INSTITUTIONALIZATION OF CLIMATE RESILIENT AGRICULTURE

SCALE UP VALUE CHAIN LINKAGES FOR CLIMATE RESILIENT AGRICULTURE VILLAGES (AMIA)

2024

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2024

Prepared by TRTA Consultant under

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Acronyms

AMIA	Adaptation and Mitigation Initiative in Agriculture
CRA	Climate Resilient Agriculture
PCIP	Provincial Commodity Investment Plans
CREATE	Climate Resilient Agriculture Technology-based Enterprise
DA	Department of Agriculture
LGU	Local Government Unit
CSO	Civil Society Organization
NGO	Non-Governmental Organization
F2C2	Farm and Fisheries Clustering and Consolidation
PGS	Participatory Guarantee Scheme
GI	Geographic Indication
PRDP	Philippine Rural Development Project
CIS	Climate Information Services
CRVA	Climate Risk Vulnerability Assessment
ADB	Asian Development Bank
NOAP	National Organic Agriculture Program
BAFPS	Bureau of Agriculture and Fisheries Product Standards
BSWM	Bureau of Soils and Water Management
PhilMeD	Philippine Centre for Postharvest Development and Mechanization
RMA	Raw Material Acquisition
QA/QC	Quality Assurance/Quality Control
RSBSA	Registry System for Basic Sectors in Agriculture
PCRVA	Participatory Climate Risk and Vulnerability Assessments
IFOAM	International Federation of Organic Agriculture Movements

Executive Summary

Currently, 175 AMIA villages across 248 barangays benefit from four strategic program areas aimed at enhancing climate resilience: (i) boosting adaptive capacity and productivity, (ii) redefining Strategic Agricultural and Fisheries Development Zones, (iii) retooling the Agricultural Development Planning Framework, and (iv) creating a new framework for government agricultural services. The AMIA development pathway includes four phases, with 28 villages selected by the Department of Agriculture (DA) for graduation to Phase 3, which focuses on scaling up through an agribusiness approach. The AMIA-CREATE framework supports this expansion, introducing tools like color-coded agricultural maps, climate risk assessments, and climate information services.

Despite these tools, AMIA villages heavily rely on government support, lacking strategic plans for long-term growth or collective marketing efforts, even in cooperatives established for over two decades. This raises questions about their readiness for Phase 3. To transition towards entrepreneurship, these villages need professional agribusiness management to prepare feasibility studies and business plans. Opportunities for development include farm clustering under the DA's F2C2 program, the Participatory Guarantee Scheme (PGS) for organic agriculture, creation of organic hubs, and Geographic Labeling (GI) for niche marketing.

The major commodities in these villages include rice, corn, vegetables, and coconuts, with focus crops being rice, corn, and coconuts. While the 12 value chain studies reviewed mention increased climate risks, they generally lack detailed discussions on mitigation actions. The ongoing updates to Climate Risk Vulnerability Assessments (CRVAs) feed into the Provincial Commodity Investment Plans (PCIPs), which are increasingly incorporating climate resilience. Out of 81 PCIPs, 54 have been updated as of January 2024, showing progress in integrating climate resilience into the value chain framework. Lastly, funding from development partners is mainly allocated to marketing, trade and logistics, inputs, production, and post-harvest processing, highlighting a shift towards comprehensive climate resilience planning in agricultural investments.

Based on its findings, the TA Team recommends: (i) full institutionalization of CRAO including office restructuring, augmentation of qualified permanent staff, and re-direction away from the role of benefactor towards supporting a process of mainstreaming climate resilience into all DA Banner Programs; (ii) creation of a Climate Resilient Agriculture Unit (CRAU) in each DA RFO, and the deployment of a CRA Specialist responsible for the provincial level; (iii) roll-out of comprehensive training program on CRA for sub-national extension staff to better understand climate change causes and mitigation measures; (iv) continuation of PCIP updating, with further elaboration of the CR Agro-Industrialization Oriented Value Chain Analysis and expanded coverage of the AMIA Program; (v) greater awareness-raising for AMIA villages on the range of support available through the DA Banner Programs; (vi) support to AMIA villages to prepare business plans including consideration of farm clustering and deployment of salaried farm managers; (vii) introduction of contract farming and marketing agreements between AMIA villages and larger buyers; and (viii) exploration of eco-tourism in AMIA villages to generate additional revenue and raise awareness on climate impacts and mitigation.

Furthermore, the TA team also outlines the enterprise development strategies for AMIA villages aim to transform these communities into economically sustainable and climate-resilient agri-

enterprises. Central to these strategies is the adoption of mechanized agricultural systems, such as the introduction of comprehensive rice processing capabilities at the Caut Farmer Field School Marketing Cooperative, which encompasses drying, milling, and packaging processes to enhance productivity and market competitiveness.

To facilitate efficient management and operational success, the strategies advocate for the establishment of structured business operations. This involves creating specific roles such as Business Managers, Admin and Finance Officers, and sector-specific supervisors to oversee daily activities and strategic initiatives. Each village is encouraged to develop organized business units focused on different aspects of agricultural production or services, thus streamlining operations and enhancing productivity.

Human resources development is another critical component. Villages are to devise detailed human resources plans that include both full-time and part-time positions crucial for operational efficiency. Emphasis is also placed on professional management and skill development to aid the transition from traditional farming methods to modern agribusiness models.

Market integration and development are pursued through initiatives like those undertaken by the Binujasan Farmers Association, which focuses on producing and marketing Bokashi, a natural soil conditioner. Similarly, BLISS Cooperative seeks strategic partnerships and contracts to market its cassava production to a Korean starch company, illustrating a proactive approach to tapping into new markets and diversifying income sources.

Additionally, some villages, like the Jose Rizal Indigenous Peoples Association, are exploring eco-tourism and agri-tourism to integrate sustainable agricultural practices with cultural heritage preservation. This not only diversifies their economic base but also promotes local culture and environmental conservation.

Comprehensive action plans and feasibility studies are critical to these strategies. Villages are tasked with developing business and marketing plans and conducting regular financial assessments to ensure economic viability and sustainability. Feasibility studies are particularly emphasized to evaluate the potential of new projects and innovations, ensuring that investments are both practical and beneficial.

Overall, these enterprise development strategies are designed to guide AMIA villages towards significant economic transformation. By enhancing productivity, engaging in strategic market activities, and building resilience against climate change, these villages can establish a robust foundation for sustained growth and prosperity.

A. Introduction

The AMIA, which is the DA flagship program on climate change, envisions that all communities, especially those dependent on agriculture and fisheries, would become resilient to the increasingly adverse effects of climate change. In pursuit of this vision, the on-going program aims to set up model communities that are called AMIA villages, that can serve as lighthouses and go-to-places for other communities to learn from and emulate, and where technological and institutional innovations are introduced so that these villages may have access to climate-relevant support services.[1] The four key program area under the AIMA are:

- Increasing adaptive capacity and productivity potential of agricultural and fisheries livelihoods by modifying commodity combinations to better meet weather issues and natural resources endowments.
- Redefining the Strategic Agricultural Fisheries Development Zones including climate change vulnerabilities as part of mapping variables.
- Redefining the Agricultural Development Planning Framework as the basis for agricultural planning by including key factors/variables associated with climate change.
- Developing a new framework and plan for the provision of a "new" government agricultural service towards the accelerated development of climate smart agriculture and fisheries industries.

The AMIA village approach is founded on the adoption of a novel mode of extension approach and based on a unit assistance that is related to a group of farmers tilling adjacent farms, with an area of approximately 100 hectares, who are facing the same climate risks and are organized into an AMIA village. The farmers within this grouping are assisted to identify their climate risks and select common adaptation strategies to increase productivity and incomes of farmers/fisherfolk with a particular emphasis on poverty that is known to increase vulnerability to climate change. The common adaptation measure adopted is achieving crop diversification and active participation in the AVC alongside the delivery of integrated and tailored support services. The aim is to enable the AMIA villages to graduate into climate-resilient enterprises based on climate-resilient production systems through the AMIA-Climate Resilient Agriculture Technology-based Enterprise (CREATE) framework.

