PURCHASE / FACILITIES	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						TOTAL
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	
Equipment for purchase							
Drone	0.65	-	-	-	-	-	0.65
Solar Panels	1.00	-	-	-	-	-	1.00
Other equipment	2.50	-	-	-	-	-	2.50
Equipment for repair							
Fumehood	0.10	-	-	-	-	-	0.10
Laminar flow	0.60	-	-	-	-	-	0.60
Tractor	0.25	-	-	-	-	-	0.25
Facilities- rehab/repair/new							
DRC Building	1.00	1.00	1.00	-	-	-	3.00
Comfort Rooms	0.50	0.50	0.50	-	-	-	1.50
Wooden Frame Garage	-	-	-	0.50	0.50	0.50	1.50
Solar Dryer / old Copra Kiln	-	0.50	0.50	0.50	0.50	1.00	3.00
Concreting of roads	-	1.00	1.00	1.00	1.00	0.50	4.50
Fencing	-	1.00	1.00	1.00	1.00	1.00	5.00
Vehicles	-	2.00	2.00	2.00	1.00	-	7.00
Lab for pollen production	1.00	1.00	1.00	1.00	1.00	-	5.00
Lab rooms	2.00	-	-	-	-	-	2.00
Nursery screenhouse	0.50	0.50	0.50	0.50	0.50	-	2.50
Vermicomposting facility	-	0.50	0.50	0.50	0.50	-	2.00
Fertilizer shade	-	0.50	-	-	-	-	0.50
Biotech lab	1.00	1.00	-	-	-	-	2.00
Makeshift screenhouse	-	-	0.50	0.50	0.50	-	1.50
Soil micro lab	-	1.00	1.00	1.00	-	-	3.00
GIS room	-	-	1.00	1.00	-	-	2.00
Biocon lab	1.00	1.00	0.50	-	-	-	2.50
Motor pool	-	-	-	0.50	-	-	0.50
Solar-powered street lights	-	-	-	1.00	-	-	1.00
Housing units	-	1.00	1.00	1.00	1.00	1.00	5.00
Land Titling	0.50	-	-	-	-	-	0.50
TOTAL	12.60	12.50	12.00	12.00	7.50	4.00	60.60

Addendum

Annex 4.4. Zamboanga Research Center – Breakdown of Indicative Investment

STRUCTURES	INDICATIVE INVESTMENT (IN MILLIONS, PHP)						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	TOTAL
Training Center Dormitory	0.65	-	-	-	-	-	0.65
Wood-working Shop Dust Collection System	1.00	-	-	-	-	-	1.00
Molecular Genetics Laboratory	2.50	-	-	-	-	-	2.50
Coconut Science and Technology Center	0.10	-	-	-	-	-	0.10
Primary Processing Plant	0.60	-	-	-	-	-	0.60
Nursery Office and Warehouse	0.25	-	-	-	-	-	0.25
2-Storey PCA Coco Nectar (inflorescence sap) and Ethanol Research Laboratory (including laboratory equipment)	1.00	1.00	1.00	-	-	-	3.00
Administration Building Extension	0.50	0.50	0.50	-	-	-	1.50
ZRC Perimeter Fence	-	-	-	0.50	0.50	0.50	1.50
Concreting of ZRC Access Roads, including proper drainage	-	0.50	0.50	0.50	0.50	1.00	3.00
Production and Utilization of Coconut Methyl Ester (CME) Using Upgraded Village-Level Oil Mill at PCA-Zamboanga Research Center.	-	1.00	1.00	1.00	1.00	0.50	4.50
Establishment of Integrated coconut processing centers in the Ayala-Labuan District under the Convergence Area	-	1.00	1.00	1.00	1.00	1.00	5.00
Gender and Development Multi Purpose Hall	-	2.00	2.00	2.00	1.00	-	7.00
TOTAL	12.60	12.50	12.00	12.00	7.50	4.00	60.60

Addendum

Annex 4.5. Laboratory Services Divisions – Breakdown of Indicative Investment

STRUCTURES	INDICATIVE INVESTMENT (IN MILLIONS, PHP)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Chemical testing of plant, soil, fertilizer, food and non-food coconut products & by-products; and other agro/bio-related samples	3.50	5.50	6.00	6.00	6.00	27.00
Sustainability of LSD ISO 17025:2017 accreditation	-	-	-	-	-	-
Procurement PT and CRMs	-	0.10	0.10	0.20	0.20	0.60
Consumables/ supplies	2.00	2.00	2.00	3.00	3.00	12.00
Preventive maintenance / calibration of lab major/support eqpt	1.50	1.50	2.00	2.00	2.00	9.00
Upgrading of laboratory instrumentation to cater current concerns of the industry	5.00	18.00	11.00	-	-	34.00
Development of Laboratory Information Management System (LIMS)	-	2.00	-	-	-	2.00
Purchases of server	-	0.50	-	-	-	0.50
Purchase of dedicated PCs (w/ printer)	-	0.35	-	-	-	0.35
Maintenance of LSD Building/ Repair	-	1.00	-	-	-	1.00
Expansion to have soil microbiology lab	-	5.00	-	-	-	5.00
TOTAL	12.00	35.95	21.10	11.20	11.20	91.45

