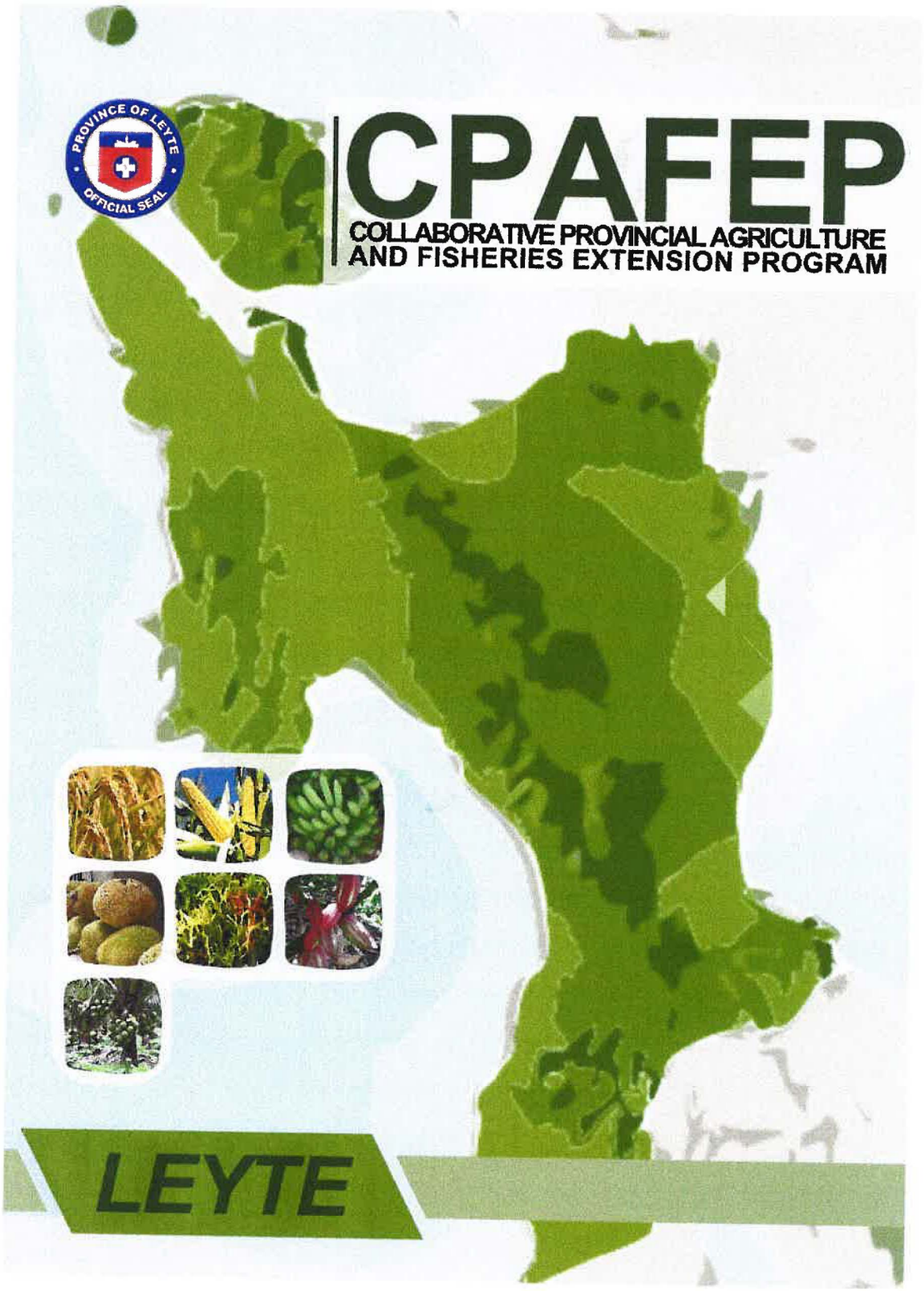

PROVINCE OF LEYTE
OFFICIAL SEAL
CPAFEP
COLLABORATIVE PROVINCIAL AGRICULTURE
AND FISHERIES EXTENSION PROGRAM
LEYTE

TABLE OF CONTENTS

List of Figures

List of Tables

List of Annexes

Annex 1:	S.W.O.T. Analysis
Annex 2:	Executive Order No. 08-2020-01, Series of 2023: Establishing the Leyte Agricultural and Fisheries Extension Center
Annex 3:	Memorandum of Agreement: Establishing a Province-Led Agricultural and Fisheries Extension System and Convergence in Leyte

Key terms and Definitions

Province-led Agriculture and Fisheries Extension Systems	Formal inter-agency network that aims to enhance Rural livelihoods by sharing science-based knowledge with farming and fishing, families, rural communities, and agricultural enterprises. It also aims to integrate various programs and related support services to strengthen capability of LGUs in implementing multiple AF programs with the province as the center for operations
Collaborative Provincial Agriculture and Fisheries Extension Program	Integrated set of projects and activities in sharing technical, market, policy and related advisory to support agriculture and fisheries in the province
Farmers	Individuals and their families who cultivate five (5) hectares or less with a mixture of crops, poultry and livestock, and occasionally a small fishpond
Fisherfolk	People directly or personally and physically engaged in the taking and/or culturing and processing fishery and/or aquatic resources
Local Government Units	Administrative authorities below the national government namely: provinces, autonomous regions, component cities, municipalities and barangays

PricEat Monitoring System	A mobile and web application developed by the Provincial Government of Leyte for the price monitoring of agricultural commodities like vegetables and eggs

Abbreviations and acronyms

AEW	Agricultural Extension Worker
AMAD	Agribusiness and Marketing Division
ARMM	Autonomous Region in Muslim Mindanao
CDA	Cooperative Development Authority
CPAFEP	Collaborative Provincial Agriculture and Fisheries Extension Program
DA-ATI	Department of Agriculture-Agricultural Training Institute
DA-SAAD	Department of Agriculture-Special Area for Agricultural Development
DOST	Department of Science and Technology
DPWH	Department of Public Works and Highways
DTI	Department of trade and Industry
EVIARC	Eastern Visayas Integrated Agricultural Research Center
FCA	Farmer/Cooperatives/Associations
F2C2	Farm and Fisheries Clustering and Consolidation
ICOT-RICE	Increased Crop Output Thru Rural Infrastructure and Community Empowerment
IPM	Integrated Pest Management
LAFEC	Leyte Agriculture and Fisheries Extension Center
LAFES	Leyte Agriculture and Fisheries Extension System
MA	Municipal Agriculturist
MAO	Municipal Agriculture Officer
MIMAROPA	Mindoro, Marinduque, Romblon and Palawan
MLGU	Municipal Local Government Unit
MT	Metric Ton
NCFRS	National Coconut Farmers Registry System
NFRS	Non Functional Requirements
NIA	National Irrigation Administration
NSIC	National Small Industries Corporation Limited
OPA	Office of the Provincial Agriculture
PAFES	Province-leg Agriculture and Fisheries Extension System
PCA	Philippine Coconut Industry
PDPFP	Provincial Development and Physical Framework Plan
PhilMech	Philippine Center for Post-harvest Development and Mechanization
RDS	Raw Dried Seaweeds
RFS	Raw fresh Seaweeds
RSBSA	Registry Systems for the Basic Sectors in Agriculture
YRRP	Yolanda Recovery and Rehabilitation Program

FOREWORD

A pleasant day! On behalf of the Provincial Local Government Unit of Leyte, I am pleased to present the Collaborative Provincial Agriculture and Fisheries Extension Program (CPAFEP) which was formulated through a rigorous consultation process among various segment in the agricultural and fishery sector of the Province of Leyte. In the time where there is already a constant changing climate, with increased risks of extreme weather and disasters, there is a need for the government to move swiftly in restoring the productivity of agriculture and fishery sectors. Climate change resiliency as we all know, is one of the approach that we should uplift for consistent economic capabilities of our farmers and fisher folk. This plan shall serve as the Provincial Government's direction and guide in proposing programs for a sustainable development in our agricultural and fishery inputs. Certainly, this would enhance the knowledge, support, cooperation, and connectedness of our partners and stakeholders. I sincerely applaud the efforts of those involved in developing this plan and it is my ardent hope that the commitment of all the officers, staff, and stakeholders especially the Provincial Agriculture Office will continue until the PCIP would be fully materialized. Together, let us be optimistic that with great vigor this plan will be the key in contributing enormous percentage of the income of the Province of Leyte. Thank you and I wish this endeavour all success.

CARLOS JERICHO "ICOT" PETILLA
Governor, Province of Leyte

CHAPTER I

AGRI-PROFILE OF LEYTE

The province of Leyte is the largest and oldest province in Eastern Visayas Region. It is bounded on the north by the Province of Biliran, in the east by the San Juanico Strait and the island of Samar, the Visayan Sea and Ormoc Seas in the west and Southern Leyte to its south. It is also the site of the largest geothermal plant in Asia, making it one of the resource rich provinces of the Philippines. Excess energy of the numerous power plants in the geothermal valley that generate electricity is supplied to the national grid that adds to the energy demand in Luzon and Mindanao. The iron smelting in Isabel, Leyte has been operational for more than 20 years since its inception.

By virtue of Republic Act No. 2227 issued on May 22, 1959, the Leyte Island was divided into the Provinces of Leyte and Southern Leyte, and Biliran as Leyte's sub-province. On May 11, 1992, Biliran became an independent province when the people of Biliran and Leyte ratified in a plebiscite the conversion of Biliran into a province. Leyte is a first class province with 40 municipalities and three (3) cities, two (2) of which are administratively independent of the Province. Ormoc City is an independent component city, while the capital, Tacloban City (which is also the regional capital of the Eastern Visayas region) was declared as a highly-urbanized city (HUC) in Calendar Year 2008. Both cities govern themselves independently of the Province. Baybay regained its city status following the reversal of the Supreme Court decision dated December 22, 2009.

Leyte is comprised of 1,641 barangays, majority of which (1,258 or 76.7% of the total) are rural and the remaining 383 or 23.3% are urban. The municipalities of the Province are clustered into five (5) congressional districts, namely: (1) the First District with an area of 758.60 square kilometers and comprised of Tacloban City and seven (7) municipalities; (2) the Second District with an area of 1,360 square kilometers and comprised of 14 municipalities; (3) the Third District with an area of 740.30 square kilometers and five (5) municipalities; (4) the Fourth District with an area of 1,189.30 square kilometers and comprised of Ormoc City and six (6) municipalities; and (5) the Fifth District with an area of 1,663.70 square kilometers and comprised of Baybay City and eight (8) municipalities (refer to Table 1 and Figure 2).

The economy of Leyte is a mixed agriculture, fishing, industrial, and energy covering total land area of 5,712.80 square kilometers or 571,280 hectares. It is the largest province in Eastern Visayas region (also known as Region VIII), comprising 26.66% of the region's total land area of 21,431 sq.km. Its major source are agriculture, industry, tourism that abounds with natural allures, rich culture and rare historical landmarks which makes it an ideal travel destination for local and foreign tourists.

Under the SAFDZ, the province has 274,481 hectares Strategic Crop Sub-development Zone, 14,854 hectares Strategic Livestock Sub-development Zone, and 9,228 hectares Strategic Fishery Sub development Zone. For non-SAFDZ areas, the remaining Network of Protected Areas for Agriculture and Agro-Industrial Development (NPAAAD) totals 154,288 hectares.

The agro-forestry zone covers 6,828 hectares, watershed/forestry zone at 113,638 hectares and built-up area at 6,068 hectares.

NPAAAD are areas that are classified as prime agricultural land. It covers not only irrigated areas but also all irrigable lands, as follows:

- all alluvial plains highly suitable for agriculture whether irrigated or not;
- agro-industrial crop lands or lands presently planted to industrial crops that support the viability of existing agricultural infrastructures and agro-based enterprises;
- highland areas with an elevation of 500 meters and above with the potential for growing semi temperate and high-value crops; all agricultural lands that are ecologically fragile, the conversion of which will result in serious environmental degradation; mangrove areas; and fish sanctuaries;
- areas covered by the NPAAAD should not be considered in urban land use planning.

Source: PPCIP Leyte

THE PROGRAM AT A GLANCE

As we pursue to entirely learn the ropes and fulfill Executive Order No. 138 (Full devolution of Certain Functions of the Executive Branch to Local Government Units), we resolve to reinforce the delivery of extension services as well as bolster the capabilities of our agricultural extension workers in order to empower our farmers and fisherfolk to manage sustainable agribusiness enterprises.

The Collaborative Province-led Agriculture and Fisheries Extension Program (CPAFEP) of Leyte brings about projects and activities crafted and envisioned for food security and vibrant trading. Leading the way is the Provincial Government full of aspiration to become a self-sufficient province through shared leadership and management with the national government agencies, state universities and colleges, civil society organizations and the private sector. The agriculture and fisheries extension (AFE) in the CPAFEP is dynamic, adaptive and resilient formed to rise above inevitable changes in the economy, political, social situations, and climatic conditions. It is an ideal platform for where PLGU-Leyte acts at the forefront, hones and manages the skills of personnel directly involved while encouraging cooperation within and outside of its organization.

Guided by the framework as set in the Province-led Agriculture and Fisheries System (PAFES) the CPAFEP was formulated according to the Provincial Investment Plan (PCIP), Annual Investment Plan (AIP), Enhanced-Provincial Development and Physical Framework Plan, and results of workshop with the municipal/city agriculture representatives. Likewise, Executive Order no. 08-2020-01, series of 2023 issued by Governor Carlos Jericho L. Petilla states that *"agricultural and fisheries extension serves as a major instrument in agriculture modernization especially in enhancing rural livelihoods and in making food available and affordable "*.

The project plans and activities of the priority commodities address the objectives of the four (4) flagship program components of PAFES: 1. Agro-enterprise development; 2. Location-specific Technology Development and Demonstration; 3. Capacity Building; and 4.

Information/Knowledge Sharing. Implementation strategies, arrangements, funding and investments are detailed and articulated to describe the cooperation among the partners.

OVERVIEW OF THE PROGRAM

In line with the mandate of the devolution of functions for agriculture delivery system the Province of Leyte forged the Collaborative Province-led Agriculture and Fisheries Extension Program (CPAFEP) with support from the Department of Agriculture and line agencies in the middle of the second quarter of 2023. Designed to effectively plan and carry-out agricultural support services to help the farmers and fisherfolk intensify the production of priority commodities and attain food security in the Province.

Agricultural commodities prioritized based on the PCIP, AIP, E-PDPFP of the province and PAFES workshop outputs were rice, corn, High-value crops, banana, jackfruit, coconut, swine, native chicken, goat, stingless bee, Tilapia, seaweed. Also, in the included is the agri-infra mechanization and a separate Communication Plan for the CPAFEP. Activities were classified into pre-production, production, harvest and post-harvest and marketing, capacity development and agricultural information.

For rice production program the key strategies are (a) Build resilience and stability in climate change adaptation; (b) Build unity and convergence in Farm Clustering and Consolidation; (c) Develop motivated and enthusiastic farmer entrepreneurs in the rice value chain and (d) Timely and relevant focus on digital transformation (DA-Masagana Rice Industry Development Workshop 2023). Major project/activities for seed sufficiency and production are provision of registered seeds and inputs, ICOT rice loan assistance, validation of hybrid and inbred rice production. On harvest and post-harvest, the activities are the establishment of Rice Processing Center, drying facilities, rice mills, storage facilities and construction of FMRs. Trainings for farmers and technicians will focus on seed production, cost-reducing technologies and IPM among others.

Capability development trainings and re-tooling for AEWs and farmers are lined-up for high-value fruit crops such as Jackfruit, Cacao and Banana. Establishment of LGU-managed Plant Nursery and Consolidation Center is being considered for high-value crops and training on Community Organization and mobilization to create and sustain FCAs. A training Center for Banana Processing and value adding and another for Jackfruit will be the primary goal of the high-value fruit crop program.

A first for the Province of Leyte is the addition of the coconut as one of its priority commodities in the implementation of the CPAFEP. The production phase of the coconut program will focus on an integrated coconut-based farming system after a seed garden and nursery are established. In the post-harvest component, there will be an Integrated Coconut Processing Center, standardization of the Coco wine quality and establishment of one (1) Coconut Shell Charcoal Manufacturing and Processing Facility.

In the part of fisheries, Seaweeds is identified for aquaculture projects. This will entail technology trainings for the commodity which will be conducted and provision of seaweed seedlings and farm implements will be provided.

Encompassing all commodity projects is agricultural information involving broadcast, print and social media. These various forms of communication for this CPFEP are defined in the Communication Plan.
The total co-investments required from the PLGU and collaborating agencies is estimated at 6,316.63M Pesos for three (3) years.

COMPARATIVE ADVANTAGE AND COMPETITIVE EDGE

Leyte is strategically located that it links Luzon and Mindanao through the Maharlika Highway. It can be easily reached through land, water, and air transportation. With forty (40) municipalities and one (1) city, it is blessed to have natural resources and habitats from ridge to reef. Farm to Market Roads are present or ongoing construction in most strategic barangays. Gross Provincial Domestic Product (GDP) of Leyte is half or 50.3% of the economy of Region 8 (PSA 2021). Though the share of Agriculture, Forestry and Fisheries is only 9.9% to the economy of Leyte (PSA 2021), agriculture in the province provides the bulk of production of major crops in Eastern Visayas. One example is rice where the provincial sufficiency index was more than 100% from 2011 to 2021 (DA 2021). Having more irrigated rice areas than the other provinces, it also accounts for more than half of the regional production.

In the report, "Assessment of Resources and Capabilities of the Local Government Units in Providing Agriculture & Fishery Extension Services" (Soliva, M. (Ed.) 2022), showed that the Office of the Provincial Agriculturist (OPA), the Office of Municipal/City Agriculturists (OM/CAs), and Office of the city Veterinarian (OCVet) have extension workers who are trained and holders of TESDA National Competency certificates on the following: Agri-crop Production NC III, Animal Production NC II, Organic Agriculture Production NC II, and Trainers Methodology NC II. Fifty percent of the OPA respondents have masteral degrees and one has doctorate. OM/CAs/OCVets have twenty-five (25) respondents with masteral degrees and two (2) with doctoral. OPA has three (3) vehicles while the OM/CAs/ OCVet have an average of one (1) vehicle and two (2) motorcycles. All offices have desktops/laptops, cell phones and other ICT equipment.

Leyte also has two (2) state universities with eight (8) campuses in different locations that offer agriculture and/or fisheries courses. These universities continuously provide workers formally educated in these fields to the different local government units aside from conducting outreach programs, research, and having a pool of experts for resource persons.

Formal lending institutions, non-government organizations, credit cooperatives, and credit support from programs of national government agencies and local government units (e.g. ICOT Rice Program of the Provincial Government of Leyte) are many and present in the province. Farmers and fisherfolk can access them for financial support.