The integrated and tailored extension and support services that are provided include the following aspects:

- Community-level climate-resilient agri-fisheries technologies.
- Climate Information Services.
- Computer-aided decision-making technologies.
- Links to market

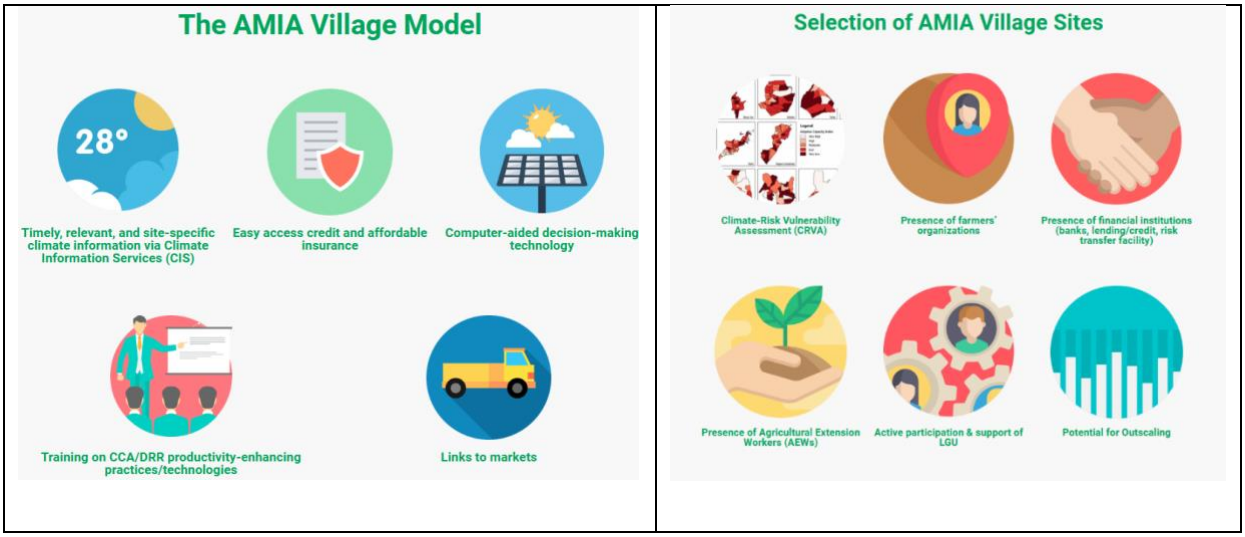
[1] AMIA Villages | Systems-Wide Climate Change Office (da.gov.ph) *(Accessed 1-Oct-23)*

- Training on CCA and disaster risk reduction productivity enhancing practices and technology.
- Easy access to credit and affordable insurance.

An important element of the solution is enabling greater empowerment of the farmers through the establishment and building of the AMIA villages, which has the following elements:

- Enabling farmers to identify and understand their vulnerability to climate change through Participatory Climate Risk and Vulnerability Assessments (PCRVA).
- Providing guidance in the use of climate- and weather-informed farm and fishing advisories to identify that to plant, when to plant, and what cultural management practices to adopt including the application of 10-day weather=based farm/fishing advisories to guide their day-to-day farming activities; seasonal climate based farm-fishing advisories as a guide to six month planning periods for farming/fishing; and special weather farm/fishing advisories as a guide to avoid damage during typhoons as well as recover after typhoons.
- Testing and adopting CRA practices, technologies, and tools that address their climate risks to produce that they sell and not just sell what they produce.
- Identification of support services that are needed and partner with the DA, LGUs, CSOs and NGOs to practice CRA.

Figure 1 AMIA village Model and Site Selection Criteria



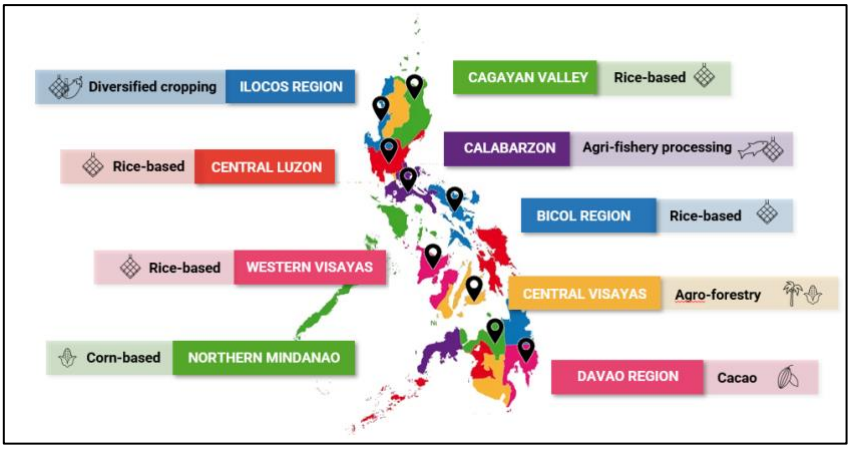
The aim is to enable graduation of the AMIA villages into climate resilient enterprises through the AMIA-Climate Resilient Agricultural Technology-based Enterprises (AMIA-CREATE) framework that expands the AMIA villages from the current pilot scale to town/provincial level CRA actions

with the aim of transforming them into market-oriented CRA enterprises while levelling up the efforts to ensure that agri-fishery communities are climate resilient.[2]

The actions that are needed comprise the following:

- The CRAO, in cooperation with the respective RFO, assess the existing AMIA villages and identify the initial areas as proof of concept for crops, livestock, aquaculture and fisheries-based expansion.
- Each RFO will make adjustments to their current budgets to support the implementation of the AMIA-CREATE networks.
- The AMIA-CREATE proof-of-concept shall include farm clustering/consolidation and professional management/business service provider to support the enterprise development approach that will be introduced.
- To ensure the transformation of AMIA villages, the DA-CRAO in collaboration with AMAS and ACPC, PCIC, the DA Banner Programs and all other programs will continue to strengthen their engagement with business service providers and professional managers to provide communities with integrated and support services.
- The RFOs will also strengthen their partnerships with the LGUs to integrate the AMIA-CREATE network in the LGU Climate Change Action Plans (CCAPs).

Figure 2: Distribution of agricultural production for regions transitioning to AMIA-CREATE



The AMIA program has also included the introduction of a series of Decision Support Tools (DSTs) as follows:

- National, Color-coded Agricultural Guide Maps that comprise an overlay of 29 maps from different source agencies to serve as tool and investment guide for various sectors

[2] https://www.da.gov.ph/wp-content/uploads/2020/03/mc04_s2020.pdf

particularly agriculture and also features the natural suitability of 20 economically important crops which are key to food security and eight major and climate change-induced hazards that largely affect the agri-fishery sector.3

- Climate Risk Vulnerability Assessment (CRVA) Maps that provide a tool that analyzes three main factors namely, exposure to hazards (exposure to significant climate variation), sensitivity (climate suitability of crops), and adaptive capacity that also support DA resilience-building initiatives for better and longer-term geographic targeting.
- Typhoon Risk Information that shows the monthly typhoon incidence in each province and provides a useful guide for adjusting planting calendars to ensure that production losses and damage losses are minimized. The patterns indicate that most super typhoons occur in the 3rd and 4th quarters of the year which is a critical period for the harvesting of crops.
- Climate Information Services (CIS) though which the RFOs of the DA provide weather information and corresponding advisories including climate resilient approaches to assist farmers and fisherfolk in better decision making during extreme weather events. The CIS Decision support tool helps farmers to decide when to plant, harvest and use the most appropriate CRA practice to build resilience and improve their livelihoods.

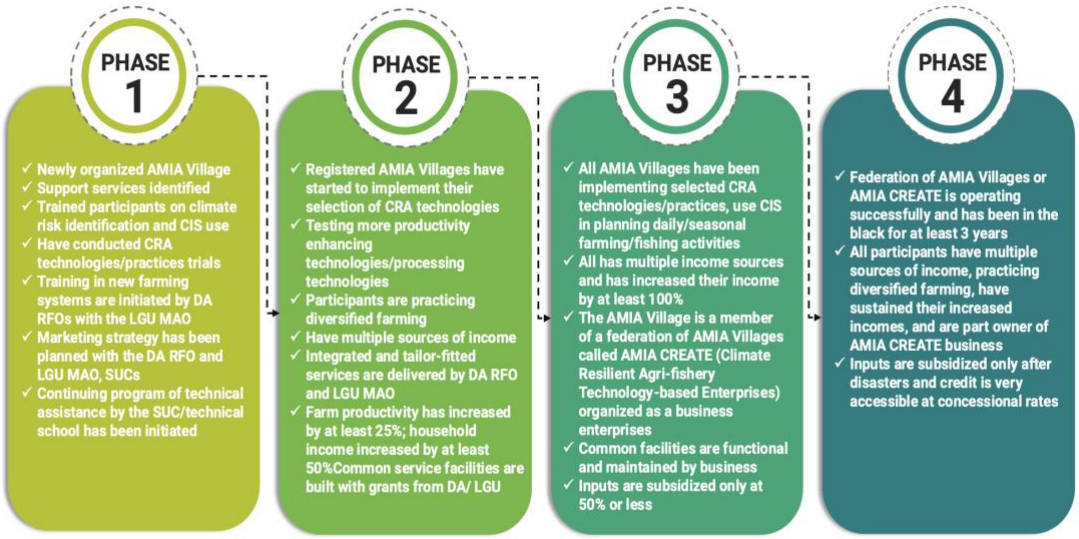
The pathway for development of the AMIA villages takes place through four phases that are designed to enable the graduation of the AMIA villages from being mere production units to Climate Resilient Agri-Fishery Technology-based Enterprises (AMIA-CREATE). This is based on the presumption that CRA needs to be promoted on a wide scale, so the AMIA villages need to be transformed from pilot scale to municipal/province level CRA actions; and transition from production based to market-oriented CRA enterprises so that agri-fisheries communities can achieve increased climate resilient in terms of their livelihoods.