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Philippine Coconut Authority

CFIDP Implementing Agency Focal Person

CFIDP Program	Implementing Agency	Implementing Agency Focal Person	PCA Focal Person
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Health Insurance Program	Philippine Health Insurance Corporation	Mr. Lemuel T. Untalan Acting Vice-President, Member Management Group	Mr. Walter M. Partosa Deputy Administrator, Administrative and Finance Branch
		Ms. Remedios L. Gabuya Chief, Social Insurance Specialist	Mr. Hernani S. Yap Department Manager, Administrative and General Services Department
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		Mr. Luther Romeo C. Salting Vice-President, Corporate Business Affairs Group	
		Mr. Renato Viado Department Manager of Actuarial Research	
Scholarship Program	Commission on Higher Education	Ms. Marivic V. Iriberri OIC- Office of Student Development & Services	Mr. Roel M. Rosales Deputy Administrator, Operations Branch
		Mr. Donald Buena Agua Education Program Specialist II	Ms. Noemi C. Dubongco Department Manager, Assessment and Monitoring Service
Training for Coconut Farmers and their Families	Agricultural Training Institute	Dr. Rosana P. Mula Director IV	Mr. Ruben P. Rico Acting Division Chief, Farmer's Welfare and Institute Development Division
	Technical Education and Skills Development Authority	Ms. Milagros Urbano Division Chief, Policy and Planning	
		Ms. Sonia S. Lipio	Mr. Hernani S. Yap

CFIDP Implementing Agency Focal Person

		Executive Director, Partnerships & Linkages Office	Department Manager, Administrative and General Services Department
		Ms. Ma. Bernadette Rufuerzo Division Chief, Partnerships and Linkages Office	
Organization and Empowerment of Coconut Farmers	Cooperative Development Authority	Mr. Virgilio R. Lazaga Assistant Secretary, Oversight Head of Agriculture Cluster	Atty. Marlon M. Terrado Attorney VI, Legal Affairs Services
		Mr. Ray Elevazo Executive Director	
		Ms. Cherry Reyes Division Chief, CDA Planning	
Hybridization			
Operations			Mr. Roel M. Rosales Deputy Administrator, Operations Branch
			Ms. Marianita N. Eroy Division Chief, Oil Palm and Other Special Concerns Division
Research	Department of Science and Technology - Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development	Dr. Reynaldo V. Eborá Executive Director	Dr. Juanito B. Sangalang PCA Breeder
		Dr. Allan B. Siano Officer in Charge, Crops Research Division	
Farm Improvement			
Intercropping	High Value Crops and Rural Credit Office	Usec. Evelyn G. Laviña Undersecretary	Mr. Roel M. Rosales Deputy Administrator, Operations Branch

CFIDP Implementing Agency Focal Person

Livestock and Poultry	Bureau of Animal Industry	Engr. Regine V. Patiño Project Development Officer III	Mr. Ruben P. Rico Acting Division Chief, Farmer's Welfare and Institute Development Division
		Dr. Rene C. Santiago OIC-Assistant Director for Production and Research	
Native Dairy	National Dairy Authority	Mr. Jovan Olaguer Coordinator, Farm Operations Group	
		Ms. Marylin Mabale Administrator	
Shared Facilities for Processing	Philippine Center for Postharvest Development and Mechanization	Ms. Maria Teresa M. Rozul Department Manager, Corporate Planning and Management Services	
		Mr. Baldwin G. Jallorina Director IV	
		Mr. Arnel Ramir M. Apaga Director I	
		Dr. Ofero A. Capariño Scientist I	
Credit Program	Development Bank of the Philippines	Ms. Rallen O. Verdadero Senior Manager, Program Development and Management Department	Ms. Djoana R. Galang Program Development Officer III, Farmer's Welfare and Institute Development Division
		Mr. Joseph Angelo R. Diamante Program Officer, Program Development and Management Department	
	LandBank of the Philippines	Mr. Edgardo S. Luzano Assistant Vice President	Mr. Eduardo F. Suarez Department Manager, Finance Division

CFIDP Implementing Agency Focal Person

Market Research, Assistance, and Promotion	Department of Trade and Industry	Mr. Laurence L. Hidalgo Program Officer	
		Usec. Blesila A. Lantayona Undersecretary	Ms. Rosella B. Villaruel Department Manager, Trade & Market Development Department
		Ms. Asteria C. Caberte Assistant Secretary	Ms. Luzbrenda P. Balibrea Division Chief III, Trade Information & Relation Division
		Ms. Rosana B. Aligaya Division Chief, Bureau of Small and Medium Enterprise Development	
Infrastructure Development	Department of Public Works and Highways	Ms. Maricor R. Bañaga Development Analyst, Bureau of Small and Medium Enterprise Development	
		Engr. Antonio V. Molano, Jr. Assistant Secretary	Mr. Walter M. Partosa Deputy Administrator, Administrative and Finance Branch
		Engr. John Paul T. Gascon Engineer V	



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2021