Moreover, the provincial government prioritized digitalization and developed a mobile and web application, "PricEat", for the price monitoring of agricultural products in all municipalities/cities. The general public can access the information. It is also about to launch another app where the suppliers (farmers/fisherfolk) can post the products that they are selling and the buyers (with the cooperation of Philippine Chamber of Commerce, Inc. – Leyte Chapter initially) the products that they want to buy. The suppliers and buyers post the volume of the product and the time it is needed. Negotiations are done and finalized between them. The PLGU provides a platform that promotes transparency and inclusivity even to small players.

CHAPTER 2: PRIORITY COMMODITIES

The Commodity Prioritization tool (**Expanded–Vulnerability & Suitability Assessment (E-VSA)** was designed to guide planners in the conduct of selection and ranking of commodities. A set of criteria and corresponding percentage weight, presented below were APPLIED as basis for priority ranking. The Expanded Vulnerability and Suitability Analysis (E-VSA) application is a Decision Support Tool (DST) within the DA PRDP Planners Portal that enables users to conduct comprehensive analyses for agricultural planning. This step-by-step guide aims to assist users in accessing and effectively utilizing the E-VSA application. From downloading the offline installer to generating rankings and visualizing data on a map, this guide provides a narrative walkthrough of the entire process. Moreso, E-VSA is a critical planning tool used by PRDP in the ranking of municipalities to assess its suitability to specific commodity, its vulnerability to typhoon, flooding and drought, as well as the socio-economic conditions of a particular area. Hereunder are the criteria used for said tool.[1]

Table 1. PRDP Commodity Prioritization Criteria and Weight

CRITERIA	WEIGHT	
I. Agronomic Suitability	**20%**	
II. Market Potential	**30%**	
1. Market size		*20%*
2. Market growth potential		*20%*
3. Ease of entry		*20%*
4. Potential for value addition		*40%*
III. Impact on the Poor	**10%**	
1. Number of Poor People Involved		*50%*
2. Potential to Raise/Create Income		*50%*
IV. Number of Growers/Producers	**20%**	
V. Suitability vis-à-vis climate, geologic, and animal/plant health risk	**20%**	
1. Crops/livestock/fishery Commodity is historically produced in the area		*50%*
2. Natural hazard and risk management measures known or available and affordable to growers/producers		*50%*
Total Weighted Score	**100%**	
Rank		

[1] Heavily drawn from PCIP Leyte, 2024

Following is a brief explanation for each criteria:

***Agronomic Suitability** (20%)* – A criteria that determines the suitability of a production area for a particular commodity. It uses the Vulnerability and Suitability Assessment Tool of Bureau of Soils and Water Management (BSWM).

***Market Potential** (30%)* – An assessment that factors in the current market size, growth potentials, ease of entry of the commodity into the market, and the commodity's potential for value adding.

***Impact to the Poor** (10%)* – Refers to the commodity's potential to increase or create income for the greatest number of poor people and while simultaneously providing opportunities for gender equality.

***Number of Growers/Producers** (20%)* – A criteria that considers the number of farmers-producers involved in the production of the commodity. More number of farmers involved means higher standardized value.

Suitability vis-à-vis climate, geologic, and animal/plant health risk (20%) – Scoring focuses on the long standing record of the commodity's production in a particular area, which indicate that risk management for climate related and natural hazards is available and affordable for growers.

For the Province of Leyte, the Commodity Prioritization Worksheet for 25 commodities is presented in the figure below.

Commodity Prioritization Worksheet

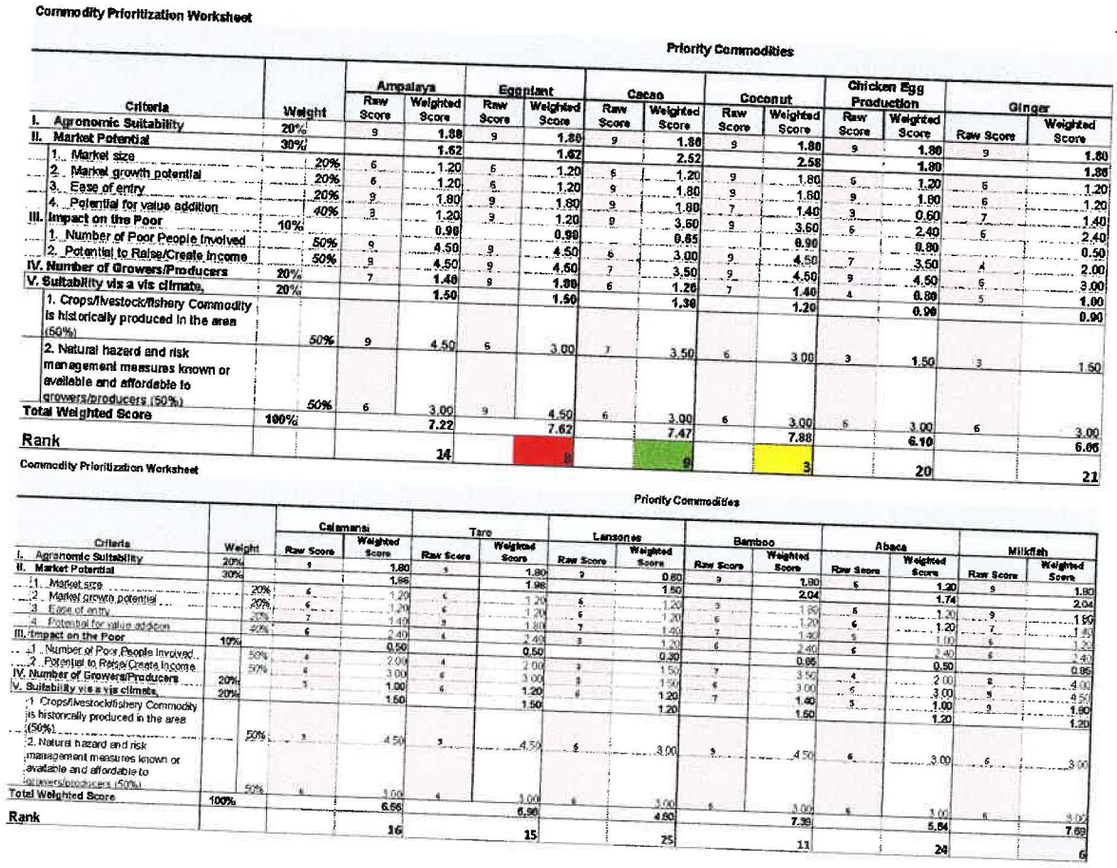
Priority Commodities

Criteria	Weight	Corn		Rice		Banana		Jackfruit		Seaweed		Lobster		Freshwater Prawn	
		Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
I. Agronomic Suitability	20%	6	1.20	9	1.80	9	1.80	6	1.20	6	1.20	6	1.20	6	1.20
II. Market Potential	30%		1.86		2.40		2.68		2.34		2.68		1.86		1.86
1. Market size	20%	6	1.20	9	1.80	9	1.80	6	1.20	9	1.80	6	1.20	6	1.20
2. Market growth potential	20%	6	1.20	6	1.20	9	1.80	6	1.20	9	1.80	6	1.20	6	1.20
3. Ease of entry	20%	7	1.40	7	1.40	7	1.40	9	1.80	7	1.40	7	1.40	7	1.40
4. Potential for value addition	40%	6	2.40	9	3.60	9	3.60	9	3.60	9	3.60	6	2.40	6	2.40
III. Impact on the Poor	10%		0.60		0.75		0.75		0.70		0.85		0.70		0.70
1. Number of Poor People Involved	50%	6	3.00	6	3.00	6	3.00	6	3.00	8	4.00	8	4.00	8	4.00
2. Potential to Raise/Create Income	50%	6	3.00	9	4.50	9	4.50	8	4.00	9	4.50	6	3.00	6	3.00
IV. Number of Growers/Producers	20%	6	1.20	9	1.80	9	1.80	7	1.40	9	1.80	8	1.60	8	1.60
V. Suitability vis a vis climate,	20%		1.20		1.50		1.20		1.80		1.20		1.20		1.20
1 Crops/livestock/fishery Commodity is historically produced in the area (50%)	50%	6	3.00	9	4.50	6	3.00	9	4.50	6	3.00	6	3.00	6	3.00
2 Natural hazard and risk management measures known or available and affordable to growers/producers (50%)	50%	6	3.00	6	3.00	6	3.00	9	4.50	6	3.00	6	3.00	6	3.00
Total Weighted Score	100%		6.06		8.25		8.13		7.44		7.53		6.56		6.66
Rank			21		1		4		10		7		17		17

Commodity Prioritization Worksheet

Priority Commodities

Criteria	Weight	Mangroove Crab		Swine		Goat		Native Chicken		Carabao		Squash	
		Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
I. Agronomic Suitability	20%	6	1.20	9	1.80	6	1.20	9	1.80	9	1.80	9	1.80
II. Market Potential	30%		1.86		1.56		1.32		1.83		1.80		1.98
1. Market size	20%	6	1.20	3	0.60	3	0.60	3	0.60	3	0.60	6	1.20
2. Market growth potential	20%	6	1.20	6	1.20	6	1.20	6	1.20	6	1.20	6	1.20
3. Ease of entry	20%	7	1.40	5	1.00	7	1.40	3.5	0.70	7	1.40	9	1.80
4. Potential for value addition	40%	6	2.40	6	2.40	3	1.20	9	3.60	7	2.80	6	2.40
III. Impact on the Poor	10%		0.70		0.70		0.60		0.75		0.75		0.90
1. Number of Poor People Involved	50%	8	4.00	8	4.00	6	3.00	9	4.50	9	4.50	9	4.50
2. Potential to Raise/Create Income	50%	6	3.00	6	3.00	6	3.00	6	3.00	6	3.00	9	4.50
IV. Number of Growers/Producers	20%	8	1.60	9	1.80	4	0.80	8	1.60	7	1.40	7	1.40
V. Suitability vis a vis climate,	20%		1.20		1.50		1.80		1.80		1.50		1.80
1. Crops/livestock/fishery Commodity is historically produced in the area (50%)	50%	6	3.00	9	4.50	9	4.50	9	4.50	9	4.50	9	4.50
2. Natural hazard and risk management measures known or available and affordable to growers/producers (50%)	50%	6	3.00	6	3.00	9	4.50	9	4.50	6	3.00	9	4.50
Total Weighted Score	100%		6.56		7.36		5.72		7.78		7.25		7.88
Rank			17		12		23		5		13		3



Commodity Prioritization Worksheet

Priority Commodities

Criteria	Weight		Ampalaya		Eggplant		Cacao		Coconut		Chicken Egg Production		Ginger	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
I. Agronomic Suitability	20%		9	1.80	9	1.80	9	1.80	9	1.80	9	1.80	9	1.80
II. Market Potential	30%			1.62		1.62		2.52		2.58		1.80		1.86
1. Market size		20%	6	1.20	6	1.20	6	1.20	9	1.80	6	1.20	6	1.20
2. Market growth potential		20%	6	1.20	6	1.20	9	1.80	9	1.80	9	1.80	6	1.20
3. Ease of entry		20%	9	1.80	9	1.80	9	1.80	7	1.40	3	0.60	7	1.40
4. Potential for value addition		40%	3	1.20	3	1.20	9	3.60	9	3.60	6	2.40	6	2.40
III. Impact on the Poor	10%			0.90		0.90		0.65		0.90		0.80		0.50
1. Number of Poor People Involved		50%	9	4.50	9	4.50	6	3.00	9	4.50	7	3.50	4	2.00
2. Potential to Raise/Create Income		50%	9	4.50	9	4.50	7	3.50	9	4.50	9	4.50	6	3.00
IV. Number of Growers/Producers	20%		7	1.40	9	1.80	6	1.20	7	1.40	4	0.80	5	1.00
V. Suitability vis a vis climate,	20%			1.50		1.50		1.30		1.20		0.90		0.90
1. Crops/livestock/fishery Commodity is historically produced in the area (50%)		50%	9	4.50	6	3.00	7	3.50	6	3.00	3	1.50	3	1.50
2. Natural hazard and risk management measures known or available and affordable to growers/producers (50%)		50%	6	3.00	9	4.50	6	3.00	6	3.00	6	3.00	6	3.00
Total Weighted Score	100%			7.22		7.62		7.47		7.88		6.10		6.06
Rank				14		8		9		3		20		21

Commodity Prioritization Worksheet

Priority Commodities

Criteria	Weight		Calamansi		Taro		Lansones		Bamboo		Abaca		Milkfish	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
I. Agronomic Suitability	20%		9	1.80	9	1.80	2	0.80	9	1.80	6	1.20	9	1.80
II. Market Potential	30%			1.86		1.98		1.50		2.04		1.74		2.04
1. Market size		20%	6	1.20	6	1.20	6	1.20	9	1.80	6	1.20	9	1.80
2. Market growth potential		20%	6	1.20	6	1.20	6	1.20	6	1.20	6	1.20	7	1.40
3. Ease of entry		20%	7	1.40	9	1.80	7	1.40	7	1.40	5	1.00	6	1.20
4. Potential for value addition		40%	6	2.40	4	2.40	3	1.20	6	2.40	6	2.40	6	2.40
III. Impact on the Poor	10%			0.50		0.50		0.30		0.95		0.50		0.95
1. Number of Poor People Involved		50%	4	2.00	4	2.00	3	1.50	7	3.50	4	2.00	8	4.00
2. Potential to Raise/Create Income		50%	6	3.00	6	3.00	6	1.50	6	3.00	5	3.00	9	4.50
IV. Number of Growers/Producers	20%		5	1.00	6	1.20	6	1.20	7	1.40	5	1.00	9	1.80
V. Suitability vis a vis climate,	20%			1.50		1.50		1.20		1.50		1.20		1.20
1. Crops/livestock/fishery Commodity is historically produced in the area (50%)		50%	3	4.50	3	4.50	6	3.00	3	4.50	6	3.00	6	3.00
2. Natural hazard and risk management measures known or available and affordable to growers/producers (50%)		50%	6	3.00	4	3.00	6	3.00	6	3.00	5	1.00	6	3.00
Total Weighted Score	100%			6.66		6.90		4.60		7.39		5.84		7.89
Rank				16		15		25		11		24		6

Figure 1. Commodity Prioritization Worksheet, Province of Leyte

The top 10 commodities for the Province of Leyte is presented below. Only the scores for Coconut and Squash have a tie, making the total number of top commodities to eleven (11).

Table 2. Top 10 Priority Commodities, Province of Leyte

Rank	Commodity	Weighted Score	Rank	Commodity	Weighted Score
1	Rice	8.25	6	Seaweeds	7.63
2	Banana	8.13	7	Eggplant	7.62
3	Coconut	7.88	8	Cacao	7.47
	Squash	7.88	9	Jackfruit	7.44
4	Native Chicken	7.78	10	Bamboo	7.39
5	Milkfish	7.69			

Five of the top ten provincial commodities are also in the top ten regional commodities, namely, Banana, Coconut, Squash, Seaweeds, and Cacao. It is observed that scores of the top priority commodities are all within the range of 8 to 7, compared to the regional scores that range from 8 to 6. The higher scores indicate the commodity's high suitability, market potential, and impact to the poor.

However, it is vital to note that among Leyte's top 10 priority commodities, Coconut and Banana scored low in the criteria of risk management for climate and natural risks and

hazards. This is an important aspect of the commodity's climate vulnerability and risk especially in the wake of super typhoon Yolanda as well as succeeding super typhoons like Odette. As such, climate and vulnerability factors are considered major areas of intervention and financing. The next sections will give ample and particular focus to this theme and topic. On the other hand, commodities such as Native Chicken, Squash and Eggplant are high in the history of production and low in vulnerability and risks.

Another salient feature of the top ten (10) commodities is the inclusion of Bamboo. In the Province of Leyte, bamboo plays major economic, environmental, and cultural roles. With high poverty incidence in the province, bamboos are indispensable housing materials for poor farmers. In terms of food, bamboo shoots are popularly consumed in the province. Lastly, bamboos are now top preferences as climate-resilient plants, as bamboos can survive the onslaught of strong typhoons and severe drought. Hence, the choice for bamboo as a priority commodity for the province sits well with climate mitigation measures and management.

RICE

A major producer of rice in the region, Leyte is self-sufficient in this commodity (DA 2022). Rice Production Program is one of the banner components of the Department of Agriculture in collaboration with the Provincial Local Government Unit of Leyte. The program is mainly concerned in rice farming and uplifting the lives of Filipino farmers. Said program integrates government initiatives and interventions for the agriculture sector, namely: food security and self-sufficiency, sustainable resource management, support services from farm to table, and broad-based local partnerships. It focuses on longer-term investments and has the following objectives: engage farmers associations / irrigators associations, LGUs and the private sector proactively; encourage the production and consumption of other food staples and provide specific interventions (technologies and services) to rice farmers to increase rice productivity such as: frontload investments in irrigation, postharvest facilities and mechanization.

The Province of Leyte gives more emphasis not on the achievement of rice self-sufficiency per se but rather the maintenance or improvement of that self-sufficiency level, both to allow the province to stay in step with the increasing demand and to enhance its contribution to the regional and national output. Herein, Rice Production program's goal of the province is how to increase and stabilize its per unit productivity to significantly boost absolute production volume and, if necessary, minimize fluctuations in yield performance especially in irrigated farms.

One of the initiatives to further boost the rice industry in the province, is the conceptualization of the program on "Increased Crop Output Thru Rural Infrastructure and Community Empowerment" (ICOT-P). Under said program, funds are provided as financial assistance to rice farmers which will be paid in kind right after harvest. Sustaining this initiative, CFAPEF will help empower rice farmers in providing their own alternative fund source; availability of market thus, preventing price intervention of middlemen which will significantly increase farmers' income.