For the 175 AMIA villages (that includes 248 barangays) that are listed only 28 have reached the stage of being eligible to graduate to Stage 3.[4]

[3] Available as an on-line version: http://farmersguidemap.da.gov.ph/

[4] The numbers of AMIA sites: Phase 1 (49); Phase 2 (98); Phase 3 (28); Phase 4 (0).

THE AGRICULTURAL DEVELOPMENT PATHWAY AMIDST CLIMATE CHANGE



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Adaptation and Mitigation Initiative in Agriculture Program

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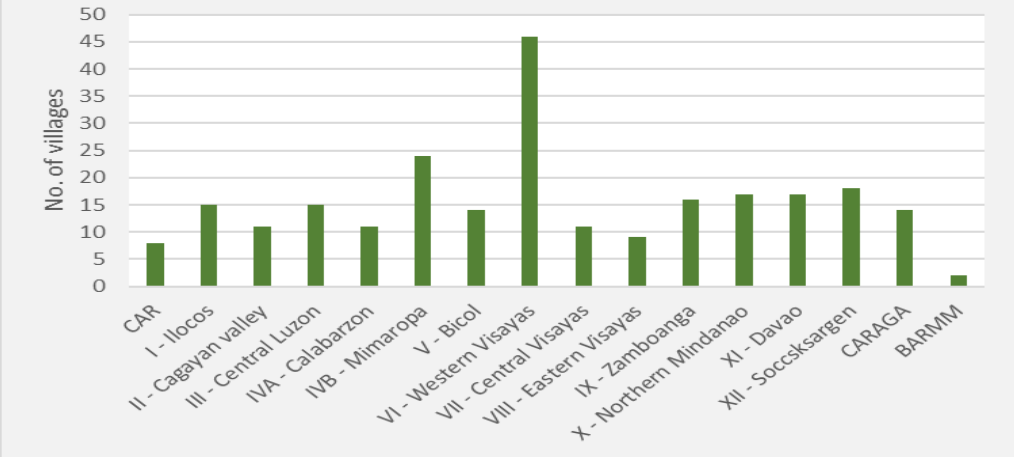
B. Analysis of AMIA program and villages

The 175 AMIA villages are located within 131 municipalities/cities across the entire country although there some differences in the frequencies of occurrence between regions with Region VI Western Visayas have established noticeably more AMIA villages than all other regions.

Figure 3: Distribution of AMIA villages by region



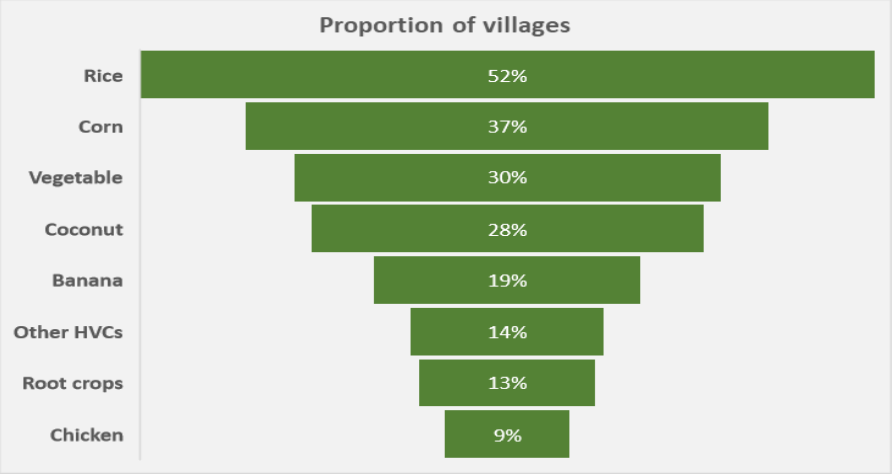
For each AMIA village there are various parameters identified that characterize their situation in respect of climate related risks, CRA practices/interventions and the major commodities/products.

- Climate related risks: The most frequently noted climate related risks concern increased frequencies of severe typhoons together with the associated wind and flood damage. The severity of these risks is not clearly quantified but there is certainly anecdotal evidence of an increase in the severity of flask flooding and the impact that this has on standing crops. Secondary factors of increased risk of landslides and soil erosion as well as storm surge are also noted that result from the increased intensity of storms. The increased frequency of drought is also noted as well as the increased unpredictability of rainfall that impacts directly on the timing of planting and risk of crop failure. There are some instances of earthquake being included although this is not a climate related risk.
- CRA practices/interventions: There are an enormous range of options or strategies identified that include not only measures to introduce climate resilience into existing production practices, but also a very large number of new initiatives some of which appear to have a strong element of transformational change in production with, in many cases, an expressed need for technical assistance and further training to enable the shift to new commodities. However, the support required for these transformational changes does appear in many cases to be a shopping list of physical support required with some of these requests relating simply to the need for mechanisation of production with the provision of machinery through direct government support. The range of options varies greatly between AMIA villages suggesting that more technical assistance may be needed in some

cases to enable farmers to gain a better understanding of CRA approaches that could be relevant to their own situation.

- Major commodities/products: For each municipality/city there is also an indication of the major commodities that and/or products that should be the focus on the expansion of production within the AMIA villages. The commodities that have been identified do not always include the other commodities that have been identified for CRA practices/interventions but tend to relate only to the main commodities that are currently being produced. Nevertheless, there is a very wide range of commodities included (23 in total) but rice and corn continue to predominate. This is of some concern since it shows little change away from the existing structure of the Philippines agriculture sector, that has not changed over the past 50 years, wherein the 74% of the arable land is used for the production of the three primary commodities of rice, corn and coconuts, that in turn continue to receive the majority of the government support.

Figure 4: Distribution of main commodities for all AMIA villages[5]



During the course of the assignment there were field visits conducted to four AMIA villages located in regions 4B, 6, 10 and 11.[6] The field visits that were conducted included at least half-day focus group discussions with community residents who were members of the associated cooperative of farmers groups, followed by field visit to the production areas for visual inspection. In each case the field visits to the AMIA villages were facilitated by CRAO staff from the respective DA Regional Office, whose assistance in each case is gratefully acknowledged.

The transition to Phase 3 in the AMIA village model is premised on the achievement of specific achievements in respect of (i) the adoption of CSA practices and use of CIS in planning daily/seasonal farming and fishing activities; (ii) farmers have multiple income sources and their income has increased 100%; (iii) the village(s) are a part of the AMIA CREATE network and is

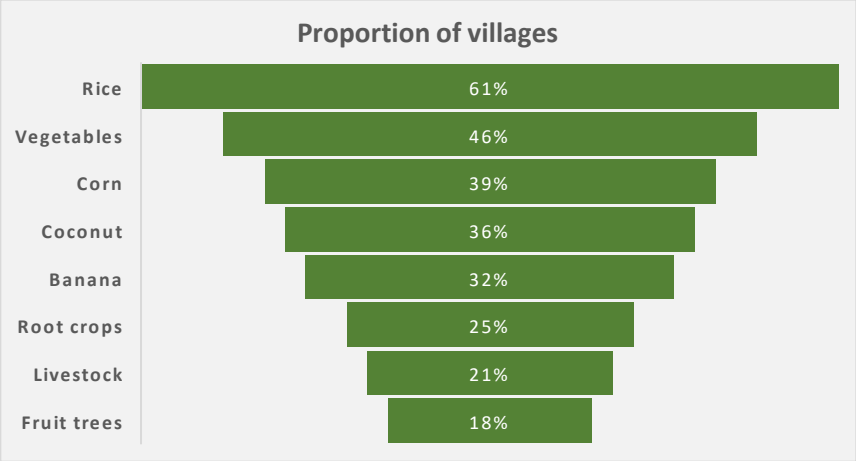
[5] Multiple commodities have been identified for some AMIA villages.