Table 3. Actual Supply and Demand of Rice in Region 8 by Province, 2022

Geolocation	Human Population (2022)	Percapita Consumption (kg)	Demand for the year (mt)	Palay Production Volume	Palay Area Harvested (ha)	Seeds	SUB-TOTAL	Feed & Waste	TOTAL Palay (mt)	Milled Rice	Non-Food Use	Milled Rice Supply (mt)	Surplus/ deficit (mt)	Sufficiency Ratio (%) Local Production	Inflow (mt)	Outflow (mt)	Available supipy (mt)	Surplus/ deficit with inflow (mt)	Sufficiency Ratio (%) w/ inflow and outflow
	(a)	*(b)*	*(c=a x b)*	*(d)*	*(e)*	*(75kg/ ha)*		*6.50%*		*65% milling recovery*	*4%*	*(f)*	*(g = f - c)*	*(h = f/c)*100*					
Region VIII - Eastern Visayas	4,596,440.44	118.05	542,600.60	840,344.65	244,169.98	18,312.75	822,031.90	53,432.07	768,599.83	499,589.89	19,983.60	479,606.29	-62,994.31	88.39	249,695.46	21,193.13	708,108.62	165,508.02	130.5
Biliran	182,662.71	123.44	22,547.52	52,579.26	12,169.00	912.68	51,666.59	3,358.33	48,308.26	31,400.37	1,256.01	30,144.35	7,596.83	133.69		4.64	30,139.71	7,592.19	133.67
Eastern Samar	481,472.17	98.12	47,239.64	55,252.12	22,594.62	1,694.60	53,557.52	3,481.24	50,076.28	32,549.58	1,301.98	31,247.60	-15,992.04	66.15		1.79	31,245.81	-15,993.83	66.14
Leyte	2,058,659.90	114.01	234,699.58	434,479.29	106,920.00	8,019.00	426,460.29	27,719.92	398,740.37	259,181.24	10,367.25	248,813.99	14,114.41	106.01	233,243.12	18,821.40	463,235.71	228,536.13	197.37
Northern Samar	642,129.64	121.25	77,859.50	80,943.64	30,268.57	2,270.14	78,673.50	5,113.78	73,559.72	47,813.82	1,912.55	45,901.27	-31,958.24	58.95	1,527.44	0.07	47,428.64	-30,430.87	60.92
Samar (Western Samar)	798,585.81	126.37	100,918.89	154,850.61	56,214.00	4,216.05	150,634.56	9,791.25	140,843.31	91,548.15	3,661.93	87,886.23	-13,032.66	87.09	1,082.90	0.99	88,968.14	-11,950.75	88.16
Southern Leyte	432,930.20	128.14	55,475.24	62,239.73	16,003.79	1,200.28	61,039.45	3,967.56	57,071.88	37,096.72	1,483.87	35,612.85	-19,862.39	64.2	13,842.00	2,364.24	47,090.61	-8,384.63	84.89

Based on the PSA 2022, Leyte has a total land area of 633,544 hectares in which 388,615.89 hectares or 61.34% are devoted to agriculture. Out of this, the total area planted to rice is 106,920 hectares, 79,226 hectares or 74.09% are irrigated with a production of 338,280.93MT and 27,694 hectares or 25.91% are rainfed and upland rice areas with a production of 96,198.36MT. The total volume of palay production is 434,479.29MT which is 51.7% that of Region 8 with an average yield of 4.06MT per hectare and a sufficiency index of 106.01 in local production (Table 6). This

implies that with the Leyte province's human population of 2,058,659.9 and a per capita consumption of 114.01 kgs, the annual demand for palay is 234,699.58MT. The total volume of production in terms of milled rice is 259,181.24MT (65% milling recovery) is able to supply the whole

population with 248,813.99MT for the whole year, leaving a surplus of 14,114.41MT that could feed the human populace in Leyte to another 3 more months until the next harvest season.

However, in the regional setting, only two (2) provinces, Leyte and Biliran can sufficiently feed its populace while the other four provinces, E. Samar, N. Samar, Samar and So. Leyte are having difficulty in feeding their people. It is an obligation to help our neighbors to be able to increase the regional sufficiency level. Hence, there's still a need for Leyte to increase its productivity level to hit the national sufficiency level target of 97% in 2028.

Identification of Key Strategies

In consultation with the other stakeholders (DA, NIA, private sector, PLGU and MLGU representatives), the following were identified as key strategies: 1. Build resilience and stability in climate change adaptation through: a) Adjusting the planting calendar and synchronizing/harmonizing distribution of interventions, b) Commercializing the climate-smart, resilient and high-yielding varieties, c) Adoption of balanced fertilization strategy, and d) Planting of cash crops during fallow period; 2. Build unity and convergence in Farm Clustering and Consolidation through: a) Organization of cluster areas, b) Strengthening of public-private partnership; 3. Develop motivated and enthusiastic farmer entrepreneurs in the rice value chain through: a) Operationalization/establishment of rice processing centers, b) Mechanization intensification, and c) Farmer engagement into agri-enterprise development activities/projects; 4. Timely and relevant focus on digital transformation through: a) finalization of RSBSA and NFFRS, and b) operationalization and use of digital agriculture technologies, tools and platforms (DA Workshop 2023).

Collaborative Extension Projects
(Rice)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Establishment of RPC center	5 RPCs established	Operational RPC	2	2	1		50M	50M	25M	
Construction of drying pavement 1000 sqm.	5 drying pavements established	Drying pavement properly utilized	2	2	1		6M	6M	3M	
Installation of 8-ton capacity mechanical dryers	5 8-ton capacity mechanical dryers established	Operational 8-ton capacity mechanical dryers	2	2	1		8M	8M	4M	
Rice mills establishment	10 rice mills established	Operational rice mills	3	3	4		30M	30M	40M	
Storage facilities establishment	10 storage facilities established	Operational storage facilities	3	3	4		30M	30M	40M	
Hauling trucks procurement	41 hauling trucks procured	Properly utilized hauling trucks	15	15	11		15M	15M	11M	
Provision of seeds										
•Inbred	144,000 kgs. procured per year	Appropriate rice seed varieties used	41	41	41		8M	8M	8M	
•Hybrid	38,000 kgs. procured per year	Appropriate rice seed varieties used	12	12	12		5M	5M	5M	
Provision of Fertilizer/biofertilizers	7,200 bags procured per year	Recommended fertilizer/biofertilizer used	41	41	41		13M	13M	13M	
Access to financing institution for Trading Capital to Rice Clusters	5 FCAs assisted	Approved loan application	5	5	5		50,000	60,000	70,000	
Production loan support (ICOT rice program)	10 MLGUs assisted	Approved loan application	3	3	4		8M	8M	12M	
						Total	**173.05 M**	**173.06 M**	**177.07 M**	

2.2 CORN

White corn ranks second to rice in terms of importance as staple food crop and yellow corn is the main ingredient for the livestock feed industry. World production records show that corn reached 1, 224, 465 million MT in 2023. Among the top 10 corn producing countries, the US leads the way, contributing 389, 146 MT, followed by China with 280, 000 MT and Brazil 129, 000 MT. In the Philippines, the demand for yellow corn at the national level is 7, 224 MT per year and that demand is still increasing every year (DA Corn Program, 2024).

The Province of Leyte has a total area of 13, 987 hectares devoted to corn production (white and yellow) while the potential expansion area is 15, 876 hectares. The average yield for white corn is 2.08 tons/ha and 3.10 tons per hectare for yellow corn. The average corn production for white and yellow corn in the province remains quite low compared to the other corn producing provinces because most of the corn farms are in marginal areas and farmers are still practicing the traditional methods of planting.

The introduction of corn farm mechanization in areas where it is applicable has made corn farming easier and more profitable. However, this is not possible in all the other areas because of the rough terrain and other environmental limitations that makes it highly vulnerable to natural hazards and calamities.

YELLOW CORN PRODUCTION, AREA AND YIELD

In the Philippines, yellow corn is mainly utilized in the livestock and poultry industries as animal feeds comprising about seventy-four percent (74%) while processing industries use about fifteen (15%) of the total yellow corn production. Approximately 1 percent of locally produced corn grains is used as seeds. A part of the produce also goes to home consumption, and some are processed into various snack food items.

The Eastern Visayas region where Leyte belongs, is one of the provinces with lower yield than the national average. In order to support the projection of increased production, appropriate technologies, irrigation facilities, farm inputs such as seeds, fertilizers, pesticides and initial capital should be provided to corn farmers. Farmer organizations should also be strengthened and access to credit facilitated.

Table 4. Yellow Corn Production, Area and Yield, 2020

REGION	PRODUCTION (MT)	AREA (HA)	YIELD (MT/HA)
PHILIPPINES	6,011,046	1,438,508	4.18
CAR	226,523	56,850	3.98
ILOCOS REGION	516,795	83,180	6.21
CAGAYAN VALLEY	1,835,121	419,232	4.38
CENTRAL LUZON	234,760	35,227	6.66
CALABARZON	52,073	13,705	3.8
MIMAROPA	105,468	23,607	4.47
BICOL REGION	211,332	57,429	3.68
WESTERN VISAYAS	227,594	61,366	3.71
CENTRAL VISAYAS	2,715	850	3.19
EASTERN VISAYAS	**6,741**	**3,889**	**1.73**
ZAMBOANGA PENINSULA	23,339	8,167	2.86
NORTHERN MINDANAO	830,785	173,807	4.78
DAVAO REGION	66,062	23,102	2.86
SOCCSKSARGEN	901,128	279,707	3.22
CARAGA	93,645	19,316	4.85
BARMM	676,963	179,074	3.78

Source: PSA, 2021

Table 1 shows yellow corn production area (hectares) and yield (metric tons) in 2020, obtained from the different regions of the country. Eastern Visayas is at eleventh place with a total production of 6, 741 metric tons coming from 3, 889 hectares of corn areas, with an average yield of 1.73 metric tons per hectare.

Supply and Demand for Yellow Corn

The latest available production volume data for yellow corn was only 6, 741 metric tons (PSA, 2020) while the regional demand was already 602 MT per month or a total of 7, 224 MT per year.

In Leyte alone, particularly in Ormoc and Capoocan, a poultry farm that operates a feed mill facility has a requirement of 200 MT of yellow corn per month (clean and dry) or 2, 160 MT per year. This is why the Office of the Provincial Agriculture of PLGU-Leyte has been encouraging corn farmers in the Province of Leyte to plant corn in the existing corn production areas of the different municipalities.

The interventions in the CPAFEP are geared towards increasing yield and developing expansion areas for yellow corn production in the Province of Leyte.

Name of Buyer/ Company	Location	Volume Requirement (mt/year)
San Miguel Corporation	Ormoc City, Leyte	14,400.00
Jolly Pig Farms	Ormoc City, Leyte	300.00
LV Poultry Supplies	Ormoc City, Leyte	300.00
Uni Feeds	Cebu City	2,400.00
Lacno's Mart	Kananga, Leyte	288.00
GLN Piggery Farms	Merida, Leyte	864.00
BMPCI Feedmill	Bontoc, Southern Leyte	1,200.00
Golden Egg Farm	Sta. Margarita, Samar	720.00
AJ Ocasla Enterprises	Sta. Rita, Samar	120.00
Kananga Buyer	Kananga, Leyte	240.00
Capoocan Buyer (RAFSKIE)	Capoocan, Leyte	1,800.00
Total Requirement per Year		**22,632.00**

Utilization: Yellow Corn

PARAMETERS	2023	2024	2025
TOTAL SUPPLY (mt)	**5,883.56**	**9,295.76**	**16,086.02**
For Feeds	**5,883.56**	**9,295.76**	**16,086.02**
Other uses (specify)	-	-	-
Other uses (specify)	-	-	-
TOTAL DEMAND (mt)	**18,192**	**20,832**	**21,873.60**
For Feeds	**18,192**	**20,832**	**21,873.60**
Other uses (specify)	-	-	-
Other uses (specify)	-	-	-
Ending Stock	**(12,305.44)**	**(11,536.24)**	**(5,787.58)**
SUFFICIENCY (%)	**32.34**	**44.62**	**73.54**
(a) For Feeds	**32.34**	**44.62**	**73.54**
(b) For all uses	-	-	-

Figure 2. List of Corn Buyers in Region 8 (as of 2024), DA-RFO 8 Corn Program, 2024

Identification of Key Strategies

Corn is one of the priority commodities of the Province of Leyte and 21, 252 hectares are devoted to corn production (white and yellow corn). Although it is grown almost everywhere in the province, only 10 priority municipalities submitted their proposals and will take part in the initial implementation of the projects and activities that will be funded by PAFES.

The first activity to be undertaken by technical personnel from the local government units (provincial and municipal) is the master listing of RSBSA-registered corn farmers in the target municipalities so that the rightful beneficiaries will be able to avail of the different corn interventions. This will then be followed by corn production trainings and other capability

building activities which should be done prior to distribution of quality seeds and other farm inputs for corn production.

Corn farm machinery and equipment services from MLGUs, cooperatives and associations should be available to the farmers to ease their burden in land preparation and corn processing activities.

Corn farm clustering and product consolidation should be done to help farmers take advantage of economies of scale and increase their profit margin.

Sustainable yields and gains can only be achieved with adequate support from government and other project stakeholders that is why quality corn seeds (OPV, conventional and GM), assorted organic and inorganic fertilizers and amendments will be provided by the project to the identified beneficiaries. Furthermore, a corn processing center will be established to provide the de-husking, shelling, drying and storage services to cluster members.

One of the F2C2 program's main thrust and part of the package of interventions is the provision of the Agro-Enterprise Clustering Approach (AECA) training to farmer-members of every cluster to prepare them for the business part of the enterprise. In here, farming is treated as a business and the officers and members are taught to take care of the business and make it grow as they go along.

When the business is doing well, a cluster may opt to have different enterprises within the business and may need additional capitalization. An important intervention at this juncture would be the provision of trading capital for the particular enterprise that has the greatest potential for expansion and success.

In the past, government agricultural programs and projects on corn were mostly designed solely for production purposes. Individual farmers sold their products directly to traders and middlemen at a lower price. In turn, traders/middlemen sold the products to the processors/feed millers at higher prices and get better profit in return. In the new scheme of things (F2C2 way), the cooperative or corn cluster as the marketing arm, (buyer/consolidator/assembler) buys all products produced by the cluster, processes it into the form that members desire and then the government, through AMAD/Project marketing Team provides a shopping list of market outlets (with corresponding price quotations) to link the cluster to the prospective buyers. The cluster finally chooses the best buyer with the highest price and best marketing arrangements.

The corn cluster/farmers become competitive and empowered because they are no longer at the mercy of the traders/middlemen. The cluster is now guided by the shopping list and is free to enter into contract with the market outlet of their choice. This scheme has already been tried and tested but it may produce better results now as this is being institutionalized in all agricultural programs and projects of government.

If all these interventions are implemented, the PAFES Team believes that the project will increase corn production and uplift the living conditions of clientele-farmers.

Collaborative Extension Projects
(Corn)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Provision of Farm Machinery and Equipment	50 farm machineries provided	Appropriate machineries used	15	15	11	DA/PLGU	18M	18M	14M	DA/PLGU
Provision of Planting materials (OPV, hybrid (yellow & white), GMO yellow)	2,000 kilograms purchased & distributed	High yielding varieties used	32	32	32		1.2M	1.2M	1.2M	
Provision of fertilizers and other soil amendments	700 bags procured per year	Recommended fertilizer/biofertilizer used	32	32	32		1.4M	1.4M	1.4M	
Provision of Corn Processing Center	3 CPCs established	Operational CPC	1	1	1		25M	25M	25M	
Access to financing institution for Trading Capital to Corn Clusters	5 FCAs assisted	Approved loan application	5	5	5		50,000	60,000	70,000	
Market networking of corn farmers to enter into contract growing	240 corn farmers contracted	Readily available market for corn produce	32	32	32		16.8M	16.8M	16.8M	
						Total	**62.45 M**	**62.46 M**	**58.47 M**	

2.3 BANANA

Banana is one of the top commodity industries of the Philippines, providing both local and international revenues for the country. Majority of banana varieties grown in the country are Cavendish, followed by Saba/Cardaba and Lakatan. Other varieties include Latundan, Bungulan and Señorita, among others. Cavendish is mainly produced as an export product. The Saba/Cardaba variety is usually processed into banana chips for export while Lakatan is consumed mostly as fresh fruit in the local market. Majority of the banana growers of Saba/Cardaba, Lakatan and other local banana varieties are small-scale backyard growers.

The Province of Leyte has a total of 8,514 hectares planted to Banana, with an annual production of 4,677 MT. It is usually grown as a backyard crop planted under coconut trees or along with other crops such as root crops or vegetables. A total of 3,574 banana farmers from the banana-producing municipalities in the province can be clustered through F2C2 to attain economies of scale, and enable banana farmers to produce and earn more from their toil.

SUPPLY AND DEMAND

In the Figure below (Annual Per Capita Consumption of Cardaba Banana by Region, selected periods), consumption of Cardaba Banana in 2012 was highest in 3 regions namely Region 7 (Central Visayas), followed closely by Region 6 (Western Visayas) and Region 4-B (MIMAROPA).

In the same Figure, it also shows that in CY 2015-2016 consumption was still highest in the regions previously mentioned except for Region 7. However, a growing trend in Cardaba consumption is evident in Regions 9, 10 and 12. As for Eastern Visayas, consumption was lower in CY 2015-2026.

The Table on Supply and Demand for Banana for Region VIII in 2023 shows that the total annual demand for banana was 6, 087 metric tons while the net supply was only 3, 951.25 metric tons. The banana that was available for food use in the market during that year was only 3, 714.18 metric tons. This means that there was a deficit of 2, 373.40 metric tons (DA RFO 8, 2023). The data provided indicates that there is more that can be done for the development of the banana industry in Eastern Visayas.

The interventions that have been included in this proposal are all geared towards helping the banana farmers, entrepreneurs and other stakeholders.