[6] It had been intended to include field visits to more AMIA villages, but the very short duration of input and the extended travel time required for the visits posed a severe constraint on the number that could be covered.

organized as a business enterprise; (iv) common facilities are functional and maintained by business; and (v) inputs are subsided only at 50% or less. The final Phase 4 is reached when (i) the AMIA CREATE network of villages has been profitable for at least 3 years; (ii) all farmers have multiple sources of income, practice diversified farming; (iii) all farmers have increased their incomes and are part owners of the AMIA CREATE business; and (iv) inputs are only subsidized after disasters and credit is easily accessible at concessional interest rates.

There are 28 AMIA villages that have been categorized as reaching Stage 3 the distribution of the commodities is broadly similar.

Figure 5: Distribution of main commodities for Stage 3 AMIA villages



The AMIA villages that were visited had been selected from amongst the 28 villages that were categorized as having reached a satisfactory stage of development to be eligible to graduate to Phase 3. However, there was a lack of information on how this decision had been taken and based on the observations during the field visits it appeared that there was a need for considerable further strengthening of the management capacity of these organizations/cooperatives before they might be capable of moving forward to the scaling up of agribusinesses.

It is acknowledged that the sample of villages visited was rather small and it is conceivable they may not be fully representative of those that have reached this stage of development. But the overall impression from these visits is that the graduation to Phase 3 will require significant effort on the part of the CRAO as well as from those supporting at the local level. As noted above one of the most serious deficiencies found is the lack of business acumen, the limited extent of cooperation between the farmers who are involved with the AMIA village, and the continuing mindset that the planning of their future activities was based on the need for government support with no serious consideration given to moving towards greater self-reliance and seeking sources of financing to support an expansion of their production potential.

Name of AMIA village	Caut Farmer Field School (FFS) Marketing Cooperative		
Location	Bgy Caut, Lapaz municipality, Tarlac Province		
Date of Registration	2011	**Area (ha)**	450
Membership	180 members	**Men**	
		Women	
		Active	
Commodities	Rice and Mungbean		
AMIA selection criteria	• Active cooperative registered with CDA and RSBSA. • Good accessibility		
AMIA support	• Warehouse • Farm machinery • Small scale rice mill (1.5 t/ha capacity]		
DA/LGU support	• Solar powered fertigation system • Rice transplanter • Small scale dryer (planned) • Water impounding project		
Climate risks	• Flooding has become more frequent and severity of drought during the dry season.		
CRA practices	• Climate adaptive rice varieties • Crop diversification (crop rotational with rice-mungbean) • Use of organic manure • Solar powered fertigation system (2022).		
Enterprise development opportunities	Establishment of mechanized rice processing system (drying, milling, packaging) provided this can be demonstrated as a viable investment and can be operated effectively by the cooperative members and the group has rice trading capital available. Increased warehouse storage capacity could support better marketing arrangements, providing drying facilities are available, to that farmers are not compelled to sell palay immediately after harvest. More active engagement in okra production as a nigh value crop and given the presence of international buyers in the municipality this should be a real opportunity for the farmers to exploit.		
Overall assessment	The cooperative has a committed management team, but they lack direction in managing their products, which is still done individually by farmers. Machinery has been provided from various sources. The cooperative has no business plan and proposes the construction of storage warehouse and rice mill that is excepted be provided through government support. Solar powered fertigation system provided is not a viable option for other farmers to adopt. Despite the presence of international buyers of Okra that is being grown within the municipality the cooperative has not taken up this opportunity to any extent.		

Name of AMIA village	Binujasan Farmers Association		
Location	Brgys. Binuncutan, Jalongajog, San Pedro & Guba Pontevedra municipality. Capiz province		
Date of Registration	May 2021	**Area (ha)**	130 ha
Membership	105 farmers	**Men**	43
		Women	62
		Active	31
Commodities	Rice (inbred), Coconuts, Sugarcane, Corn (yellow), Tropical vegetables, Oher HVCs (20% of members)		
AMIA selection criteria	Active organization Registered RSBSA Accessibility		
AMIA support	Warehouse with bays for Bokashi production Chopping machine		
DA/LGU support	Technical assistance to cooperative (through MAO)		
Climate risks	Continuous rain and flash flooding is adversely affecting HVCs, whilst droughts during extended dry season. More unpredictable rain is expected with the rains extending into November. Prolonged rains and flooding has exacerbated rat infestation. Inter-cropping is proposed as a response to the unpredictable rainfall and increased diversification into native chicken and swine production. Lack of clear understanding of the causes of climate change and belief that the damage to the ozone layer may be one result.		
CRA practices	Focus is on the production of Bokasi as a soil conditioner		
Enterprise development	Small-scale production of Bokashi production that can be further scaled up to semi-commercial operation.		
Overall assessment	The association has been focusing on producing Bokashi, a process that converts farm wastes and other organic matter into the soil to improve soil quality. The Association has used the availability of agro-industrial wastes in Ponteverde such as mud press from the Capiz Sugar Central, carabao manure from a cattle ranch within Capiz, carbonized rice hulls and rice bran from the rill mills. Other raw materials for commercial production of Bokashi are also available. The association has been to manually produce one batch of 70 sacks of finished product in 15 days (about 2 weeks). The process includes fermentation, mixing and shredding. AMIA introduced the technology to AMIA and initially provided capacity development assistance such as trainings, initial starter equipment such as mixer and shredder. Field trials will be conducted to determine the benefits of bokashi on soil and yield of different commodities. The results of the field trials will also be used for promotion and campaign on benefits of bokashi in the agro-ecosystem, crops and improve family income. Laboratory tests on nutrient analysis were facilitate by DA-AMIA		

Name of AMIA village	BLISS Cooperative		
Location	Brgy. Lingion, Manolo Fortich municipality, Bukidnon Province		
Date of Registration	1994 (registration with CDA 1996)	**Area (ha)**	5,000 ha within barangay of which 540 ha arable land
Membership	363 farmers	**Men**	100
		Women	263
		Active	All
Commodities	Corn, Cassava and Livestock		
AMIA selection criteria	Active cooperative, registered with CDA and RSBSA. Good accessibility and supporting the corn and cassava sectors.		
AMIA support	• Inputs/seeds • Livelihood starter - cattle (31 head), goats (33 head), ready to lay chicken (8 batches x 45 head/batch). • 10-weather forecast provides an important decision-making tool for farmers on scheduling of different farm activities. • (In pipeline) Storage and all-weather dryer (valued at PNP 2 million).		
LGU support	• Technical assistance to cooperative (through MAO) • Farm mechanization • Administrative assistance to the coop (document processing)		
Climate risks	• Rainfall less reliable but group members have been using CIS advisories that are available through the AMIA program		
CRA practices	• Crop rotation being practiced in using corn - cassava - corn • Crop insurance through the RSBSA • Commodity diversification - crops and livestock production (native chicken, native pigs)		
Enterprise development	• Common service facility - the existing equipment (tractors, corn shellers, and hauling truck) can be income sources for the cooperative and provide equity to support additional financing through commercial loans. • Consolidation and trading - Improved and enlarged storage facilities needed and capital for the purchase of farmers' products stored and sold by the cooperative. • Supply of cassava to new Korean starch company based in Tagoloan, Misamis Oriental. The company will buy fresh cassava, as well as chips and granules. Daily demand for processing will be 400 metric tons of fresh cassava.		
Overall assessment	• The cooperative has existed for almost 30 years but has still not been fully developed in coordination of production and marketing systems for the main commodities. Sales of produce comprise random spot transactions arranged by individual farmers with middlemen or direct sales to processors. There is no collective purchase of inputs for the cooperative members. Although the cooperative has secured a significant loan for the purchase of a large truck, this is only being fully utilized during the harvest season and at other times is mainly idle. It has represented a large investment for the cooperative, that was in response to the difficulties that they experience in securing transportation logistics for the transport of corn and cassava, and because of its age will incur increasingly higher repair and maintenance costs. • The cooperative does not have a business plan and even lacks basic information on the total overall levels of production of the main commodities. • There was no attempt to enter production agreements with larger buyers for the main commodities. • Proposals for enterprise development at present are largely based on expectations of further AMIA or DA grant funded support.		

Name of AMIA village	Jose Rizal Indigenous Peoples Association (JIPAS)		
Brgy. Profile	Brgy. Jose Rizal is wholly within the Mt Apo Natural Park Protected Area 480 households and 5 associations including JIPAS.		
Location	Brgy Jose Rizal, Sta. Cruz municipality, Davao del Sur province		
Date of Registration of organization	3 June 2019 (DoLE)	**Area (ha)**	47,000 ha[7] (Each farmer has about 2 hectares)
Date of AMIA creation	October 2021		
Membership	125 farmers (40 households)	**Men**	50%
		Women	50%
		Active	All
Commodities	Coconut, Banana, Coffee, Cacao, Abaca, Rubber, Rice, Corn, Root crops		
AMIA selection criteria	• CRVA results (flashflood prone area) • PAGRO and MLGU recommended • Accessibility		
AMIA support	• Fertilizer for coffee • Farm tools • Post-harvest tools (flotation drums, nets, plastic drums) • Trainings (coffee farm rejuvenation, banana GAP • Horse for transportation logistics		
LGU support	• Technical assistance to the association • Link the association to other project support (RAPID growth project)		
Climate risks	• Temperature increase attributed to loss of forest cover in Mt Apo • Unpredictable weather and changes in wet and dry season timing and duration		
CRA practices	• CRA has been practiced since their farms are in a Protect Area where farm practices should not affect biodiversity and natural forest growth. • Minimal use or zero use of synthetic pesticides and fertilizers depending on commodity. • Intercropping of perennial crops • Value addition of products • Crop insurance through RSBSA program		
Enterprise development	• **Improvement of product quality and value adding of existing commodities.** Existing products (coffee, cacao, abaca) may be improved through post-harvest facilities such as all-weather driers, stripping machines (manual or mechanized). Coffee quality can be further improved through quality improvement farming practice (e.g. red pick harvesting). Furthermore, marketing and promotion of locally produced coffee through participation in local, national, and international coffee quality competition. • **Ecotourism-Bamboo Park.** JIPAS is working with Municipal Tourism Office to promote Bamboo Peak as one of the Municipality's ecotourism sites. Target tourists are mountaineers and adventure/nature tourists and marketing of their local products such as fruits, coffee, sikwate (from cacao), coconuts, and other indigenous crafts • **Rope making for local market.** This is a potential source of income generation with a high demand for different industries such as fishing		

[7] Certificate of Ancestral Domain Title (CDAT) that is part of the Mt. Apo Natural Park. The CDAT also covers areas in Makilala, Vabsalan, Digos, Sta. Cruz, Sibulan and Davao City. The group belongs to Bagobo - Tagbawa tribe and the farm areas of the tribal members as part of the economic/multi-zone of the Ancestral Domain Sustainable and Protection Plan.

Name of AMIA village	Jose Rizal Indigenous Peoples Association (JIPAS)
	industry, furniture, gifts, toys and hobbies (GTH) products. Farmers themselves also require abaca ropes for their farming activities and confirm that ropes made of abaca are more durable than nylon ropes.
Overall assessment	JIPAS is supporting members in terms of marketing their products. JIPAS consolidates products (abaca fiber, coffee beans, cacao etc) and delivers products (in bulk) to specific buyers. This indicates the increased participation of JIPAS in the value chain through trading and consolidation of the commodities. Consolidation is more of a support service of JIPAS to provide farmer-members access to market, and not operated as a business activity of the association. Other activities of the association can be developed into full blown business such as processing of coffee and cacao (sikwate). Series of trainings, coaching sessions and internship programs on product development and business development could further support the association and its members

C. Future development pathways for AMIA villages

Based upon the findings from the field visits to four AMIA villages several overall general conclusions can be drawn.[8]

- There was observed to be a strong commitment amongst the farmers in each of the AMIA villages that were visited to advance their organisation/cooperative and to increase the response to achieving greater climate resilience in their production systems. However, the strategies for achieving this objective were less clearly understood.
- There has been relatively little progress towards significant diversification of the production models and commodities and the focus of their attention remains on the primary commodities that they have been producing. However, the adoption of rotational practices was more evident.
- The progress that has been made in the AMIA villages so far has been largely the result of a wide range of government support and subsidy programs and there has been minimal effort exerted to source external funding through loans to support improvements in equipment or facilities. Indeed, the expectation and reliance on continuing government direct support continues to constrain the planning process for the AMIA villages. Some of the support received had consisted of supplies of seed and planting materials as well as livestock dispersal programs.
- None of the AMIA villages visited had a business plan and furthermore had only very vague knowledge of the overall annual production capacity of the members of the association/cooperative. There seemed to be little understanding of using an agribusiness-based approach to the further development in these AMIA villages and how to go about the preparation of a business plan that could form the basis for further negotiations with buyers/processors as well as applications for loans. Overall, there had been little engagement with the private sector other than the buyers/traders who have purchased from individual farmers.
- There was found to no evidence of collective purchasing of inputs by the association/cooperative on behalf of the members to secure advantageous prices for inputs that are being used. This should be a very basic function of any farmers organisation to provide the members with more incentive to become members of the to the group.
- Similarly, marketing is done almost exclusively by individual farmers selling to buyers and middlemen through a series of random spot transactions at negotiated prices that often put the farmer at a disadvantage. There seemed to be little knowledge or understanding of the concept of contract farming supporting buying agreements with traders/processors, and the concept seems to have been little applied.

[8] See Annex 2 for detailed analysis of selected value chains.

- Some of the proposals for local storage and post-harvest (e.g., drying) had been identified but they were prepared with the expectation of government support and there had been no consideration of the viability of such investments and whether they were worthwhile.
- Financial management capacity within the AMIA villages was not well developed and the amount of capital accumulation within the group was very limited, without formal savings programs or purchase of shares in the cooperative by members nor payment of dividends.

To enable these AMIA villages to develop further and evolve into AMIA-CREATE networks there will be a need for considerable support from professional managers as well as business service providers (as is noted earlier in the DA circular Memo Circular 04, 2020) who possess adequate knowledge and experience of operating agribusinesses in a commercial environment. This assistance can enable the AMIA villages to engage in more strategic planning including the conduct of feasibility studies to examine their current production models and identify the best opportunities for increasing and expanding the scope in terms of commodities that are produced and considering the possible need to a refocus of their production mix in response to potential climate risks. Once viable production models have been identified then this can lead into the preparation of sound business plans for the AMIA villages to confirm and validate the viable production models that have been identified and this can provide the basis for seeking external financing for investment in these plans. In fact, one recommendation for consideration is that the graduation of the AMIA village to Phase 3 should be linked to the completion of a feasibility study and the formulation of a viable business plan that provides the strategy for achieving the scaling up and shift towards an agribusiness based mode of operation.

One of the strategies that has been identified for the establishment of the AMIA/CREATE network relates to the concept of **farm clustering**. The concept of farm clustering is gaining attention in the Philippines as a strategy to enhance agricultural productivity, and promote sustainable practices, as well as improve the livelihoods of farmers and fishers. It also features in the eight point paradigm of the DA for the modernization and development of the Philippine agriculture sector by consolidation of small- and medium- sized farms. Although there are no large-scale nationwide farm clustering initiatives yet listed below are some notable examples of successful farm clustering in specific provinces:

- Benguet Vegetable Trading Post: Located in La Trinidad, Benguet province, this trading post is serving as a clustering hub for vegetable farmers in the region. Farmers have been able to bring their produce to the trading post, where they can aggregate their harvests, negotiate prices with traders, and access buyers more efficiently. The clustering has helped them to reduce their transportation costs, improve their market access, and strengthened the bargaining power of the farmers.
- La Granja Agri-Eco Village: Situated in the La Carlotts City, Negros Occidental is an agri-eco village that promote farm clustering and sustainable agriculture. The village has integrated small farms, research facilities, and training centers within a designated area. The farm clustering facilitates knowledge sharing, the adoption of eco-friendly practices and the marketing of organic production.
- Rice clustering in Nueva Ecija: In one of the major rice producing provinces in the country, farm clustering initiatives have been implemented to enhance rice production and promote

efficient resource utilization. Clustering has helped to optimize the use of irrigation systems, machinery, and other resources leading to increased productivity and cost savings for farmers.

- Mango Farm Clustering in Guimaras: Guimaras is known for its high-quality mangoes. The local government has initiated mango farm clustering projects to strengthen the mango industry. Clustering allows farmers to pool resources for processing and marketing, and it is promoting adherence to quality standards and sustainable practices.
- Vegetable cluster farming in Mindanao: The Northern Mindanao Vegetable Producers Association (Normin Veggies) was originally organized in 1999 by 15 independent growers, corporate farms with support from a local NGO. Subsequently support was provided through the USAID Growth with Equity Program (GEM) and the DA and is now recognized as one of the world's innovative pro-poor value chain development models.