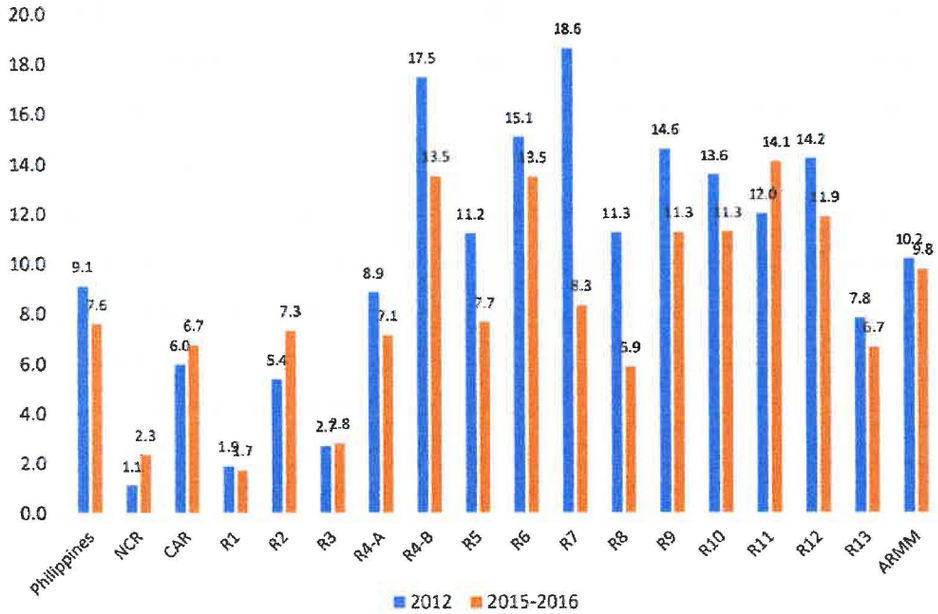


Figure 3. Annual Per Capita Consumption of Cardaba Banana by Region, selected periods, PSA 2023

Table 5. Annual 2023 Supply and Demand of Banana in Region VIII

Geolocation	Per Capita Consumption (kg)	Human Population (2020)	Total Demand	Supply					Surplus/ deficit (mt)	Sufficiency Ratio (%)
			Requirement per Annum (mt)	Projected Production Volume (mt)	Area harvested in 2023 (ha)	Net Supply (mt)	Feed and Waste (6% of the Net Supply (mt)	Available Food Use (mt)		
	(a)	*(b)*	*C =(a x b)*	*(d)*	*(e)*	*f= (d)*	*g = (f *.06)*	*h=(f-g)*	*I = (h-c)*	*k=(I/c)*100*
Eastern Visayas	**13.297**	**4,255,223**	**56,581.70**	**262,782.62**	**28,107.29**	**262,782.62**	**15,766.96**	**247,015.66**	**190,433.96**	**436.56**
Biliran	11.748	184,349	2,165.73	8,817.69	1,136.45	8,817.69	529.06	8,288.63	6,122.90	382.72
Leyte	15.983	380,883	6,087.66	3,951.25	3,148.21	3,951.25	237.08	3,714.18	-2,373.49	61.01
So. Leyte	12.557	1,810,581	22,735.10	25,208.10	5,039.00	25,208.10	1,512.49	23,695.61	960.51	104.22
W. Samar	9.662	801,306	7,742.22	18,362.84	5,392.00	18,362.84	1,101.77	17,261.07	9,518.85	222.95
E. Samar	15.297	643,520	9,843.92	164,230.44	7,290.49	164,230.44	9,853.83	154,376.61	144,532.69	1,568.24
N. Samar	11.694	434,585	5,082.03	42,212.30	6,101.14	42,212.30	2,532.74	39,679.56	34,597.53	780.78

Source: DA-RFO 8, 2023

Identification of Key Strategies

Banana is one of the priority commodities of the Provincial Local Government Unit of Leyte. Interventions that will foster development and capacitate farmers to be ready to face the challenges of disruptive natural forces affecting banana production such as typhoons, flooding, pests and diseases are really vital for the development of the banana industry.

The goal of improving productivity and competitiveness can be attained through conduct of trainings on Banana Package of Technology, marketing, financial management and entrepreneurial skills. Farm inputs will also be provided to qualified farmer beneficiaries of registered and government-accredited organizations. Another strategy to improve and sustain banana production is continuous banana planting and replanting activities, field monitoring for pests and diseases, supervision and provision of technical assistance regarding production, harvest and postharvest handling. Clustering of banana farms and consolidation of the products by empowered lead organizations will be done so that the price will no longer be dictated by middlemen since the products will now be marketed in bulk.

A training center for food processing and value-adding of agricultural products will be established in each identified municipality. Farmers will be trained on value-adding and marketing of Banana products in coordination with DOST and DTI.

Collaborative Extension Projects
(Banana)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Intensification of Banana Production	36 hectares production sites established	Increased production of quality bananas	San Miguel & Dagami	Jaro & Tolosa Dagami	Baybay & Mahaplag San Miguel	MLGU/PLGU	4 M	6M	6M	PLGU/MLGU/DA
Consolidation, Trading and Marketing of Banana	2 consolidating areas/points established	Consolidated banana products commanding higher prices				MLGU/PLGU	1 M	2M	3M	PLGU/MLGU/DA
Training Center for Food Processing and Value Adding of Agricultural Products established	1 training and processing center established	Operational training and processing center			Dagami	MLGU/PLGU			12M	PLGU/MLGU/DA/ VSU/ DOST
						Total	**5 M**	**8 M**	**21 M**	

2.4 JACKFRUIT

Jackfruit is the flagship commodity of Eastern Visayas under the HVCDP of the DA since 1995. It is one of the important commodities that is traditionally and commercially cultivated by farmers both in small/backyard and plantation scale. It is valued as fruit and vegetable in the region but its significant market potential is for fresh fruit and processed forms.

There are several jackfruit varieties that are grown in the Philippines. Three NSIC-registered varieties originated from Eastern Visayas: Burabod, EVIARC Sweet and Baybay Sweet. EVIARC Sweet is claimed to be the sweetest jackfruit variety in the country. The fruit was registered in the National Seed Industry Council in 2007 after three successive fruiting years of evaluation. It was found to surpass all other existing varieties based on the standards set by the Fruit Crops Technical Working Group of the NSIC. EVIARC Sweet has a fruit size of approximately 12 kg, golden yellow, taste and aroma far more superior than all the rest, with a sugar content of 25.14 brix.

Leyte has been the highest producing province in the region since 1990's. However, due to the tremendous damages caused by typhoon Yolanda in 2013, Leyte's production dropped that by 2014 the province ranked 4th in the region. Southern Leyte is leading producer in 2016 and closely followed by Samar. Production of Eastern Samar is also at the same level of Leyte's current production.

Consumption and Demand

The per capita consumption of jackfruit is 0.65 kilogram per year (Torres, et.al, 2010) as shown on the record. Basing on the population of Leyte in 2011 which is 1,950,000 people and multiplying it with the per capita consumption of 0.65kg/person/yr so the total jackfruit demanded is 1,267,500 kilograms or 1,267.5 metric tons. On the year 2012 (BAS, 2012), the production in metric tons for jackfruit in Leyte, which is 771.07 metric tons, so there's a supply gap of 496.43 metric tons. Using the supply gap percentage of 66% by Abamo,et.al (2009) , we will be having a supply 1,168.28 metric tons.

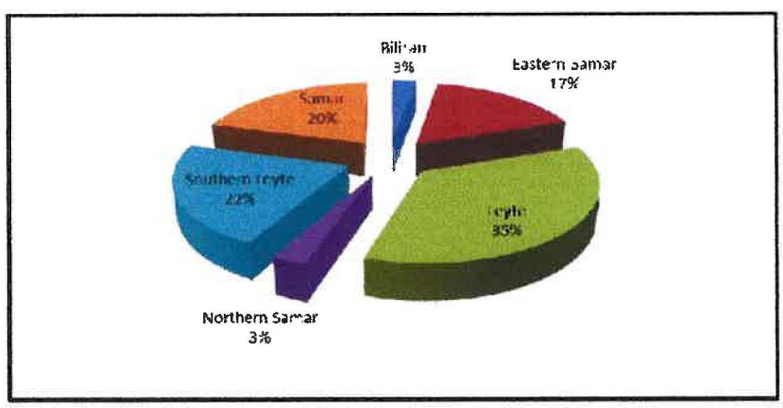


Figure 4. Percentage Share of Eastern Visayas provinces in the total regional production of jackfruit, 2010

Year	Production (MT)	Area (Ha.)	Bearing Trees	Yield/Bearing Tree (Kg)
2008	808.69	203	18,975	42.62
2009	834.46	203	19,065	43.77
2010	825.39	203	19,075	43.27
2011	811.58	197	18,969	42.78
2012	771.07	214	20,298	37.99

Source: BAS, 2012

Figure 5. Volume of Production, Area Planted and Yield Per Hectare

Markets and Trading Practices

Peak harvesting and trading of jackfruit in Leyte occurred in April, May and June which coincided with the major fruiting season of AES 1 that normally started in May until sometime in August while Eastern Samar and Western Samar provinces reflected year round harvesting and trading of jackfruit. Farmer growers in these

Identification of Key Strategies

Identified as one of the major fruitcrops produced in the Province of Leyte the industry on jackfruit production faces a challenge to intensify the technology not only production but also on the processing aspect.

Establishment of seedling nursery to cater to intensive technical trainings on seedling propagation is one of the major strategies for jackfruit. This is aside from providing a venue and showcase the production of jackfruit especially the EVIARC Sweet planting material. Furthermore, to maintain and properly identify the varieties of commercial importance a scion grove will be established for the said purpose.

The increase in production will definitely open more opportunities for local manufactures hence support in terms of post-harvest facility will be put in place. With increased production and post-harvest facility, FCAs will be organized to strengthen and access these groups for interventions from various agencies to foster collaboration and guarantee the sustainability of the jackfruit industry in Leyte

Collaborative Extension Projects
(Jackfruit)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Jackfruit seedling nursery establishment	5 Jackfruit Seedling Nursery established	Availability of DA-BPI accredited nursery	1	2	2		300,000	600,000	600,000	
Jackfruit scion grove establishment	5 scion groves established	Availability of true-to-type scion	1	2	2		200,000	400,000	400,000	
Provision of EVIARC sweet grafted planting materials	24,600 EVIARC sweet grafted planting materials procured	Availability of clean and true-to-type grafted planting materials	41	41	41		1.1M	1.1M	1.1M	
Establishment of jackfruit processing center	2 processing centers established	Operational Jackfruit processing center	1	1	1		12M	12M	12M	
Access to financing institution for Trading Capital to Jackfruit Clusters	5 FCAs assisted	Approved loan application	5	5	5		50,000	60,000	70,000	
						Total	**13.65 M**	**14.16 M**	**14.17 M**	

2.5 CACAO

Cacao is the main ingredient in chocolate, a multi-billion-dollar industry worldwide. The growing demand for cacao and chocolate products in both local and international markets presents a promising opportunity for industry growth.

The Philippines has a competitive advantage for cacao production due to its favorable climate and soil conditions. The first cacao in Asia was planted in the Philippines in 1670 and it was believed the fruit that chocolate is made from, the Theobroma cacao, or cacao, made its way to the country from Central America via the Manila-Acapulco Trade. There are three major cultivar groups being grown by farmers. Each cultivar possesses its unique properties and qualities. These cultivars are the Crillo, Forastero and Trinintario.

Historians have published many accounts of how cacao reached the Philippines. Recollect monk Juan de la Concepcion and Fr. Manuel Blanco tell a different tale - they credit the introduction of the crop to a Jesuit Friar named Juan Davila from Cariga, Leyte. He is said to have requested Governor-General Diego Salcedo to bring the plant from Nueva España to Cariga (Carigara), Leyte so he can teach the locals in the area how to cultivate it (Auro chocolate.com/blogs).

SUPPLY AND DEMAND

Based on KII and FGD results, the forecasted demand for cocoa beans from processors in the region is about 27.8MT per year. In terms of local production, there is an estimated supply of 56.16MT cocoa beans per year from 65 farms (17,550 bearing trees). From the regional production alone, there is already a surplus cacao beans supply of about 28.36MT. Nevertheless, the region traders still import about 18.82MT of cocoa beans from Davao. Therefore, with a quantity of 56.16MT, an adequate supply of cocoa beans can cater to the existing processors and market traders who import beans from Davao if the supply across the region is structured.

For, Leyte The estimated dried cocoa bean production for Leyte is 16.31 MT per year(from 10 farms with 5,098 bearing trees in 8.31ha) while the forecasted demand for grinding/processing of cocoa beans is 7.95 per year (from 10 processors with an output of 6,952 kgs of tablea per year). On the other hand, 18.12 MT per year (from 1 cocoa trader and 4 processors) is imported from Davao region and there's a supply gap of 26.48 MT excess of supply per year

Table 6. Supply and Demand of Cacao

Province	Estimated Dried Cocoa Bean Production	Imported from the Davao region	Grinding/ Processing Forecasted Demand for Cocoa Beans	Supply Gap
Leyte	16.31MT per year (from 10 farms with 5,098 bearing trees in 8.13ha)	18.12MT per year (from 1 cocoa trader and 4 processors)	7.95MT per year (from 10 processors with an output of 6,952kgs of tablea per year)	26.48MT excess of supply per year
Southern Leyte	13.32MT per year (from 20 farms with 4,164 bearing trees in 8.4ha)	No importation activity of dried cocoa beans is observed from Davao to these provinces.	1.08MT per year (from 8 processors with an output of 945kgs of tablea per year)	12.24MT excess of supply per year
Eastern Samar	5.83MT per year (from 8 farms with 1,823 bearing trees in 2.92ha)		1.26MT per year (from 5 processors with an output of 1,103kgs of tablea per year)	4.57MT excess of supply per year
Northern Samar	7.46MT per year (from 10 farms with 2,330 bearing trees in 6.1ha)		3.17MT per year (from 4 processors with an output of 2,774kgs of tablea per year)	4.29MT excess of supply per year
Samar	11.2MT per year (from 10 farms with 3,500 bearing trees in 8.16ha)		11.18MT per year (from 8 processors with an output of 9,786kgs of tablea per year)	0.02MT excess of supply per year
Biliran	2.03MT per year (from 7 farms with 635 bearing trees in 2.1ha)	0.7MT per year (from 4 processors who procure in Tacloban – Labios)	3.16MT per year (from 5 processors with an output of 2,762kgs of tablea per year)	0.43MT shortage of supply per year
Source: KIIs, FGDs, and Field Visits				

Identification of Key Strategies

Consultative meetings were conducted among the key players of Cacao (DA, DTI, PCA, PLGU, MLGU, and private sectors). The key strategies for cacao encompass a holistic approach that addresses production challenges, improves farmer livelihoods, and promotes sustainable and

ethical sourcing. By adopting climate-smart practices, optimizing yields, ensuring fair prices, and prioritizing responsible sourcing, the cocoa industry can create a future that is both profitable and environmentally responsible. Continued research, collaboration, and commitment from all stakeholders are essential to achieving this goal.

Collaborative Extension Projects
(Cacao)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Cacao seedling nursery establishment	5 Cacao Seedling Nursery established	Availability of DA-BPI accredited nursery	1	2	2		300,000	600,000	600,000	
Cacao bud wood garden establishment	5 bud wood gardens established	Availability of true-to-type bud wood garden	1	2	2		200,000	400,000	400,000	
Provision of high yielding variety planting materials	41,000 high yielding variety planting materials procured	Availability of clean and true-to-type grafted planting materials	41	41	41		1.1M	1.1M	1.1M	
Establishment of cacao post-harvest processing center	2 post-harvest processing centers established	Operational cacao post-harvest processing center	1	1	1		12M	12M	12M	
Access to financing institution for Trading Capital to Cacao Clusters	26 FCAs assisted	Approved loan application	6	10	10		50,000	70,000	75,000	
						Total	**13.65 M**	**14.17 M**	**14.175 M**	

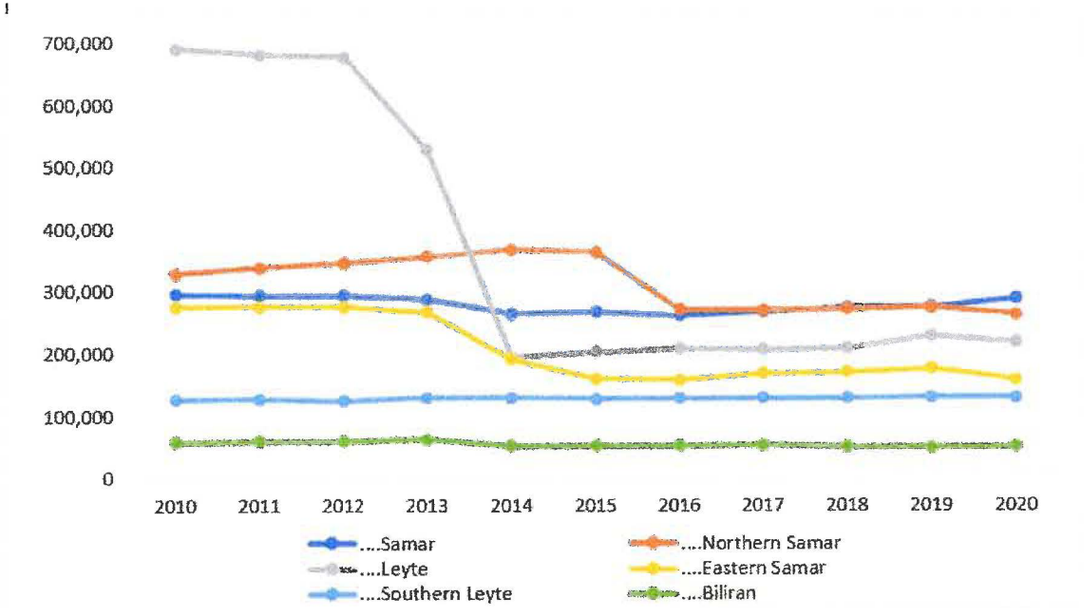
2.6 COCONUT

The coconut or *Cocos nucifera (L.)*, a member of the palm family, is one of the most versatile plants in the world. The crop is believed to be originally from Southeast Asia (Malaysia, Indonesia, Philippines) and the islands in between the Indian and Pacific Oceans. The coconut is classified as a drupe, which is at once a fruit, a seed and a nut. The plant can provide food, fuel, medicine and even building materials for housing and other farm structures. The coconut shell can be used as fuel for cooking and charcoal can be made from the coconut shell. Coconut oil and milk can be extracted from the inner flesh of the mature coconut and coconut milk has become very popular with those adopting plant-based diets, and as such its market value is expected to grow more than two-fold to reach approximately 1.78 billion US dollars by 2027. Other products and by-products have also gained economic importance and the demand for these products is continuously increasing in the domestic and global markets.

The world's coconut production amounted to 63.7 million metric tons (MT) in CY 2021 and the leading global coconut producer for that year was Indonesia (17.6 million MT), followed by the Philippines with 14.7 million MT (M. Shahbandeh, January 25, 2023). The best countries in the world are able to produce 12.5 MT/ha while the Philippine average is only 4.0 MT/ha.

There are approximately 3.65 million hectares of agricultural land devoted to coconut in the Philippines and it is vastly cultivated in 69 out of 82 provinces nationwide. Mindanao supplies about 60% of total nut production in the country. However, strong typhoons, drought, pest and disease outbreaks, natural calamities, armed conflict and disruption in the transport system are a few of the factors that impact the coconut industry.

The average nut production in the Philippines is only 44 nuts/palm/year (actual yield) and is a far cry from the potential yield of 150 nuts/palm/year (potential yield). Narrowing this yield gap is of utmost priority if we are to succeed in improving the living conditions of our coconut farmers. The project interventions and activities included in the CPAFEP for Leyte are designed to address the gap in yield and other challenges of the coconut industry such as inadequate agriculture-related infrastructure and facilities, insufficient technology development, weak training, extension and information dissemination. There is therefore a need to implement these interventions in the different priority municipalities and expand to other areas in the later years.



Source of basic data: PSA, 2021

Figure 6. Regional Coconut Product

Leyte dominated by holding 39% share in 2010. However, Production dropped by 71% in 2014 due to the supertyphoon.