Although the outcomes and impact of farm clustering initiatives in the Philippines have varied, significant numbers of farmers have reported positive experiences and benefits from participating in the farm clustering, but others have faced challenges or have not seen their expectations fully met In the cluster farming initiatives attempted. Although farmers may not be financially better off, most of the cluster members' expectations do appear to have been met after joining the clusters.[9] Some of the key factors that may influence famers' experiences have included the following:

- One of the primary goals of farm clustering is to achieve consolidation of production and facilitation of better access to markets. By clustering together farmers and/or fisherfolk can collectively negotiate better prices, access larger markets, and attract buyers more effectively. In successful cases, farmers indeed have reported increased sales, better market linkages, and improved profitability. However, the effectiveness of market access may depend on factors such as product quality, demand, transportation infrastructure, and the availability of market support.
- Farm clustering also enables the planning and synchronizing of production schedules, consolidation of input purchases thus enabling greater strength in negotiating prices, and the ability to ensure that production timing is synchronized with periods of greater demand when prices are higher.
- Enhanced delivery of technical support can be facilitated through farm clustering achieving greater efficiency in the training programs, knowledge sharing platform, and technical advice for farmers and fisherfolk. These activities aim to enhance farmers' and fisherfolks' skills, introduce sustainable practices, and improve productivity. When farmers or fisherfolk actively engage in these programs and apply the knowledge gained, they also experience positive changes in their farming or fishing techniques, production, and profitability.
- Another advantage of cluster farming is the sharing of resources such as machinery, equipment, storage facilities and irrigation facilities that leads to reduced costs, increased

[9] Mintoflor, M, Batt, P & Murray-Prior R (2008). Cluster farms in Mindanao: Are smallholder farmers expectations being fulfilled.

operational efficiency and improved access to essential resources, all of which result in cost savings and enhanced productivity.

- Farm clustering provides opportunities for farmers or fisherfolk to have greater interaction and collaboration and to learn from each other. This can foster a sense of community, promote social cohesion, and facilitate the exchange of ideas and experiences that brings benefits in terms of the increased sharing of knowledge, mutual support and increased networking within the cluster.
- Whilst farm clustering projects have the potential to being benefits, there are some challenges that may arise, of which the most common are the lack of support for infrastructure development, insufficient market support, disparities in farmer capacities and commitment, conflicts of interest, and uneven distribution of project benefits.

The earlier cluster farming initiatives that have been attempted have focused mainly on consolidation of production and facilitation of better access to markets, although as explained above there are in fact many other opportunities that can be tapped into including the pooled use of resources through planning and synchronizing of production schedules, consolidation of input purchasing, and enhanced delivery of technical advice to the farmers.

There is another element to farm clustering that may also be considered and that concerns the use of a hub farm as the focus for the establishment of the cluster, that is also known as a nucleus agro-enterprise. In this case the hub farm is usually a larger-scale farm or agribusiness that serves as a model farm or a demonstration site for innovative farming practices for the cultivation of similar crops and engaging in related agricultural activities. Thus, the hub farm can act as a training and knowledge sharing center disseminating modern farming techniques, best practices, and innovative technologies to the farmers in the cluster. There are other functions that the hub farm can fulfil such as facilitating the bulk procurement of inputs such as seeds and fertilizers and enabling access to farm machinery for mechanization of land preparation and harvesting. Hub farms can also act as the primary buyers of smallholder farmers' production from within the cluster as well as providing credit to the farmers that is repaid when produce is sold to the hub farm. This model is particularly relevant where there are processing requirements for the raw product before it can be marketed, which smallholder farmers are unable to achieve, and it has been adopted successfully for perennial tree crops such as coffee, cacao, oil palm, etc.,

The DA's Farm and Fisheries Clustering and Consolidation (F2C2) Program was initiated on 5 August 2020 with the issuance of the DA Administrative Order No. 27 that provided the guidelines for implementation, with the objective of adopting farm and fishery clustering to increase food production levels, improve famers and fishers' incomes, and provide better access to resources, technologies, and markets for farmers and fisherfolks. The program focusses on grouping together of crops, livestock and/or fish producers within a community or adjacent communities on the basis of the proximity of their production areas, similarity of inputs, shared production activities/processes and or common final products, where there is potential for unified management of production activities, sourcing of inputs, access to financing, processing, logistics, storage, marketing, and enhanced quality of production. The aim is to achieve economies of scale, and thus achieve cost effective production, harvesting, processing, and marketing operations and subsequently increase farmers' and fishers' incomes. It enables the government to channel assistance such as credit, modern production methods, farm machinery, post-harvest and

program facilities, transport and logistics, packaging support, as well as information and communication technologies (ICTs) to farm and fisher clusters. Furthermore, the program gives priority focus to community production and processing, projects that promote coordination and organized production and value chain systems towards increased productivity compared to the stand alone traditional farming and fishing practices.[10] Thus, there are certainly many aspects of the farm clustering approach that are highly relevant to the scaling up of the activities within the AMIA-CREATE networks and could be given further consideration as a part of the evolving strategies that are adopted.

An opportunity may exist through the introduction of **organic certifications** procedures for AMIA villages. The concept of organic agriculture is closely related to climate resilience, and this represents a significant opportunity to leverage the introduction of practices that are focused on building healthy soils, increasing biodiversity, and reducing dependence on synthetic inputs that will help to create more resilient farming systems that can better withstand the impacts of climate change, such as droughts, floods, and extreme weather events.

The National Organic Agriculture Program (NOAP) is led by the National Organic Agriculture Board under the DA and in cooperation with various stakeholders in the organic industry, relevant national government agencies, NGOs, and civic society. Overall, the NOAP aims to promote, propagate, further develop, and implement the practice of organic agriculture in the Philippines towards a competitive and sustainable organic industry that contributes to:

- Better incomes and sustainable livelihoods: increased farm productivity, reduced expenses on farm inputs, better incomes for farmers and reduction of poverty in the rural sector.
- Improved health: Protected health of farmers, consumers and the public in general.
- Environmental protection: Enhanced sol fertility and farm biodiversity, reduction in pollution and destruction of the environment as well as prevention of further depletion of natural resources.
- Disaster Risk Reduction and resilience to climate change: Improved resiliency to disaster risks and climate change vulnerabilities caused by human interventions and naturally induced hazards.
- Social justice: Meeting the basic material needs and improving standards of living for all, upholding human rights gender equality, labour standards and the right to self-determination.

The Organic Agriculture Act that was passed in 2010 included a compilation of a range of previous implementation guidelines that covered such items as (i) the designation of the Bureau of Agriculture and Fisheries Product Standards (BAFPS) to grant accreditation to organic certification bodies as well as being responsible for the formulation and enforcement of standards of quality and the processing, preservation, packaging, labelling, import, export, distribution and advertising of agriculture and fisheries products. There were also guidelines and AOs issued in

[10] The DA F2C2 program benefits from a wide range of DA Banner Programs that are listed in Annex 5.

2012 relating to the DA granting of subsidies for organic certification, facilitating the establishment of organic farming demonstration farms and procedures for the accreditation of organic agriculture extension service providers. However, organic agriculture in the Philippines is still in its infancy with relatively few farmers overall that are practicing it. However, there are a few schemes in place to promote organic agriculture that include (i) Organic Farm Business Plan (OFBP) under the DA that provides financial and technical assistance to farmers who want to transition to organic farming that requires farmers to undergo training in organic farming practices; (ii) Organic Agriculture Program (OAP) of the Bureau of Water and Soils Management (BSWM) that promotes organic agriculture through research, extension and education and also provides financial assistance to farmers interested to adopt organic farming practices; and (iii) the Philippine Centre for Postharvest Development and Mechanization (PhilMeD) also has an organic farming program to develop appropriate organic agriculture techniques and provides training, demonstration farms, and technical assistance to farmers wanting to practice organic farming.

Based on the latest data that could be accessed there are reported to be about 40,000 farmers across the entire country that are now practising organic agriculture, but the uptake of organic farming has been constrained by a lack of infrastructure. Farmers generally have to use manual labour rather than machinery and there is a lack of satisfactory storage facilities for organic produce leading to higher spoilage rates. In addition, farmers lack market access since there is currently limited domestic demand for organically certified products that are generally sold at a higher price than uncertified products. but this situation is changing with a growing awareness of the importance of consuming safe food items that have a known origin. However, there appear to be no existing or functional organic hubs that are yet established and the AMIA villages could potentially provide sites for the wide introduction of organic agriculture.

One further consideration is the adoption of the **Participatory Guarantee Scheme** (PGS) that refers to a locally focussed quality assurance system that is developed and practiced by farmers who are engaged in organic agriculture and is built on a foundation of trust, social networks and knowledge exchange, which provides an alternative and complementary tool to third party certification in the organic agriculture sector. This is particularly relevant for small-scale farmers who cannot afford the pay the cost of the service of third-party certifiers, in order to label and sell their produce as guaranteed organic, in local markets. Consumers, in turn, have the assurance that the food they are eating has been produced organically, and they can even participate in the verification progress through PGS. The PGS are recognised by the International Federation of Organic Agriculture Movements (IFOAM) and are especially adapted to local markets and short supply chains and there are reported to be now over 100 PGS initiatives that have commenced across the entire country.[11]

Although the update of PGS in the Philippines is still limited, the government can play an important role in its further promotion through the introduction of pro-organic policy measures that include “push measures” to encourage the production and supply of organic products, “pull measures”

11 https://pgs.ifoam.bio/pgs_groups/map?utf8=%E2%9C%93&filter=&status_filter=&country_filter=Philippine Accessed 06-Jun-23

that raise awareness of consumers and promote more demand for organic products, and "enabling measures" that have overarching effects on supply and demand.[12]

An opportunity also exists for AMIA villages through the wider adoption of the **Geographic Indication (GI)** policy (IPOPHIL Memorandum 2022 - 022) that provides a strategic policy tool for a climate resilient, inclusive, and sustainable transformational policy especially for indigenous commodities around the country. Some examples of existing potential GI products include pili nuts in Bicol region, Tinalak of Lake Sebu, Guimaras mangoes, etc. The "Champagne" is a registered GI that is applied in France and the EU, as well as other countries including India, as the climatic conditions, soil texture, temperature, and the skills required for the production define the distinctiveness if the sparkling wine that is made in the Champagne region of France. The model provides an interesting case study into the challenges that can occur and mechanisms to respond to challenges and infringements but could work on any potential GI-based AMIA CREATE networks for specific commodities and the Food and Agriculture Organization (FAO) has already piloted the development of two GI commodities for registration, namely for Kulaman Coffee from Sultan Kudarat and Cordillera Heirloom Rice from the Cordillera Region.

The AMIA villages could potentially also explore opportunities to become sites for Farm and Ecotourism, by becoming the sites for to broaden peoples' knowledge and understanding of the causes of climate change and to promote and showcase climate resilient agricultural techniques as well as GHG emission mitigation measures. By the development of farm tourism, local culinary products, value added products, and souvenir items from local products, etc.,), the AMIA village can expand its market direct to consumers. This in turn can provide an opportunity to raise awareness of certification procedures and the availability of specific certified products that are being marketed and stimulate increased demand potential for these products.

There is also a need to consider low carbon and climate resilient investments that build on enhancing AVC resilience to climate impacts. This can encompass many aspects within the value chain ranging from improved soil management and conservation techniques to achieve carbon sequestration through to greening of the supply chains by the adoption of measures that reduce GHG emissions during harvesting, processing, drying, storage and transport of products.

[12] policy_toolkit_main_report.pdf (ifoam.bio) Accessed 06-Jun-23

D. Enterprise development strategies for AMIA villages

In the case of each of the AMIA villages that have been studied there have been recommendations provided relating to the opportunities for further enterprise development through which there can be further expansion of the scale of production and more active engagement with market actors that will collectively result in enhanced level of returns for the farmers within the AMIA village. As already noted, based on the assessment of the AMIA villages that were visited, there will be a need for significant additional support to be provided for the preparation of business plans that can form the basis for requests for financing for their further development and expansion of their production capacity. These plans must necessarily include strategies for value addition and marketing based on consolidation of the production of the individual farmers. To achieve this will require a significant program of assistance that can be coordinated through the DA Regional Offices. Depending on the level of skills available at regional and/or provincial LGU level, this may necessitate the hire of other staff who can work as professional managers to support an agribusiness approach to the scaling up of the production within each AMIA.

A part of the AMIA village scaling up towards enterprise development as well the establishment of the AMIA-CREATE networks will also entail the establishment of formal organizational structures for each association and the creation of positions for senior managers within these structures that are salaried positions. This in turn will necessitate the generation of additional revenue within the AMIA villages to finance the creation of these positions and this can be achieved if there are better marketing arrangements in place.

A major weakness identified in each of the AMIA villages studied was the absence of any formal marketing arrangements and the apparent absence of any consideration of contract farming arrangements for specific commodities with larger traders and institutional buyers. An important role for the professional managers that are proposed to be recruited by the AMIA villages will be the negotiation and management of these contract farming arrangements

Based upon these proposals an attempt has been to prepare an action plan for each of the four AMIA villages that features both an outline of the enterprise development opportunities and a proposed business operational structure, a human resources development plan and an organisational capacity and action plan. These can provide the templates for the development of similar action plans for other AMIA villages as they reach the stage of being ready to graduate to enterprise development.

D.1Caut Farmer Field School Marketing Cooperative

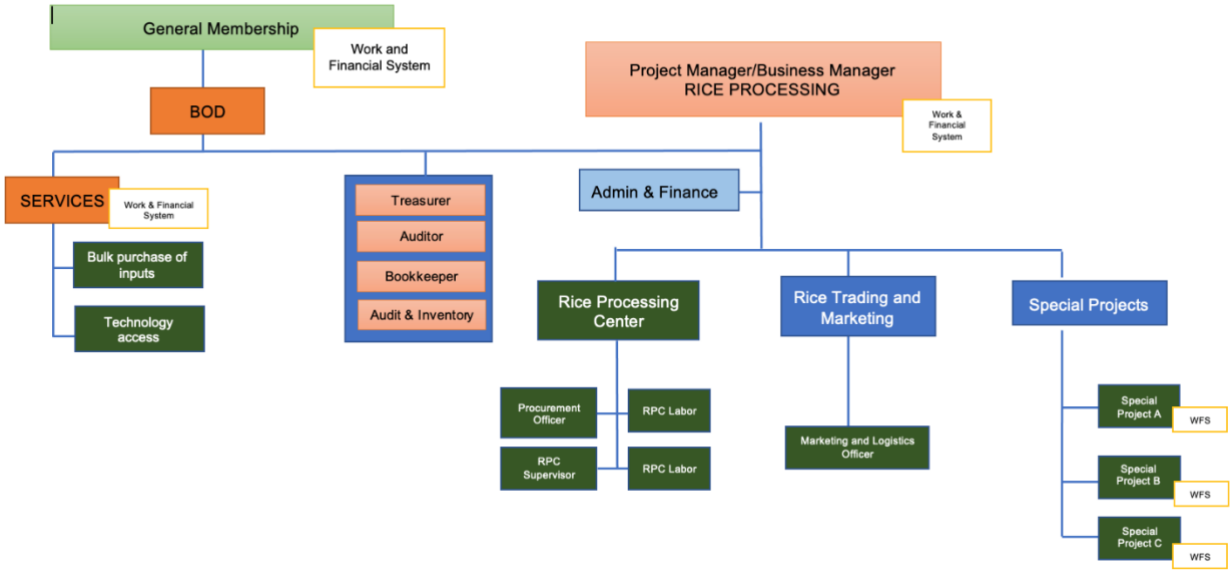
The Caut Farmer Field School (FFS) Marketing Cooperative provides an example of an AMIA village that is focussed primarily on rice but with opportunities for future diversification into other high value annual corps.

Name of AMIA village	Caut Farmer Field School (FFS) Marketing Cooperative

Enterprise development

Establishment of mechanized rice processing system (drying, milling, packaging) provided this can be demonstrated as a viable investment and can be operated effectively by the cooperative members and the group has rice trading capital available. Increased warehouse storage capacity could support better marketing arrangements, providing drying facilities are available, so that farmers are not compelled to sell palay immediately after harvest. More active engagement in okra production as a high value crop and given the presence of international buyers in the municipality this should be a real opportunity for the farmers to exploit. The mechanized rice processing center will not only support the Caut FFS Marketing Cooperative but will also support other rice farmers within the municipality.

Proposed Business Operational Structure



In the proposed operational structure, the Business/Project Manager who will oversee the overall business activities of the cooperative will play a major role in the business operations of the association. Also, the operational structure is a functional structure, tasks are divided or assigned based on roles of members and personnel. Besides the existing rice trading and marketing business, rice processing center, the cooperative may implement special projects that will benefit the cooperative financially. Special projects are short term projects such as participation to trade fairs or occasional selling missions, toll processing, etc. Each special project will have a separate work and financial plan for easier monitoring of costs and revenue.

Proposed Human Resource Plan

Name of AMIA village	Caut Farmer Field School (FFS) Marketing Cooperative

The Caut FFS Marketing Cooperative will employ personnel to manage the business, who may be hired full-time or part-time depending on the requirement of post. The following six categories are proposed:

Business Manager: to manage the overall operation of the rice business of the cooperative. He or She may be hired through a recruitment process approved by the Board of Directors (BOD).