Northern Samar dropped by 25% in 2016 due to Typhoon Nona in 2015

Eastern Samar dropped due to Yolanda and continued to drop due to subsequent typhoons, i.e. Ruby

Samar on the other hand, maintained a relatively steady production from 2010-2020, and currently has the highest production level in the region.

Source: PSA, 2021

Table 7. Regional Coconut Product

	Production (MT)	Area planted (ha)	Bearing trees	Bearing trees/ha	Yield (kg/tree)
EASTERN VISAYAS	1,099,650	330,140	35,477,788	107	31.00
Samar	286,650	49,100	5,887,789	120	48.69
Northern Samar	261,522	84,255	9,479,000	113	27.59
Leyte	216,787	94,745	10,835,099	114	20.01
Eastern Samar	157,160	48,372	4,644,200	96	33.84
Southern Leyte	128,624	32,168	2,721,200	85	47.27
Biliran	48,909	21,500	1,910,500	89	25.60

Source of basic data: PSA, 2021

Identification of Key Strategies

Cross-checking, validation and master listing of National Coconut Farmers Registry System (NCFRS) - registered coconut farmers in the target areas will be undertaken prior to the implementation of any intervention so that the PAFES project will be in line with the PCA directive that only NCFRS-Registered coconut farmers from accredited farmer organizations can avail of CFIDP and other program or project interventions.

Establishment of coconut seedling nurseries and coconut seed gardens will be undertaken so that future planting material needs of coconut farmers will be addressed. Since it will still take time for the nursery and seed garden projects to be productive, one of the immediate interventions that would address the lack of planting materials will be the purchase by proponent agency or request from PCA, of 5, 000 coconut seedlings and distribution to target farmer beneficiaries.

The establishment of coconut technology demonstration farms that will showcase best management practices and crop, livestock and inland fishery integration technologies in coconut production is an additional intervention that will benefit coconut farmers in the demo site and neighboring areas.

The need to maximize the impact of government interventions has been felt and that is why strengthening coconut farmers' organizations is another intervention that will be implemented in Leyte and this will have an initial target of five coconut farmers' organizations to be trained and registered with the Cooperative Development Authority (CDA) and accredited by PCA and PLGU-Leyte.

On the production side of the project plan, an important intervention will be the establishment of integrated farming systems model farms in selected locations, the objective of which is to showcase crops, livestock and inland fishery integration schemes that will provide additional source of income to farmers while waiting for the coconuts to be harvested and processed.

Under the processing interventions, the establishment of integrated coconut processing centers that will cater to all coconut product and by-product processing needs is deemed necessary for Leyte coconut farmers to be competitive with coconut products coming from

different provinces. The PAFES Team will also work closely with Department of Science and Technology (DOST) and Department of Trade and Industry (DTI) in developing the protocol to standardize *tuba* or *bahalina* processing and quality. The establishment of the coconut shell charcoal manufacturing and processing facility is also part of the interventions that will improve the quality of charcoal produced by Leyte coconut farmers since there is even a proposal to go into charcoal briquetting for the *lechon baboy, inasal* and barbeque industry.

Access infrastructure and other equally important infrastructure projects will be undertaken by the Department of Public Works and Highways (DPWH) while the need for machineries and processing facilities will be addressed by PhilMech and the other stakeholders.

The establishment of integrated coconut processing centers in strategic locations within the Province of Leyte is deemed necessary because the only way to be competitive in the global market is by improving the quality of copra coming from local communities. Shared service facilities (SSF) such as these will be accessible to local coconut farmers who will avail of the services that will be offered by the processing centers. White copra produced by these processing facilities will greatly improve the quality of locally-produced copra and the resulting high quality coconut oil that will be produced.

Farm clustering and consolidation efforts will be focused in the coconut production areas surrounding the facilities since it would be easier to transport and market the products in bulk and organized farmer groups will be able to command better prices for their products compared with marketing their products individually.

Standardizing the process of tuba making and quality of Bahalina are two different areas of concern that need to be addressed because this is an emerging local product that is becoming well-known in many parts of the country, and even abroad yet there are no approved standards for both the process and the quality of the product. The intervention of standardizing the process and quality of tuba/bahalina will be a collaborative effort among different government agencies (DA, DOST, DTI, LGUs) and industry stakeholders

The role of multi-media is very important in project implementation. Printed materials in the form of leaflets, social media posts and broadcast media programs such as University/School on the Air, advertisements and other forms of information dissemination are vital to the success of any program or project.

Collaborative Extension Projects
(Coconut)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Coconut seedling nursery establishment	2 Coconut Seedling Nursery established	Availability of good quality coconut seedlings	1	1		PLGU/MLGU/PCA	200,000	400,000	400,000	PLGU/MLGU/PCA
Coconut Seed Garden establishment	1 Coconut Seed Garden established	Availability of good quality coconut seedlings	1			PLGU/PCA	200,000	400,000	400,000	PLGU/PCA
Procurement of dwarf coconut seedlings and distribution to qualified farmers	5000 dwarf coconut seedlings procured per year 5000 dwarf coconut seedlings distributed per year	Availability of good quality coconut seedlings	1	1	1	PCA	1.5M	2M	2M	PCA
Standardization of Coco Wine "Tuba" Quality	2 Coco Wine "Tuba" Standardized Process approved 5 trained CFOs and farmers	Adoption of standardized Coco Wine "Tuba" processing	2	2	2	PLGU/MLGU/DOST/PCA/DTI	500,000	700,000	700,000	PLGU/MLGU/DOST/PCA/DTI
Integrated Coconut processing center establishment	2 processing centers established	Operational Integrated coconut processing centers	1	1		PLGU/MLGU/DOST/PCA/DTI / Philmech	12M	40M		PLGU/MLGU/DOST/PCA/DTI / Philmech
Coconut Shell Charcoal Manufacturing and Processing Facility establishment	3 Coconut Shell Charcoal Manufacturing and Processing Facility established	Operational Coconut Shell Charcoal Manufacturing and Processing Facility	1	1	1	PLGU/MLGU/DA/PCA/DTI/ Philmech	5M	5M	5M	PLGU/MLGU/DA/PCA/DTI/ Philmech
						Total	**19.4 M**	**46.5 M**	**8.5M**	

2.7 Seaweed

Seaweeds refer to a wide range of photosynthetic non-flowering plant-like organisms that live either in marine or brackish water environment. Seaweeds are often classified into three main groups based on pigmentation i.e. green (Chlorophyceae), brown (Phaeophyceae) and red (Rhodophyceae). The Kappaphycus, Euchema, Caulerpa, and Gracilaria species are the most collected and cultivated species in the country. About 98% of the total seaweed production is made of Kappaphycus and Euchema species which are mainly used for the production of carrageenan. Moreover, Seaweed Farming is considered as one of the most productive livelihoods of coastal farmers in the Philippines. The figure below shows the major species used by farmers in the country. Each species has many cultivars or varieties and strains that differ in color, branching, thallus characteristics, and preferred environment.[2]

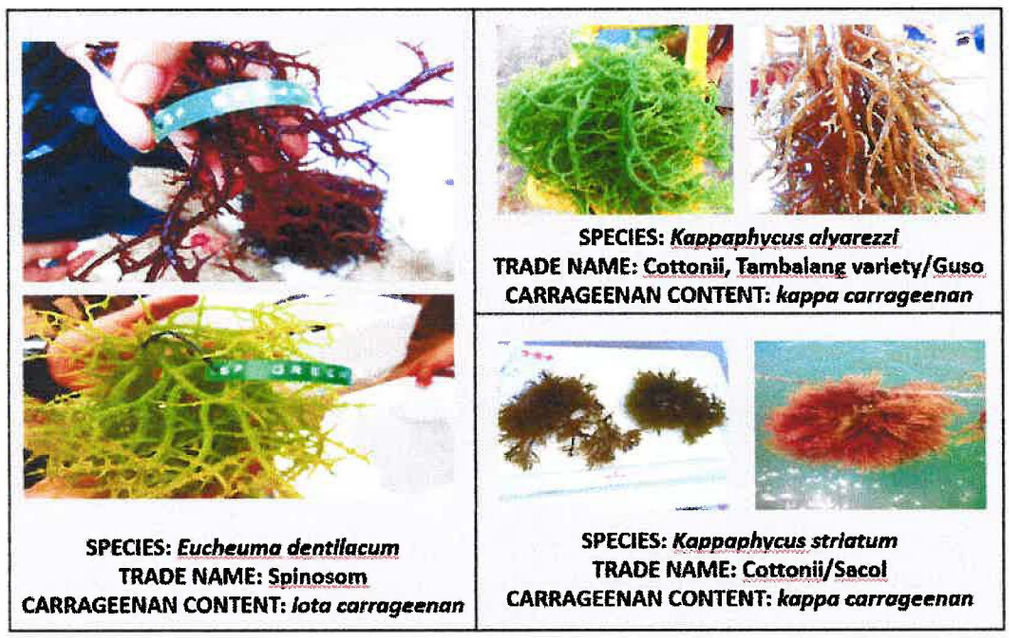


Figure 7. Seaweeds Species in the Visayas

In Leyte, the Island of Dawahon, in the municipality of Bato, is considered the seaweed capital in Eastern Visayas, with 90 hectares of its coastal area devoted to seaweed farming. Seaweed farming is the main source of living for the island residents for more than fifty years. Preferred seaweed varieties used were Kappaphycus alvarezii and Eucheuma denticulatum for their availability and economic potential. Dawahon Island seaweed farmers primarily produced raw

[2] PCIP, 2021

dried seaweeds (RDS) because of the presence of existing buying station and traders. Other areas in Leyte market their raw fresh seaweeds (RFS) in the neighboring existing markets.

However, their production was hampered by increasing frequency of destructive typhoons, and the emergence of seaweed diseases, all due to global warming. In the past, typhoons were not as destructive and more frequent as they are now. Seaweed diseases were not even observed. Subsequently, production dramatically declined in recent years.

In some parts of the coastal areas in the Province of Leyte, small potential areas were farmed for seaweeds, and sadly, they likewise bear the brunt of climate change.

Province	2013	2014	2015	2016	2017	Ave % growth
EASTERN VISAYAS	**27,884.62**	**17,925.84**	**18,513.49**	**18,411.26**	**30,952.14**	**2.75**
Leyte	16,331.80	17,571.80	18,085.43	17,948.97	30,436.57	21.59
Northern Samar	371.74	353.86	354.95	284.39	279.61	-6.20
Eastern Samar	11,181.07	0.18	73.11	176.82	235.64	-24.47
Samar	..	..	..	1.08	0.32	-70.37
Southern Leyte	..	..	..	..	..	..
Biliran	0.01	..	..	..	..	..

Source: Consolidated from BFAR

Figure 8. Seaweed Production in Eastern Visayas, 2013-2017 (in MT)

Carrageenan Processors Demand Requirement*	73,720 MT
RDS Supplied to Processors*	44,232 MT
Visayas RDS Production**	34,577.66 MT
RDS Outside Visayas	9,654.34 MT
Supply Gap	53% MT

Data computed from Visayas seaweed production at 7:1 fresh to RDS ratio

Figure 9. Supply Gap of RDS for Carrageenan Processing in the Visayas

Identification of Key Strategies

To address these issues and keeping Leyte's vision of a seaweed industry that is economically and environmentally sustainable, providing benefits to fisherfolk while maintaining competitiveness and efficiency, the following interventions were proposed to our target beneficiaries. Firstly, identification, evaluation and assessment of Municipalities and fisherfolk beneficiaries among coastal Municipalities will be conducted. Currently a total of 919 seaweed fisherfolks with existing 942 hectares production area need to be capacitated through provision of technical services and capability development trainings on seaweed production, simple accounting and bookkeeping, values education and climate resilient technology and marketing.

The farming of seaweed is mostly dependent on the weather condition. For the past 15 years, the Municipality of Merida, Babatngon, Palompon, Tabango and other seaweed producing municipalities have "seasonal" planting season, which means that they only plant seaweed seedling during the month of February to August. In the case of Brgy. Dawahon Island, Bato Leyte seaweed planting is "non-seasonal" which means that they can plant seaweed in a whole year. Recently with the issue of "climate change", Dawahon as the number one producer of seaweeds in Eastern Visayas have drastically reduced their production. With extreme heat during summer season that lasts for 2-3 months, coastal waters have high salinities that reach until 45-50ppt. that is so harmful to the seaweed seedlings. When this season comes, the seedling will automatically fall from the stem. This is in addition to the usual "ice-ice disease and epiphytes" that are common diseases among seaweed seedlings.

For the last 5 years, the Office of the Provincial Agriculturist have continued supporting financial and technical assistance to the seaweed farmers with the Municipalities identified in the Province of Leyte. Even the non-seasonal Municipalities have changes in their planting months. If they can plant seaweed seedlings in 4-5 times per year, now they can only plant 3-4 times per year.

Dawahon Island on the other hand was categorized now a "non-seasonal" planting category. They will not definitely plant during the months of March and April where there is extreme heat, while other Municipalities was eager to plant during summer season. Definitely, planting season for Dawahon falls on the month of July to January. An account for these

changes in their planting season was the effect of "climate change" where coastal temperature, salinities, dissolved oxygen counts and other water parameters are the limiting factors in seaweed production.

In line with the decrease of production of seaweed in the Province of Leyte, the demand for high marketability in terms of dried seaweed is still great and the foreign market soared high all throughout the world. The Philippines maintains its market production from third (3rd) and 4th producing countries in the world. The fisherfolk will never stop planting and producing because of this demand. More so that in Eastern Visayas or the Province of Leyte have a local trader located in Brgy. Diit, Tacloban City (TBK) where local market is readily available.

As to BFAR status of high value commodity of the 2022 Philippine production profile, seaweed is the number 1 producing commodity garnering 65.76%, followed by Milkfish 16.51%, tilapia 10.72%, shrimp 2.99% and shellfish 2.17%. Other fisheries commodities have 1.84%.

As to the present status of the seaweed production in the Province of Leyte, vast financial and technical support still remains. The Department of Agriculture Regional Office 8-Philippine Rural Development Project (DA 8-PRDP) have an on-going project right now in the Municipalities of Dawahon, Bato, Palompon, Tabango and Merida, Leyte. This project will enhance the marketing strategies and entrepreneurial capacity of seaweed production that would greatly increase the income of seaweed fisherfolk.

To address the problem on climate change that causes the increase of coastal temperature, salinities and other factors affecting growth of seaweeds, the Department of Science and technology, Regional office 8 - iSTART (DOST-iSTART) project was established. This is an on-going project of DOST 8, De La Salle University, Quezon City, Manila (DLSU, Manila), Eastern Visayas State University, Tacloban City (EVSU-Tacloban City), BFAR 8, Tacloban City and the Province of Leyte. The Province of Leyte will procure the most priced monitoring equipment on dissolve oxygen content, salinity monitoring and other gasses present in the water that will greatly enhance good production of seaweed seedlings. This is a corroborative research project with the State Universities and agencies mentioned in the Province of Leyte.

With the continued technical as well as financial support and continued monitoring of municipalities and fisherfolk on seaweed production, the Province of Leyte can still maintain its status as the number 1 producer of dried seaweeds in the whole of eastern Visayas.

In order to properly facilitate the distribution of seaweed seedlings and farming implements, a master listing of RSBSA registered seaweed farmers, who are members of fisherfolk associations, must be established first with the assistance of government agencies. In this manner, the rightful beneficiaries will be able to avail of the different seaweed interventions.

Upon production, crop insurance is necessary for protection from various risks and calamities since the province is calamity and hazard-prone.

Collaborative Extension Projects
(Seaweed)

Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Provision of seaweed planting materials and farm implements: (Polyethylene rope, Monofilament Nylon No. 300, 80 & 120, Empty Rice sacks, HDPE floaters, 1.5 coca cola plastic, etc.)	10 seaweed farms established	Productive seaweed farms	3	4	3	PLGU/BFAR 8	1.35M	1.8M	1.35M	PLGU/BFAR 8
Installation of culture lines (2 lines/FF approximately 100 meters/line) or "Tie-tie"	10 seaweed farms established	Productive seaweed farms	3	4	3	PLGU/BFAR 8	31,500	42,000	31,500	PLGU
Marketing of Raw Dried Seaweed (RDS)	12,611 kgs dried kappaphycus sold per cropping/year	Good quality RDS	3	3	3	FF/BFAR/MLGUs/PLGU	15M	15M	15M	FF/BFAR/MLGUs/PLGU
	24,000 kgs dried spinosum sold			1		FF/BFAR/MLGUs/PLGU		30M		FF/BFAR/MLGUs/PLGU
Post-Harvest and Value-Adding of fresh seaweed	5 new product forms	Increased market competitiveness of products	2	2	1		100,000	100,000	50,000	
Packaging and labelling	5 new products	Increased market competitiveness of products	2	2	1		200,000	200,000	150,000	
						Total	**16.65M**	**47.142 M**	**16.5315 M**	

Strategic Extension Support Services

1. **Technology demonstration (TD) -** testing, adaptation and on-farm/on coast demonstration of new, improved and climate resilient agriculture and fisheries technologies in strategic locations of the Province in collaboration with the private sector, farmers and fisherfolk.

TD Projects	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1	Y2	Y3		Y1	Y2	Y3	
Technology demonstration (TD) of priority and selected commodities		Wide scale adoption by farmers of POT on Rice Production								PLGU, DA, ATI, MLGU
➢ Rice	15 TD established		5	5	5		200,000	200,000	200,000	
	3 derby conducted	Increased farmer's income by 10%	3				600,000			
➢ Corn	5 TD established		2		3		100,000		150,000	
	2 farm visits and field days	Increased number of farmer-extension workers for specific commodities	2				150,000			
	1 derby conducted		1				300,000			
	100 bags of corn seeds		2				660,000			
➢ Coconut	4 TD established			2	2			100,000	100,000	
➢ Banana	4 TD established			2	2			100,000	100,000	
➢ Jackfruit	3 TD established		1	1	1		200,000	200,000	200,000	
➢ Cacao	3 TD established		1	1	1		200,000	200,000	200,000	

➢ Seaweed	10 TD established	Increased No. of fisherfolk beneficiaries on TD of Seaweed	3	3	4		150,000	150,000	200,000	PLGU, DA, ATI, MLGU, BFAR
						TOTAL	**1.96M**	**0.95M**	**1.15M**	

2. **Capacity building** - massive training of LGU agricultural extension workers, farmers, fisherfolk, rural women and the youth on agro-enterprise development and improved agriculture and fisheries production, processing and marketing technologies.

Training Courses	Target Output	Expected Outcome	Target Municipalities/Cities			Lead Player(s)	Investment			Sources of Funds
			Y1 (2022)	Y2 (2023)	Y3 (2024)		Y1 (2022)	Y2 (2023)	Y3 (2024)	
• Training for AEWs /Technicians (retooling courses on:)		Enhanced knowledge and skills on various improved technologies in agriculture and fisheries								
➢ Rice	10 trainings conducted		3	3	4		300,000	300,000	400,000	DA, ATI, PLGU, MLGU
➢ Corn	6 trainings conducted		2	2	2		200,000	200,000	200,000	DA, ATI, PLGU, MLGU
➢ Coconut	6 trainings conducted		2	2	2		200,000	200,000	200,000	DA, ATI, PLGU, MLGU
➢ Banana	6 trainings conducted		2	2	2		200,000	200,000	200,000	DA, ATI, PLGU, MLGU

➢ Jackfruit	6 trainings conducted	2	2	2	300,000	300,000	300,000	DA, ATI, PLGU, MLGU
➢ Cacao	6 trainings conducted	2	2	2	300,000	300,000	300,000	DA, ATI, PLGU, MLGU
➢ Seaweed	3 trainings conducted	1	1	1	300,000	300,000	300,000	DA, ATI, PLGU, MLGU, BFAR
• Training of Trainers (TOT)								
➢ Rice	10 trainings conducted	3	3	4	300,000	300,000	400,000	DA, ATI, PLGU, MLGU
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Jackfruit	3 trainings conducted	1	1	1	350,000	350,000	350,000	DA, ATI, PLGU, MLGU
➢ Cacao	3 trainings conducted	1	1	1	350,000	350,000	350,000	DA, ATI, PLGU, MLGU
➢ Seaweed	3 trainings conducted	1	1	1	350,000	350,000	350,000	DA, ATI, PLGU,

									MLGU, BFAR
• Season long Farmer Field School (FFS)									
- Rice	20 FFS conducted	6	6	8	750,000	750,000	1M	DA, ATI, PLGU, MLGU	
• Farm machinery and post-harvest equipment operation and maintenance									
➢ Rice	20 trainings conducted	6	6	8	600,000	600,000	800,000	DA, ATI, PLGU, MLGU	
➢ Corn	10 trainings conducted	4	4	2	400,000	400,000	200,000	DA, ATI, PLGU, MLGU	
➢ Jackfruit	3 trainings conducted	1	1	1	200,000	250,000	250,000	DA, ATI, PLGU, MLGU	
➢ Cacao	3 trainings conducted	1	1	1	200,000	250,000	250,000	DA, ATI, PLGU, MLGU	
➢ Seaweed	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, BFAR	
• Climate resilient technology training									
➢ Rice	15 trainings conducted	5	5	5	500,000	500,000	500,000	DA, ATI, PLGU,	

									MLGU, PhilRice
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Jackfruit	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Cacao	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Seaweed	4 trainings conducted	1	1	2	500,000	500,000	500,000	DA, ATI, PLGU, MLGU, BFAR	
● Training on Good Agricultural Practices									
➢ Rice	20 trainings conducted	6	6	8	600,000	600,000	800,000	DA, ATI, PLGU, MLGU	
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU	

➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Jackfruit	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Cacao	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Seaweed	4 trainings conducted	1	1	2	100,000	100,000	200,000	DA, ATI, PLGU, MLGU, BFAR
• Cost reducing technologies training								
➢ Rice	10 trainings conducted	4	4	2	400,000	400,000	200,000	DA, ATI, PLGU, MLGU, PhilRice
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Jackfruit	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU

➢ Cacao	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Seaweed	4 trainings conducted	1	1	2	100,000	100,000	200,000	DA, ATI, PLGU, MLGU, BFAR
• Training on Balance fertilization strategy								
➢ Rice	10 trainings conducted	4	4	2	400,000	400,000	200,000	DA, ATI, PLGU, MLGU, PhilRice
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
• Training on Composting Facility for bio degradable waste								
➢ Rice	10 trainings conducted	4	4	2	400,000	400,000	200,000	DA, ATI, PLGU, MLGU
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU

➢ Jackfruit	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, BSWM
➢ Cacao	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU
➢ Seaweed	4 trainings conducted	1	1	2	100,000	100,000	200,000	DA, ATI, PLGU, MLGU, BFAR, DOST
4. Strengthening of FCAs								
➢ Rice	6 trainings conducted	2	2	2	200,000	200,000	200,000	DA, ATI, PLGU, MLGU, CDA
➢ Corn	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA
➢ Coconut	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA
➢ Banana	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA
➢ Jackfruit	3 trainings conducted	1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA

➢ Cacao	3 trainings conducted		1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA
➢ Seaweed	3 trainings conducted		1	1	1	100,000	100,000	100,000	DA, ATI, PLGU, MLGU, CDA
• Training on agribusiness ventures (processing product development & marketing advocacy)									
➢ Rice	3 trainings conducted		1	1	1	100,000	100,000	100,000	DA,DTI,PLGU, MLGU, DOST
➢ Corn	3 trainings conducted		1	1	1	100,000	100,000	100,000	PLGU, MLGU, DA-AMAD
➢ Coconut	3 trainings conducted		1	1	1	100,000	100,000	100,000	PLGU, MLGU, DA-AMAD
➢ Banana	3 trainings conducted		1	1	1	100,000	100,000	100,000	PLGU, MLGU, DA-AMAD
➢ Jackfruit	3 trainings conducted		1	1	1	100,000	100,000	100,000	DA,DTI,PLGU,

										MLGU, DOST
➢ Cacao	3 trainings conducted		1	1	1		100,000	100,000	100,000	DA,DTI,PLGU, MLGU, DOST
➢ Seaweed	3 trainings conducted		1	1	1		100,000	100,000	100,000	DOST, BFAR, ATI, PLGU, MLGU
• Project Proposal Development Writing (for AEWs)	3 trainings conducted		1	1	1		100,000	100,000	100,000	ATI, PLGU
• Outcome-based Monitoring and Evaluation	3 trainings conducted		1	1	1		100,000	100,000	100,000	ATI, PLGU
• Presentation to Annual RD&E Agency Review	3 trainings conducted		1	1	1		100,000	100,000	100,000	
						Total	**12.7M**	**12.8M**	**13.15M**	

Chapter 3:

COMMUNICATION PLAN
(CPAFEP)

Introduction

Communication is a process of transmitting and receiving information in the form of ideas, facts, feelings, opinions and thoughts between two or more people in order to understand, educate and build relationships, trust and teamwork. It likewise settles or evades problems and conflicts, promotes harmony in dealings.

For so long a time, various farm programs and projects were implemented to include numerous efforts to sustain agricultural growth but results came in with miniscule outcomes. Appropriate and tested farm technologies hardly trickle down to the rightful recipients because of weak agri-fishery extension service.

The implementation of EO No. 138 and the introduction of the PAFES are welcome breaks for enablers as well as stakeholders of the industry as this will not only incorporate the execution of various agri-fishery programs and correlated support services but also strengthen the capabilities at the provincial level.

Goals

To promote PAFES and CPAFEP as a convergence initiative towards an effective agricultural and fishery extension system.

Objectives

1. To orient provincial/municipal local chief executives, office of the provincial/municipal agriculturists AEWs on the CPAFEP.
2. To disseminate the contents, strategies, projects, activities and partner agencies involved in the CPAFEP
3. To facilitate provincial/municipal AEWs to share knowledge, skills and best practices on appropriate farm technologies to farmers and fisherfolk for adoption.
4. To make available agricultural information packages on CPAFEP projects for dissemination.

Target Audiences

1. Local Chief Executives (provincial and municipal)
2. Partner agencies
3. Agricultural Extension Workers (provincial and municipal)
4. Farmers/fisherfolk
5. General public

Key Message

1. PAFES and CPAFEP is a convergence initiative which could pave the way towards an effective agri-fishery extension system and accelerate growth in the agriculture sector.

Strategies

1. Broadcast
   a) Broadcast releases on program/project updates, activities, technologies for utilization

      Mag Agri Kita (radio program)

      Every Monday, 2-3pm over DYMP, Palo, Leyte

      Parauma, may kasugbong ka

      Every Tuesday and Thursday, 2-2:30pm over DYVL Aksyon Radyo
2. Print
   a) Pamphlets, flyers on CPAFEP projects and farm technologies
3. Social Media

   Project updates, activities, techno guides of priority commodities

   Office of the Provincial Agriculturist – Leyte (Facebook page)
4. Interpersonal
   a) Focused group discussions on convergence efforts, project management, appropriate agri-fishery technologies and best practices
5. Benchmarking
   a) Farm visit to successful farmers, interaction and sharing of best practices.

Feedback Mechanism through:

a) Text/digital messages
b) Emails
c) Letters
d) Dialogue

Communication Plan For CPAFEP

Province of Leyte

STRATEGY	PURPOSE	TIMELINE	AUDIENCE	PERSONS RESPONSIBLE
1. Broadcast through radio program	To transmit information on CPAFEP projects, activities, updates and agri-fishery technologies	Year 1	General public	OPA Agricultural Information Unit
2. Print (printed information packages)	To provide translated/simplified information materials	Year 1 to Year 3	Farmers /fisherfolk	-do-
3. Social Media	To convey project updates, activities, milestones and agri-fishery technologies	Year 1 to Year 3	General public	-do-
4. Interpersonal	To discuss CPAFEP matters, project implementation and related concerns	Year 1 to Year 3	Project implementors, AEWs	ATI, DA, OPA
5. Benchmarking	To share best practices	Year 2	AEWs, Farmers	ATI, OPA, MA

CHAPTER 4: SUMMARY OF INVESTMENTS

COLLABORATIVE PROVINCE-LED AGRICULTURE AND FISHERIES EXTENSION SERVICES

PROVINCE OF LEYTE

SUMMARY OF INVESTMENTS

Projects/interventions	Co-investment			Total	Source of funds
	Y1	Y2	Y3		
a. Rice	818,112,300.00	885,712,300.00	749,912,300.00	2,453,736,900.00	DA,PLGU,CLGU,MLGU,NGOs
b. Corn	15,690,000.00	16,235,000.00	1,100,000.00	33,025,000.00	DA & PLGU
c. Banana	15,260,000.00	19,280,000.00	21,300,000.00	55,840,000.00	ATI,DA,PLGU,MLGU,VSU,DOST
d. Jackfruit	4,790,000.00	25,350,000.00	7,900,000.00	38,040,000.00	ATI,DA,PLGU,MLGU,VSU,DOST,Philmec & DTI
e. Coconut	27,350,000.00	70,350,000.00	28,850,000.00	126,550,000.00	PLGU,MLGU,PCA, DOST & DTI
f. Seaweeds	10,480,000.00	5,360,000.00	5,410,000.00	21,250,000.00	ATI,DA,PLGU,MLGU,EVSU,DOST,BFAR & DLSU
g Cacao					
Grand Total:					

CHAPTER 5: IMPLEMENTATION ARRANGEMENTS, ORGANIZATION AND MANAGEMENT

As provided in the Memorandum of Agreement for the establishment of the PAFES and in the Executive Order No. 08-2020-01, the Leyte Agriculture and Fisheries Extension Center is established as the operational arm in the implementation of the CPAFEP. The center will be under the supervision of a management committee chaired by the Provincial Governor with the Regional Executive Director of the DA and BFAR Director as the Co-chairs. Members of the management committee are SUC Presidents, LMP President, LEMMCAP-Leyte President, Heads of DA attached agencies in the province, Private Sector and RBO Representatives. All collaborating agencies will function as advisors as well as serve as participate in the convergence effort. Directly under the supervision of the Center Director is the multi-disciplinary Community Agriculture and Fisheries Management teams led by Mun./City Agriculture(M/CAs) with their corresponding AEWs. However, administratively the M/CAs and AEWs will remain under the control of their Mun./City mayors.

The management committee will set the strategic direction, agenda as well as promulgate the policies of the Leyte agriculture and fisheries extension service. Likewise, the management committee will approve the Province-led agriculture and fisheries extension program and its corresponding annual budget for endorsement to the Secretary of Agriculture for co-financing. In addition, the management committee will assign and oversee the programs and operations of the Province-led agriculture and fisheries extension program. The management committee will meet on a quarterly basis to monitor the progress of implementation of the Province-led agriculture and fisheries extension program.

The Center Director of the LAFEC will lead in the development and implementation, supervise in the operation and coordinate with the Leyte Agriculture and Fisheries Extension System (LAFES) partners for technical support. Quarterly reports for submission to the Management Committee on the progress and accomplishments of the Center will be prepared by the Center Director. Administrative and secretariat support to the management committee will also be provided by the Center Director.

The community agriculture and fisheries management team will assist the Center in developing the Province-led agriculture and fisheries extension programs and in establishing agro-based enterprises in Leyte. It will also serve as a multi-disciplinary resource person to capacity building programs and serve as a roving team of technical advisors. The team will link the LAFES with resource technology providers within and outside the province.

Figure 10: Organizational Structure of PAFES

Appendix 1. SWOT Analysis

SWOT analysis: Rice, Corn, Banana, Coconut, Jackfruit, Cacao & Seaweed

INTERNAL FACTORS		EXTERNAL FACTORS	
Strengths	**Weaknesses**	**Opportunities**	**Threats**
Rice			
• Three (3) organized Seed Growers Association composed of 305 individuals	• Insufficient production/supply of certified seeds	• Production expansion due to high demand for seeds, both certified and hybrid rice seeds	• Presence of capable competitors from other provinces/regions
• Availability of hybrid seeds supplier	• Absence/non-availability of Hybrid Rice Seed Grower	• Potential identification, recruitment, organization, capacity/capability development of a group for certification	• Presence of highly capable seed producer-companies as potent competitors
• Availability of farm machineries, equipment and post-harvest facilities	• Increasing/high prices of farm inputs	• Availability of new and superior varieties	• Instability and rising prices of inputs
• Competent AEWs	• Inefficient use of machineries and equipment due to poorly designed farm production areas	• Greatly reduced cost of production	• High cost of maintenance and unavailability of spare parts and after sales service, when needed
• 71,165 Registered RSBSA Rice Farmers	• Prioritization of programs and projects implemented lacks focus on increasing rice production and farm productivity	• Availability of technology and manpower complement for increasing production and productivity	• Prioritization of projects by LGUs due to power of Fiscal Autonomy
• 2,335 Non-enrolled RSBSA Rice Farmers	• Non-compliance with the recommended good agricultural practices, and too much dependence on government dole-outs	• Availability of support from NGAs	• Very high probability of non-use and waste of resources
• LGU Priority Commodity	• Delimitation/reduction of potential programmable areas due to non-inclusion as targets	• Continuous and on-going RSBSA registration still available	• Foregone/Lost opportunity for increasing farm production and productivity
• Potential for Hybrid Rice Production	• Uncertainty of support and sufficient fund allocation	• Presence of RCEF/NGAs/ICOT-Rice, and MLGU-iniatives programs as complementary support	• Occurrence of pest and diseases, and other calamities
• Potential areas for expansion	• Very low adoption and willingness of the farmers to adopt	• Increased production and productivity through adoption of technology	• Ever increasing and instability of prices of inputs

• Irrigated – 50,168 has	• Almost 30% lacks irrigation resulting in Low Average yield per hectare	• Availability of Rice Production Technology and other short term complementary programs for the provision of irrigation water	• Non-availability or distant location of water source
• Rainfed – 20,715 has	• Low adoption and non-compliance with recommendations due to high cost of production inputs	• Availability of technologies and credit facilities for Rice Production (LBP, DBP, etc.)	• Occurrence of pest and diseases, and other calamities
• Upland – 638 has	• Limited window for production and lower farm production and productivity	• Availability of provision of some other forms of irrigation interventions	• "Pole Vaulting" and other attitudinal characteristics
• Availability of Farmer/Cooperative/Association (FCAs) potential for clustering and consolidation and existence of rice clusters	• Low production and productivity and seasonality of available labor	• Premium price for products and availability of niche markets	• Non-coverage of some threats or occurrences resulting to non-payment of claims
• Availability of Insurance for Rice crops	• FCAs though organized, individually undertakes farm operations and other activities, especially marketing of produce	• Many viable FCAs are open to the idea of clustering and consolidation	
	• Farmers not used to crop insurance due to inability to pay premium when no government program is available	• Availability/Existence and aggressive promotion of agricultural insurance program by the PCIC	
Corn			
• Existing potential area for corn production.	• Low production due to limited number of farmers planting corn.	• Availability of expansion areas.	• Erratic weather conditions.
• Yellow corn as primary source of feeds.	• High production cost.	• Variety of product forms.	• Fluctuating prices of yellow corn (kernel).
• LGU priority commodity.	• Lack of technical manpower.	• High market demand.	• Incidence of pests and diseases.
• Well-trained farmers and empowered FCAs.	• Lack of consolidation centers.	• Availability of farm machineries and equipment for corn production.	• Influx of corn supply from other sources.
• Competent AEWs.	• Lack of post-harvest facilities.	• Availability of appropriate package of technology.	• Presence of competitive alternatives (cassava, sorghum, etc).
• Availability of funding from NGA/LGU	• Lack of policies on specific local government fund utilization	• Availability of support funds from other NGAs and local government units.	• Presence of other local government projects requiring immediate funding.

• Availability of High Yielding Varieties/ Hybrids.	• High cost of quality seeds.	• Availability of DA counterpart funds for quality corn seeds.	• Presence of other priority beneficiaries requesting for quality corn seeds.
• Existence of corn clusters.	• Lack of entrepreneurial skills of corn cluster officers and members.	• Availability of trainings/activities to improve entrepreneurial skills.	• Competition among FCAs in the scheduling of entrepreneurial trainings.
Banana			
• 8,514.6 has. Production area	• low productivity; fragmented farms	• available production technology; existing tissue culture laboratory	• natural calamities, pests and diseases; lack of tissue cultured planting materials; no personnel to handle the laboratory
• 4,677.5 MT (annual production)	• quality of product	• can be processed into other products export potential	• Competition
• 3,574 banana farmers	• high cost of inputs	• clustering of farmers	• no expansion of production areas; low quality banana
• existing buying stations (SC Global, Baybay City)	• high marketing cost	• consolidation of products	• competition of processors, exporters and traders
• Existing Leyte Banana Production & Trading Enterprise (Carigara)	• low adoption of farmers to new technologies	• LGU priority commodity (Budget)	• Competition
	• fluctuating/unstable price	• encouraged/eager to produce more quality banana	
	• fluctuating/unstable price	• encouraged/eager to produce more quality banana	
Jackfruit			
• Jackfruit are grown in different municipalities in the province	• Lack of accredited and trained plant propagators	• There are agencies who can provide trainings on propagation of seedlings	• insufficient source of asexually propagated planting materials
• Increase market demand of planting materials for EVIARC Sweet jackfruit	• Limited supply of asexually propagated EVIARC Sweet planting materials	• There are many small-scale nurseries in the province	• Vulnerability to natural weather disturbances
• Availability of experts/technical persons who can share their knowledge on POT of Jackfruit	• Limited financial capacity of farmers to buy fertilizers and other inputs	• Presence of learning sites for jackfruit production	• Accessibility of farmers to learning sites
• Re-tooling trainings are conducted for AEWs	• Lack of technical knowledge of farmers on improved technologies in jackfruit production	• Many people are willing and interested to venture into jackfruit production	• Lack of trained AEWs

• Research opportunities are available for conduct.	• Limited outreach of existing extension services	• Presence of a strong research collaboration/ partnership with DA, VSU/ACIAR and PCAARRD for disease, fruiting and nutrient management, and other researches aimed at increasing jackfruit production	• Source of fund
• -93% (2,180,106 kg) market demand gap	• Limited research on Jackfurit.	• High demand for fresh and processed jackfruit	• Seasonality of jackfruit
• Volume of harvest during season	• Lack of appropriate facilities/ equipment and transport vehicle for hauling	• Presence of agencies who can provide marketing support and regulatory services to trading	• Lack of knowledge on handling of jackfruit after harvest and lack of postharvest facilities
• Open market for local and international	• High level of losses and waste due to short shelf life and existing handling practices	• Use of Apps to connect the producers to individual/institutional buyers	• High cost of Apps
• Availability of raw materials for processing	• Lack of reliable price information and maketing system	• There are local machine fabricators	• Sustainability and volume of raw materials
• Presence of different government agencies like Food Science-VSU, DOST and DTI who extend their technical expertise who can assist in processing jackfruit	• Low capacity of the vacuum fryer machines equating to less economies of scale	• There are other product forms for jackfruit that does not require expensive/sophisticated machines	• Availability of quality low-cost machine for processing
• Existing regional jackfruit federation	• Machines are expensive and cannot easily be afforded by processors or those who wanted to venture into vacuum-fried or dehydrated jackfruit processing	• There are technologies that could prolong shelf-life of processed jackfruit	• Limited funding for jackfruit-based activities
• Jackfruit is identified as one of the priority crop of the province for investment.	• Processors are yet to comply with requirements of FDA and other permits	• There are agencies and research institutions who are conducting researches on improvement of jackfruit processing technology	• Less priority crops among LGUs
• Continuous fund allocation for DA-established and maintained scion garden in the province	• High perishability of processed products	• There are organized municipal-based jackfruit associations	• Maintenance of scion garden is expensive
• Availability of financial institutions	• There is no provincial jackfruit federation	• Jackfruit is prioritized as banner commodity of the region	• Voluminous paper requirements in processing loans

	• Some LGUs have other priority crops	• There are DA-established and maintained scion garden in the region	
	• Limited operational funds of DA Stations for planting materials production and rehabilitation of scion grove/garden which have been damaged/affected by weather disturbances	• Huge demand for quality and grafted planting materials inside and outside the region	
	• Limited access of farmers to financial institutions who can provide credit services and financing for their procurement of inputs due to limited knowledge on available services	• Loans are acquired by farmers and PGs from informal sources	
	• Lack of coordination between agencies on their programs and projects for jackfruit		
Cacao			
• Favorable soil and climate conditions for production	• Non-self-pollinating characteristic of cacao	• Cacao could help farmers to increase their income	• Prevalence of pests and diseases
• Suitability of cacao as an intercrop	• Inefficient procurement and distribution system of planting materials	• Cacao could be a potential source of additional income for coconut farmers	•Erratic weather condition
• Early productive stage	• Proliferation of non-accredited nurseries	• Present of the private/ business sector that has an investment in cacao	• Competition with other plantation crops
• Two-week harvest interval	• Inaccurate production data of cacao per municipality	• Around 2M hectares of coconut farms can be intercropped with cacao	• Commonly used varieties may no longer be true-to-type
• Early Return on Investment and high profitability	• Unorganized cacao bean producers and processors	• Increasing no. of cacao processors	• Presence of cacao substitute in the market
• Availability of funding as intercrop of coconut under the CFIDP	• Poor access road from farm to market	• High market demand for both local and international	• Mis-use of pesticides that affects the population of pollinators
• Existing National and Regional Cacao Council	• Poor pre & post-harvest handling of cacao beans		
• Presence of local cacao processors and buyers	• Poor quality of produced cacao beans		
• Existing "skilled" cacao growers are willing to train new cacao farmers in- situ and through an apprentice modality. This	• No specific fund allocated for cacao in LGU		

is both for production and fermentation technologies.			
Coconut			
• 274,540 has. Coconut area	• Low productivity; underutilized areas under coconut; marginal areas	• Available technologies on varietal improvement and appropriate cultural management	• land conversion; cutting coconuts without replanting
• 147,150 registered Coconut Farmers (NCFRS)	• Aging coconut farmers; non-adoption of appropriate technologies	• Clustering of farmers and consolidation of products	• depleted manpower/scarce labor force; high cost of labor
• 158,848 MT Coconuts	• Low production; traditional low yielding variety; senility of bearing trees; underutilized coconut by-products; limited supply of nuts	• existing Oil Mills (Baybay City & Tolosa); Coconut Hybridization Project; LGU priority commodity; charcoal and charcoal briquette consumer/buyer	• natural calamities; pests and diseases; governance/budget support to agriculture
• Presence of National Coconut Research Center	• low adoption of available technology	• Availability of technologies from research centers and source of high yielding planting materials	• non-adoption of generated researches for improved coconut production
• Existing "Tuba" Production and Trading Enterprise	• occasional demand for "Tuba"; fluctuating/unstable price; low supply of "Tuba"	• encourage farmers/"Tuba" gatherers to produce more	• competition of processors, exporters and traders
Seaweed			
• 6,359 hectares (has.) total production area in Eastern Visayas	• Non-utilization of production area	• Available production technology	• Low production, Natural Calamities
• 17,899.56 metric tons-2020 annual production	• Decreasing production	• Second (2nd) top export commodity in fisheries production sharing 22% to the total export earnings of USD 250 Million	• Extreme weather condition caused by climate change and the occurrence of pests and diseases
• 919 seaweed fisherfolk in the Province of Leyte	• Seasonal cultural approach	• Available production area	• Aging fisherfolk beneficiaries
• Existing buying station of raw dried seaweed (RDS)– TBK and consolidators	• Low grade of RDS	• For export	• Competition of processors, exporters and traders
• Existing market of fresh seaweeds	• High cost of product	• Value adding of seaweed into other product for commercial quantity	• No marketing standard
• Priority commodity for coastal municipality of the Local Government Unit (LGU)	• Insufficient fund allotment	• Seaweed PRDP; DOST iSTART	• Project sustainability
• Approved trading enterprise (PRDP) Project	• Low productivity	• Available trader and processor	• Project sustainability

• Approved Dost-Innovation, Science and Technology for Accelerating Regional Technology-Based Development (iSTART) Project	• On time conduct of the Project	• Conduct Basic Research on seaweed technology that can be a baseline information to different Provinces in Region 8	• Sustainability of iSTART Project
• Registered coastal fisherfolk	• Cannot avail government support	• Forming an Organization (Association) for Accreditation to the Provincial Local Government Unit (PLGU) thru Sangguniang Panlalawigan (SP)	• Project sustainability and Aging Fisherfolk Beneficiaries
• Annual conference of the Seaweed Industry Association of the Philippines (SIAP)	• Not all seaweed fisherfolk can attend the activity	• Info drive for current technology innovation on processing and marketing	• Competition of processors, exporters and traders

Annex 1: EO 08-2020-01 Series of 2023: Establishing the Leyte Agricultural and Fisheries Extension Center

Republic of the Philippines
PROVINCE OF LEYTE

Office of the Provincial Governor
CARLOS JERICHO L. PETILLA

OFFICE OF THE GOVERNOR

EXECUTIVE ORDER NO. 08-2020-01
Series of 2023

ESTABLISHING THE LEYTE AGRICULTURE AND FISHERIES EXTENSION CENTER

WHEREAS, the Agriculture and Fisheries Modernization Act of 1997 (AFMA) declares the policy of the State to promote science and technology as essential for national development and progress and that the State shall give priority for the utilization of research results through formal and non-formal education, extension, and training services;

WHEREAS, agricultural and fisheries extension (AFE) serves as a major instrument in agriculture modernization especially in enhancing rural livelihoods and in making food available and affordable to all Filipinos;

WHEREAS, despite the greater attention afforded to the agriculture and fisheries sectors in the past years, weak AFE services lingered over time which slowed down the utilization of smart agriculture and fisheries technologies responsive to the needs of farmers and fisherfolk in the Province;

WHEREAS, Leyte aspires to further elevate and sustain itself as a food secure and self-sufficient province with shared leadership and management, stronger resiliency and adaptive capacity in agriculture and fisheries through science-based innovations shared through vigorous AFE services;

WHEREAS, mandates PLGUs to integrate and evaluate MCLGU extension programs, attaining economies of scale for greater productivity and impact is a big challenge at the municipality/city level;

WHEREAS, to ensure smooth implementation of all AFE programs whether funded by LGUs, the national government, private agencies/entities, and/or foreign donors, there is an imperative to establish a single entity to serve as a unitary umbrella in planning and implementing such AFE programs in the province;

WHEREAS, the Province of Leyte signed a Memorandum of Agreement (MOA) with the Department of Agriculture (DA) and partners to establish and manage a Leyte Agriculture and Fisheries Extension Center in collaboration with various public, private and civil society organizations in the province.

NOW, THEREFORE, I, CARLOS JERICHO L. PETILLA, Governor of the Province of Leyte by virtue of provisions vested in me by the law, do hereby order:

SECTION 1. TITLE. This Executive Order mandates the establishment of a **"Leyte Agriculture and Fisheries Extension Center"** as the operational arm of the **Province-led Agriculture and Fisheries Extension System.**

SECTION 2. FUNCTIONS. The Center shall perform the following functions:

2.1 Lead the development and implementation of a Collaborative Provincial Agriculture and Fisheries Extension Program (CPAFEP) guided by the Provincial Commodity Investment Plan (PCIP) and Value Chain Analysis (VCA) of priority commodities.

2.2 Integrate the Province-led Agriculture and Fisheries Extension Program with the Comprehensive Provincial Development Plan (CPDP).

2.3 Coordinate the operations of Municipality/City LGU extensionists and mobilize technical support of subject matter specialists from the Visayas State University and Eastern Visayas State University, private sector, and civil society partners in implementing the Province-led Agriculture and Fisheries Extension Program.

2.4 Lead the establishment of viable agro-enterprises and setting up of corresponding technology adaptation/demonstration farms, capacity building, conduct of field days and other related activities in collaboration with partner agencies in the province.

2.5 Link farmers and fisherfolk with market and provide custom services in the whole agriculture and fisheries value chain.

2.6 Submit quarterly reports to the Management Committee on the progress and achievements of the Center, and if there are bottlenecks, the critical steps taken to overcome them.

SECTION 3. PROGRAMS. The Center shall subject to the availability of funds and the usual accounting and auditing rules and regulations develop and pursue the following flagship programs in collaboration with partners of Leyte Agriculture and Fisheries Extension System:

3.1 **Agro-enterprise development** – establishing enterprises to enhance rural livelihoods based on the value chains of priority commodities of the Provincial Commodity Investment Plan (PCIP).

3.2 **Location-specific Technology Development and Demonstration** – testing, adaptation and on-farm/on-coast demonstration of new, improved, and climate resilient agriculture and fisheries technologies in strategic locations of the province in collaboration with the private sector, farmers, and fisherfolk.

3.3 **Capacity Building** – massive training of LGU agricultural extension workers, farmers, fisherfolk, rural women and the youth on agro-enterprise development and improved agriculture and fisheries production, processing and marketing technologies.

3.4 **Information/Knowledge Sharing** – timely provision of technical, market and weather advisory through personal and electronic (i.e., mass media, mobile phone, and computer—ased) channels.

SECTION 4. ORGANIZATION AND MANAGEMENT SYSTEM. The Center shall be supervised by a MANAGEMENT COMMITTEE composed of the following:

4.1 **Chair** : **HON. CARLOS JERICHO L. PETILLA**

4.2 **Co-Chair** : **ANDREW RODOLFO T. ORAIS, DVM**
Regional Executive Director
Department of Agriculture Regional Field Office VIII

DIR. HANNIBAL M. CHAVEZ
Regional Executive Director
Bureau of Fisheries and Aquatic Resources Regional Office VIII

4.3 Members:

- Edgardo E. Tulin, President, Visayas State University;
- Dennis C. De Paz, President, Eastern Visayas State University
- Remedios L. Petilla, President, League of Municipalities of the Philippines (LMP) – Leyte Chapter
- Ariel B. Gam, President, League of Municipal Agricultural Officers and Municipal/City Agriculturists of the Philippines (LeMMCAP) – Leyte Chapter
- Heads of DA bureaus/agencies in the Province
- Ugene Tan, President, Philippine Chamber of Commerce and Industry – Leyte Chapter
- Jorge R. Alvero, President, Provincial Agriculture and Fisheries Council (PAFC)
- Froilan M. Fernan, Civil Society Organization (CSO) Partner
- Annabelle V. De Asis, DILG Leyte Provincial Director
- Araceli D. Larraga, DTI Leyte Provincial Director
- John Glenn Ocaña, DOST Leyte S&T Director
- Josefina Corazon N. Turla, OIC-DAR Province of Leyte
- Clarence L. Jereza, PCIC Regional Manager
- Alejandro K. Bautista, DENR-PENRO
- Edgar B. Tabacon, DPWH Regional Director
- Rolando V. Bade, TESDA Provincial Director
- Manuel P. Albaño, DEPED-Leyte Schools Division Superintendent
- PCOL Edwin C. Balles, PNP-Leyte Provincial Director
- LTCOL Ernesto R. dela Rosa INF (GSC), PA141B Commanding Officer

4.4 The Leyte Agriculture and Fisheries Extension Center shall be headed by a CENTER DIRECTOR appointed by the Provincial Governor. Municipal agricultural extension workers (AEWs) shall be technically supervised by the PAFEC and backstopped by the multi-disciplinary Community Agriculture and Fisheries Management Teams (i.e., crops, livestock, fisheries, agribusiness, extension communication, community organizing, agri-infrastructure) detailed from partner agencies of Leyte Agriculture and Fisheries Extension System.

4.5 Frontline services shall be led by Municipal/City Agriculturists (M/CAs) with their corresponding Agriculture Extension Workers (AEWs) who shall be technically supervised by the Center Director in implementing the Province-led Agriculture and Fisheries Extension Program. Notwithstanding this, the (M/CAs) and AEWs shall remain administratively under the Municipal/City Mayors. Administrative support

and project monitoring shall be provided by the Office of the Provincial Agriculturist of Leyte.

Figure 1. Organization and Management System of PAFES

SECTION 5. TERMS AND REFERENCE OF THE MANAGEMENT COMMITTEE.

5.1 Set the strategic direction and agenda of Leyte Agriculture and Fisheries Extension System for the province consistent with national and regional agriculture development plans.

5.2 Promulgate policies of Leyte Agriculture and Fisheries Extension System to be implemented by the Center.

5.3 Approve the Province-led agriculture and fisheries extension program and corresponding annual budget of Leyte Agriculture and Fisheries Extension Center and endorse these to the Secretary of Agriculture for co-financing.

5.4 Appoint/detail human resources and provide oversight to the programs and operations of Leyte Agriculture and Fisheries Extension Center.

5.5 Meet every quarter to monitor the progress of implementing the Province-led agriculture and fisheries extension program.

SECTOR 6. TERMS AND REFERENCE OF THE CENTER DIRECTOR

6.1 Lead the development and implementation of the Province-led agriculture and fisheries extension program.

6.2 Formulate the annual work and financial plan of the Center for approval by the Management Committee.

6.3 Supervise the operations of Municipality/City LGU extensionists and coordinate technical support of subject matter specialists from Leyte Agriculture and Fisheries Extension System partners.

6.4 Prepare quarterly reports to the Management Committee on the progress and achievements of the Center.

6.5 Provide administrative and secretariat support to the Management Committee.

SECTION 7. TERMS AND REFERENCE OF THE COMMUNITY AGRICULTURE AND FISHERIES MANAGEMENT TEAMS (I.E., CROPS, LIVESTOCK, FISHERIES, AGRIBUSINESS, EXTENSION COMMUNICATION, COMMUNITY ORGANIZING, AGRI INFRASTRUCTURE).

7.1 Assist the Center in developing the Province-led agriculture and fisheries extension program.

7.2 Assist the Center in establishing and nurturing agro-based enterprises in the province.

7.3 Serve as multi-disciplinary resource persons to the capacity building programs of the Center.

7.4 Serve as roving teams of advisors in providing technical support and advisory services to Municipality/City AEWs in the province.

7.5 Link Leyte Agriculture and Fisheries Extension System with resource/technology providers within and outside the province.

This order shall take effect immediately.

Done at the Provincial Government Complex, West Bypass Road, Palo, Leyte this 2nd day of August in the year of our Lord, Two Thousand and Twenty-three.

CARLOS JERICHO L. PETILLA
Governor

MEMORANDUM OF AGREEMENT

ESTABLISHING A PROVINCE–LED AGRICULTURE AND FISHERIES EXTENSION SYSTEM AND CONVERGENCE IN LEYTE.

KNOW ALL MEN BY THESE PRESENTS:

This agreement is executed and entered into by and among the following:

The **PROVINCIAL GOVERNMENT OF LEYTE**, a local government unit with office address at the Provincial Capitol, Tacloban City hereinafter referred to as **PLGU–LEYTE** duly represented by **HON. CARLOS JERICHO L. PETILLA** in his capacity as **Governor**;

The **DEPARTMENT OF AGRICULTURE**, a government agency with office address at Elliptical Road, Diliman, Quezon City hereinafter referred to as **DA** duly represented by **ANDREW RODOLFO T. ORAIS** in his capacity as **Regional Executive Director** of DA Regional Field Office 8 upon authority from His Excellency, **President FERDINAND R. MARCOS, JR.** in his capacity as **Secretary;**

The **VISAYAS STATE UNIVERSITY,** a public higher education institution with main campus at Baybay City hereinafter referred to as **VSU** duly represented by **EDGARDO E. TULIN** in his capacity as **President;**

The **EASTERN VISAYAS STATE UNIVERSITY,** a public higher education institution with main campus at Tacloban City hereinafter referred to as **EVSU** duly represented by **DENNIS C. DE PAZ** in his capacity as **President;**

The **LEAGUE OF MUNICIPALITIES OF THE PHILIPPINES – LEYTE CHAPTER**, Provincial government entity with office address at Municipal Hall, Palo, hereinafter referred to as **LMP–LEYTE CHAPTER** duly represented by **HON. REMEDIOS L. PETILLA** in her capacity as **President;**

The **PROVINCIAL AGRICULTURE AND FISHERIES COUNCIL,** a public-private entity with office address at Office of the Provincial Agriculturist, Palo, Leyte hereinafter referred to as **PAFC** duly represented by **JORGE R. ALVERO** in his capacity as **Chairperson;**

The **PHILIPPINE CHAMBER OF COMMERCE AND INDUSTRY – LEYTE CHAPTER,** a non-stock, non-profit, non-government business organization with office address at SMED, Tacloban City hereinafter referred to as **PCCI-LEYTE CHAPTER** duly represented by **EUGENE TAN** in his capacity as **President;**

The **LEAGUE OF MUNICIPAL AND CITY AGRICULTURISTS OF THE PHILIPPINES – LEYTE CHAPTER,** a municipal government entity with office address at Municipal Agriculture Office, Dulag hereinafter referred to as **LeMCAP-Leyte** duly represented by **FRANKLYN L. DIONGZON** in his capacity as **President;**

The **HIPUSNGO FARMERS AND FISHERFOLKS ASSOCIATION** a non-stock, non-profit, non-government business organization with office address at Brgy. Hipusngo, Baybay City, Leyte hereinafter referred to as **CSO PARTNER** duly represented by **FROILAN M. FERNAN** in his capacity as **President;**

The **DEPARTMENT OF INTERIOR AND LOCAL GOVERNMENT**, a government agency with office address at Tacloban City, hereinafter referred to as **DILG-LEYTE** duly represented by **ANNABELLE V. DE ASIS** in her capacity as **Provincial Director**;

The **DEPARTMENT OF TRADE AND INDUSTRY,** a government agency with office address at Tacloban City, hereinafter referred to as **DTI-LEYTE** duly represented by **ARACELI D. LARRAGA** in her capacity as **Provincial Director**;

The **DEPARTMENT OF SCIENCE AND TECHNOLOGY,** a government agency with office address at Palo, Leyte, hereinafter referred to as **DOST-LEYTE** duly represented by **JOHN GLENN OCAÑA** in his capacity as **Provincial S&T Director**;

The **DEPARTMENT OF AGRARIAN REFORM,** a government agency with office address at Tacloban City, hereinafter referred to as **DAR-LEYTE** duly represented by **JOSEFINA CORAZON N. TURLA** in her capacity as **OIC-PROVINCIAL AGRARIAN REFORM PROGRAM OFFICER II;**

The **PHILIPPINE CROP INSURANCE CORP,** a government agency with office address at Tacloban City, hereinafter referred to as **PCIC** duly represented by **CLARENCE L. JEREZA** in his capacity as **REGIONAL MANAGER II;**

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES,** a government agency with office address at Palo, Leyte, hereinafter referred to as **DENR - PENRO** duly represented by **ALEJANDRO K. BAUTISTA** in his capacity as **OIC Provincial Environment and Natural Resources Officer**;

The **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**, a government agency with office address at Palo, Leyte, hereinafter referred to as **DPWH** duly represented by **EDGAR B. TABACON** in his capacity as **REGIONAL DIRECTOR;**

The **TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AGENCY**, a government agency with office address at Tacloban City, hereinafter referred to as **TESDA - LEYTE** duly represented by **ROLANDO V. BADE** in his capacity as **PROVINCIAL DIRECTOR;**

The **DEPARTMENT OF EDUCATION**, a government agency with office address at Tacloban City, hereinafter referred to as **DEPED-LEYTE** duly represented by **MANUEL P. ALBAÑO** in his capacity as **SCHOOLS DIVISION SUPERINTENDENT**;

The **PHILIPPINE NATIONAL POLICE**, a government agency with office address at Palo, Leyte, hereinafter referred to as **PNP - LEYTE** duly represented by **PCOL EDWIN C. BALLES** in his capacity as **PROVINCIAL DIRECTOR**;

The **PHILIPPINE ARMY**, a government agency with office address at Mahaplag, Leyte, hereinafter referred to as **PA – 14IB** duly represented by **LTCOL ERNESTO R. DELA ROSA INF (GSC)** in his capacity as **COMMANDING OFFICER**;

WITNESSETH:

Whereas, the **PROVINCE OF LEYTE** aspires to be a model of economic development, a home to compassionate, dynamic, responsive and God-centered province, governed by committed, dignified and transparent leadership in an adaptive, resilient, ecologically sustained and peaceful environment;

Whereas, the **DEPARTMENT OF AGRICULTURE** is primarily concerned in improving farm productivity and income and generating work opportunities for farmers, fisherfolk and other rural workers and encourage people's participation in agricultural development through sectoral representation in agricultural policy-making bodies;

Whereas, the **VISAYAS STATE UNIVERSITY** and **EASTERN VISAYAS STATE UNIVERSITY** are committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development;

Whereas, the **LEAGUE OF MUNICIPALITIES OF THE PHILIPPINES** aims to provide municipalities, through the Mayors with relevant and adaptive best practices, linkages with pertinent international and local organizations, capacity development, research and advocacy services;

Whereas, the **LEAGUE OF MUNICIPAL AND CITY AGRICULTURISTS OF THE PHILIPPINES** serves as the frontline organization in sharing relevant information with farmers and fisher folk and aims to strengthen extension services through innovations and best practices in the face of climate change and global competitiveness;

Whereas, the **PROVINCIAL AGRICULTURE AND FISHERIES COUNCIL** is the apex mechanism for consultation and dialogue between and among government agencies, local government units, private entities, including non-government organizations and people's organizations and serves as the integrative, consultative and monitoring structure for inter-agency and inter-sectoral collaboration in the Province;

Whereas, the **PHILIPPINE CHAMBER OF COMMERCE AND INDUSTRY,** comprised of small, medium, and large enterprises, local chambers and industry associations representing various sectors of business; work together to foster a healthier Philippine economy and improve the viability of business in the community;

Whereas, the **HIPUSNGO FARMERS AND FISHERFOLKS ASSOCIATION**, a duly registered Non- Government Organization is committed to advance the development of the Province through quality voluntary services and committed action;

Whereas, the **NATIONAL GOVERNMENT AGENCIES AND CORPORATIONS (DILG, DTI, DOST, DAR, DENR, DPWH, DEPED, PNP, PHIL. ARMY, TESDA, PCIC, etc.)** in the performance of their mandate, can contribute much to the convergence of resources in the formulation and implementation of an integrated, consultative, harmonious and complementary inter-agency and inter-sectoral collaboration in the Province;.

NOW, THEREFORE, for and in consideration of the foregoing premises, the parties hereby agree and bind themselves voluntarily to the following terms and conditions in establishing the Province-led Agriculture and Fisheries Extension System (PAFES).

A. Role of the Provincial Local Government Unit of LEYTE (PLGU-LEYTE):

1. Establish and manage a Provincial Agriculture and Fisheries Extension Center (PAFEC) in collaboration with DA, VSU, EVSU, LMP-LEYTE CHAPTER, PAFC, PCCI-LEYTE, and other partners.

2. Provide sustained annual co-financing to the PAFEC together with the DA and other funding sources.

3. Lead the development and implementation of a Province-led agriculture and fisheries extension program (PAFEP) guided by the Provincial Commodity Investment Plan (PCIP) and Value Chain Analysis (VCA) of priority commodities in the Province.

4. Integrate the Province-led agriculture and fisheries extension program (PAFEP) with the Comprehensive Provincial Development Plan.
5. Identify sites in setting up technology demonstration farms in collaboration with partner agencies.
6. Guided by its PCIP, link farmers and fisherfolk with markets and provide custom services in the whole agriculture and fisheries value chain.
7. Collaborate with partner agencies in conducting field days and other related activities in the Province.
8. Provide subject matter specialists and mobilize support from Municipal LGUs in program implementation.
9. Submit quarterly reports to the PAFES Management Committee on the progress and achievements of the PAFEC, and if there are bottlenecks, make the critical steps to overcome these.

B. Role of the DA (*RFO 8, ATI, NFA, PCA, PhilFIDA, NIA, BFAR, and other DA attached agencies in the Province):*

1. Provide sustained annual co-financing to the Provincial Agriculture and Fisheries Extension Center (PAFEC) together with other funding sources.
2. Train agricultural extension workers and farmers/fisherfolk cooperatives on agro-enterprise development along the priority commodities of the Province in collaboration with the Provincial Agriculture and Fisheries Extension Center (PAFEC).
3. Actively participate in in mapping out and implementing a Province-led agriculture and fisheries extension program (PAFEP).
4. Provide subject matter specialists and other technical services to backstop the agricultural extension workers technically supervised by the Provincial Agriculture and Fisheries Extension Center (PAFEC).
5. Provide inputs (e.g., seeds, fingerlings), farm/fishery machineries, and equipment to the Province-led Agriculture and Fisheries Extension Program (PAFEP) through the Provincial Agriculture and Fisheries Extension Center (PAFEC).
6. Assist in the setting up technology demonstration farms and in conducting field days in all municipalities of the Province in collaboration with partner agencies.
7. Provide support services in all aspects of crops, livestock and fisheries production, processing and marketing.
8. Purchase produce from farmers/farmers' organizations and enable farmers a fair return on production investment to ensure and establish manageable buffer stock.
9. Review the Provincial Agriculture and Fisheries Extension Center's annual report prior to approval and release of the co-financing budget for the succeeding annual action plan.

C. Role of Visayas State University and Eastern Visayas State University:

1. Organize and deploy a dedicated core of subject matter specialists assigned on-call to the Provincial Agriculture and Fisheries Extension Center (PAFEC).
2. Test, adapt, and package site specific and climate resilient technologies in strategic locations of the Province in collaboration with appropriate national, regional, and international agencies, farmers and fisherfolk.

3. Collaborate with partner agencies in setting up technology. demonstration farms and conduct field days on priority commodities in all Municipalities of the Province.
4. Train farmers, agricultural extension workers, and subject matter specialists[1] in the Province in collaboration with the Provincial Agriculture and Fisheries Extension Center (PAFEC) and develop, produce, and share knowledge products using the local language of the Province in collaboration with the PAFEC.
5. Share information and technologies to farmers and fisherfolk through electronic media and web-based media platforms.

E. Role of City and Municipal Local Government Units (MLGUs):

1. Provide frontline agriculture and fisheries technical and related extension services to farmers and fisherfolk in their respective jurisdiction as defined by the Province-led agriculture and fisheries extension program (PAFEP).
2. Provide sustained annual financing for the MLGU agriculture and fisheries core budget as defined in the Province-led agriculture and fisheries extension program (PAFEP).
3. Collaborate with the Provincial Agriculture and Fisheries Extension Center (PAFEC) in training farmers and fisherfolk. setting up technology demonstration farms and conducting field days in selected communities.
4. Develop agricultural and fisheries extension programs in their respective Municipalities and participate in mapping out a Province-led Agricultural and Fisheries Extension Program through a well recorded, ladderized Municipal/City Agriculture Office structure.
5. Strengthen and mobilize Rural Based Organizations to support the Province-led agriculture and fisheries extension program (PAFEP).

F. Role of Municipal and City Agriculturists:

1. Lead frontline services with their corresponding Agricultural Extension Workers (AEWs) in the implementation of the Province-led Agriculture and Fisheries Extension Program.
2. Assist the PAFEC in establishing and nurturing agro-based enterprises in the Province.
3. Serve as advisors in providing technical support and services to Municipal/City AEWs in the Province.

G. Role of the private sector (PAFC and PCCI):

1. Actively participate in identifying agricultural and fisheries extension program priorities and in mapping out and implementing the Province-led agriculture and fisheries extension program (PAFEP).
2. Provide assistance in training farmers, fisherfolk and extensionists especially on agro-enterprise development.
3. Assign representatives to various activities of the Provincial Agriculture and Fisheries Extension Center (PAFEC) and provide technical assistance in technology demonstration.
4. Participate in information and education, and community mobilization.
5. Collaborate with PLGU in monitoring and evaluating the Province-led agriculture and fisheries extension program (PAFEP) at the community level.
6. Mobilize strong community support for the Province-led agriculture and fisheries extension program (PAFEP).

[1]The conduct of specialized technical courses for subject matter specialists will be collaborated with SUCs and private providers.

H. Role of CSOs:

1. Actively participate in identifying agricultural and fisheries extension program priorities and in mapping out and implementing the Province-led agriculture and fisheries extension program (PAFEP).
2. Assign representatives to the Provincial Agriculture and Fisheries Extension Center (PAFEC) and provide assistance in technology demonstrations and training of farmers, fisherfolk and extensionists especially on agro-enterprise development.
3. Help engage and catalyze partners in establishing the Province-led Agriculture and Fisheries Extension System (PAFES) and Provincial Agriculture and Fisheries Extension Center (PAFEC).
4. Together with PLGU–LEYTE, DA, Visayas State University and Eastern Visayas State University, facilitate the formulation of a Province-led agriculture and fisheries extension program (PAFEP).
5. Provide technical and management expertise in the full implementation of the Province-led Agriculture and Fisheries Extension Program.
6. Mobilize strong community support for the Province-led Agriculture and Fisheries Extension Program (PAFEP).

I. Role of NATIONAL GOVERNMENT AGENCIES AND CORPORATIONS (DILG, DTI, DOST, DAR, DENR, DPWH, DEPED, PNP, PHIL. ARMY, TESDA, PCIC, etc.):

1. Actively participate in the convergence of resources and initiatives, while performing their mandate, in the formulation and implementation of provincial agricultural and fisheries programs, projects, and activities;
2. Pursue an integrative, consultative, harmonious, and complementary inter-agency and inter-sectoral collaboration in the Province with consideration to the Comprehensive Provincial Development Plan (CPDP), Provincial Commodity Investment Plan (PCIP), and other related plans;

DURATION: This Memorandum of Agreement shall take effect and shall continue to be enforced for a period of three years and/or until renewed and subject to amendment thereafter, upon mutual consent of the parties concerned, unless otherwise mutually revoked in writing by the concerned parties, within 90-day notice.

IN WITNESS WHEREOF, the parties have hereunto affixed their signature on this ___ day of _____ at _____.

On behalf of PLGU-LEYTE :

HON. CARLOS JERICHO L. PETILLA
Governor

On behalf of LMP-Leyte:

HON. REMEDIOS L. PETILLA
President

On behalf of EVSU:

DENNIS C. DE PAZ
President

On behalf of DA:

ANDREW RODOLFO T. ORAIS
Regional Executive Director

On behalf of VSU:

EDGARDO E. TULIN
President

On behalf of DPWH - LEYTE:

EUGENE TAN
President

On behalf of PAFC:

JORGE R. ALVERO
Chairperson

On behalf of Hipusngo Farmers and Fisherfolks Association:

FROILAN M. FERNAN
President

On behalf of DTI:

ARACELI D. LARRAGA
Provincial Director

On behalf of DAR-LEYTE:

JOSEFINA CORAZON N. TURLA
OIC-Provincial Agrarian Reform Program Officer II

On behalf of DENR:

ALEJANDRO K. BAUTISTA
OIC Provincial Environment and Natural Resources Officer;

On behalf of TESDA-LEYTE:

ROLANDO V. BADE
Provincial Director

On behalf of PNP-LEYTE:

PCOL EDWIN C. BALLES
Provincial Director

On behalf of LeMCAP-Leyte:

FRANKLYN L. DIONGZON
President

On behalf of DILG-LEYTE:

ANNABELLE V. DE ASIS
Provincial Director

On behalf of DOST-LEYTE

JOHN GLENN OCAÑA
Provincial S&T Director

On behalf of PCIC:

CLARENCE L. JEREZA
Regional Manager II

On behalf of DPWH:

EDGAR B. TABACON
REGIONAL DIRECTOR

On behalf of DepED-LEYTE:

MANUEL P. ALBAÑO
Schools Div. Superintendent

On behalf of PA-14IB:

LTCOL ERNESTO K. DELA ROSA
INF (GSC) Commanding Officer

Signed in the Presence of:

IMELDA G. SIEVERT
Provincial Agriculturist

FABIAN C. AUDIANO
APCO Leyte District 4 & C

Annex 2: Memorandum of Agreement: Establishing a Province-Led Agricultural and Fisheries Extension System and Convergence in Leyte

ACKNOWLEDGEMENT

BEFORE ME, a Notary Public for in above jurisdiction, appeared the following persons with their corresponding Residence Certificates written opposite their names, known to me the same persons who executed the foregoing Memorandum of Agreement and acknowledgement to me that the same is their free will and voluntary act and that of the entities as they respectively represent.

Name	Res. Cert./ID No.	Place	Date of Issue
CARLOS JERICHO L. PETILLA	P66-E001	PALO LEYTE	JULY 2022
ANDREW RODOLFO T. ORAIS	H02-86-015872	TAC. CITY	FEB 8, 2022
REMEDIOS L. PETILLA	DICA ID NO. 6003	Palo, Leyte	March 5, 2015
EDGARDO E. TULIN	[illegible]	Tacloban City	Jan 18, 2023
DENNIS C. DE PAZ	P06209501	DSWD, Manila	06/26/95
EUGENE TAN	910-919-043	Tacloban City	07/30/99
JORGE R. ALVERO	2/30-1486-5260-2571	Govt. ID	10 May 2021
FRANKLYN L. DIONGZON	PRC-0013260	TAC. CITY	DEC/16/2011
FROILAN M. FERNAN	2483-4739-6140-6486	PARAÑAQUE CITY	NOV. 15 2021
ANNABELLE V. DE ASIS	[illegible]	[illegible]	
ARACELI D. LARRAGA	VIII-0026	8718 PALO, LEYTE	
JOHN GLENN OCAÑA	13-000003199-5	Tacloban City	
JOSEFINA CORAZON N. TURLA	080187159286	DAILEO, Leyte	7/25/2022
CLARENCE L. JEREZA	CRN: 080-6101-4737-4	Iloilo, City	
ALEJANDRO K. BAUTISTA	PRC-0003073	PRC-RO Tac. City	
EDGAR B. TABACON	ID NO. 3-5-1000	OPNA MANILA	
ROLANDO V. BADE	ID NO. 8021-0466	TELDA LEYTE P.O.	AUGUST 30, 2022
MANUEL P. ALBAÑO	PRC-0490289	PRC-RO Tac City	11/05/1998
EDWIN C. BALLES	PNP ID-23E05001655	CAMP CRAME, QUEZON CITY	05/05/2023
ERNESTO R. DELA ROSA	AFP-O-28450	FORT BONIFACIO	01/01/22

This instrument consisting of eight (8) pages including the page on which this acknowledgement is written, signed in every page hereof by parties and their instrumental witnesses.

IN WITNESS WHEREOF, I have herewith set my hand and seal on this 3 MAY 2023 day of _____, 2023 at _____.

_____
Notary Public

Doc. No. 136
Book No. VIII
Page No. 29
Series of 2023