Admin and Finance Officer: to be hired based on qualifications, track record and other qualifications that will be set by the BOD. The Admin and Finance officer will report to the Business Manager and will also have a reporting function to the Treasurer.

Rice Processing Center (RPC) Supervisor: to oversee the operation of the RPC to ensure quality and inventory of rice are timely. The RPC Supervisor must have a technical understanding on the operation of the rice processing facility.

Procurement Officer: to be in charge in the procurement of fresh paddies from farmers and to monitor rice farms that will supply the needed requirement of the RPC.

Marketing and Logistics Officer: to be overall in charge in the marketing of rice in retail and wholesale markets and to also ensure the availability of logistics services to deliver rice to the buyers.

In addition, RPC Laborers will be hired to support the manpower requirement of the RPC.

Proposed Organizational Capacity and Action Plan

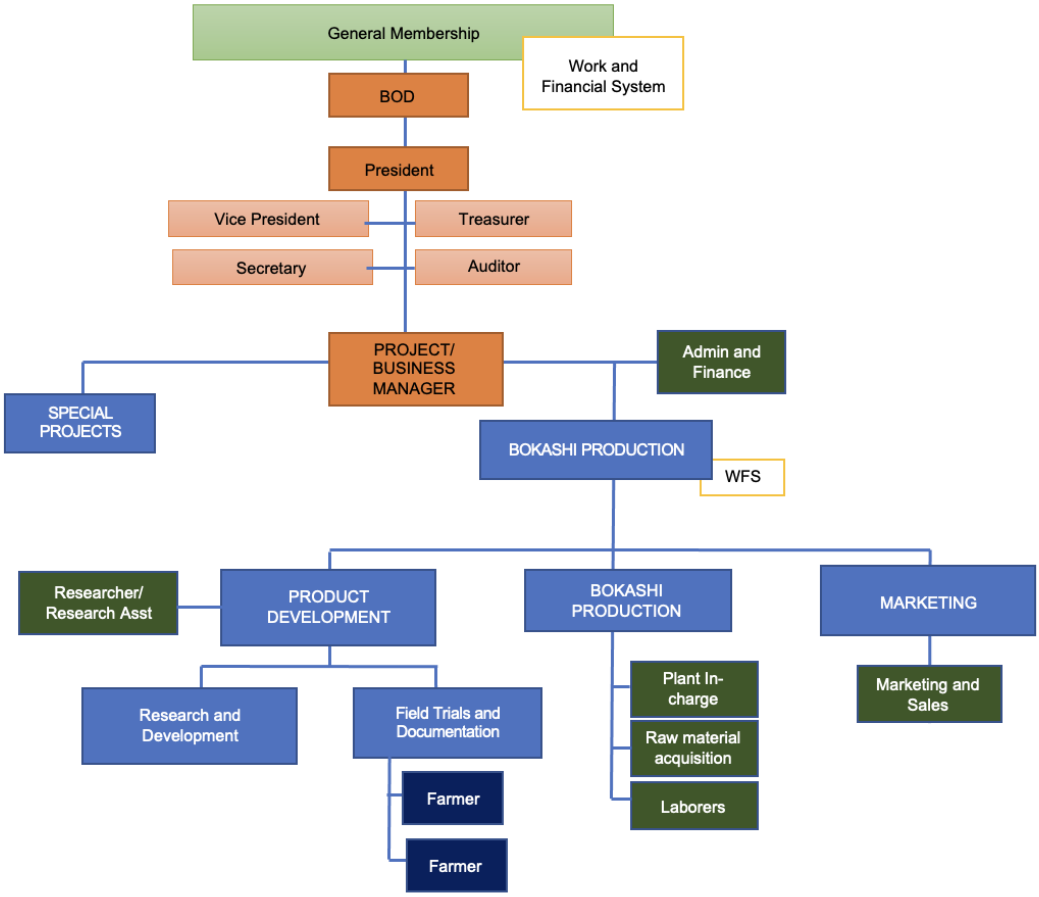
Activity	Year 1	Year 2	Year 3
A. Formation of Business Units & Business Operational Structure			
B. Formulation of RPC Business Plan			
C. RPC Marketing Plan			
D. RPC Business Operation, Hiring & Training of personnel			
E. Organizational Capacity Building Plan			
Farmer skills upgrading			
Farm records & accounting			
Financial & records management systems			
Marketing, technology & industry trends			
Organizational strengthening			
F. Work and Financial planning (quarterly & annual)			

D.2Binujasan Farmers Association

he Binujasan Farmers Association provides an example of an AMIA village that is focussed on the production of a marketable soil conditioner that is produced from a combination of various waste products of their existing crop production.

Name of AMIA village	Binujasan Farmers Assocation
Enterprise development	
Proposed Enterprise:	
Bokashi Product Development and Marketing	
The Binujusan Farmers Association proposed enterprise on product development of natural soil conditioner using farm wastes that are available in the area. Bokashi is natural soil conditioner processed from sugarcane wastes (mud press), carabao manure, carbonized hulls and other agro-industrial wastes.	
Proposed Business Operational Structure	
The proposed operational structure of Binujusan Farmers Association is towards the product development marketing of Bokashi, a soil conditioner to be produced from agro-industrial wastes within the municipality. Since soil conditioning and other fertilizer would require several tests and field trials prior to registration, the focus of the first 3 years of the business is on product development, field trials and small volume production/marketing for the purpose of field trials.	
In the proposed operational structure, the Business Manager that will oversee the overall Bokashi Production Business which has 3 main division: (1) Product Development; (2) Bokashi Production (small scale); (3) Marketing. Product Development includes Research and Development focusing on different formulation of Bokashi, field trials of the product on different commodities, geographic location.	
Small scale Bokashi Production will also be implemented for the purpose of field trials and small-scale marketing to other areas. A Production Division will collect data related to production of the soil conditioner. While Bokashi is in product development, small scale marketing can also be done to cover costs of production while promoting participation to the field trials.	

Name of AMIA village	Binujasan Farmers Assocation



Proposed Human Resource Plan

Binujusan Farmers Association will employ personnel to manage the Bokashi business even during product development stage. Personnel may be hired full-time or part-time depending on the requirement of post.

Business Manager: to manage the overall operation of Bokashi Production. He or She may be hired through a recruitment process approved by the BOD. The Project/Business Manager will initiate partnership (in behalf of the association) with other research institutions.

Admin and Finance Officer: to be hired based on qualifications, track record and other qualifications that will be set by the BOD. The Admin and Finance officer will report to the Business Manager and will also have a reporting function to the Treasurer.

Researcher/Research Assistant: to be engaged to lead the Product Development Division including research and development, field trials and documentation. The Researcher will work

with partner farmers for the field trials. The researcher will also document bokashi production protocols for field trials.

Plant In-charge: to oversee the production of Bokashi based on protocols provided and approved by the Product Development Division. The Plant In charge will also support the Product and Development Team by monitoring and documenting plant related information (e.g. equipment efficiency, etc.)

Raw Material Acquisition (RMA): to ensure that raw materials collected for the production of Bokashi meets the standards, quality and quantity at the proper time. To RMA will also be incharge for raw material inventory from the source. Since most of the raw materials are wastes generated, the RMA will coordinate with the raw material sources to be able to sustain production of Bokashi.

Marketing and Sales Officer: to be the overall in charge in the marketing and promotion of Bokashi to different users. The Marketing Officer will also work with the product development team to determine appropriate product based on farmer's needs.

In addition, laborers will support the manpower requirement of the Bokashi Processing Unit.

Proposed Organizational Capacity and Action Plan

Activity	Year 1		Year 2		Year 3	
A. Formation of Business Units and Business Operational Structures	■					
B. Preparation of Product Development Team (R&D and Timeline	■	■				
C. Implementation of R&D, field trials and documentation [13]		■	■	■		
D. Preparation of Business Plan to request for research funding support			■	■		
E. Bokashi production operation hiring and training of personnel	■	■				
F. Small-scale production (for field trials)		■	■	■	■	■
G. Collection of results of field trials for production promotion		■	■	■	■	■
H. Preparation and implementation of marketing plan				■	■	■
I. Work and Financial Planning	■	■	■	■	■	■
J. Commercial Production (upon registration)			■	■	■	■

[13] Duration of the research and field trails will also depend on the requirements of the Fertilizer and Pesticide authority (FPA) or other institution where the product will be registered and certified.

D.3BLISS Cooperative

The primary commodity that will be the focus of the activities for the BLISS Cooperative is Cassava through the negotiation of a supply contract with a local Korean processor/exporter.

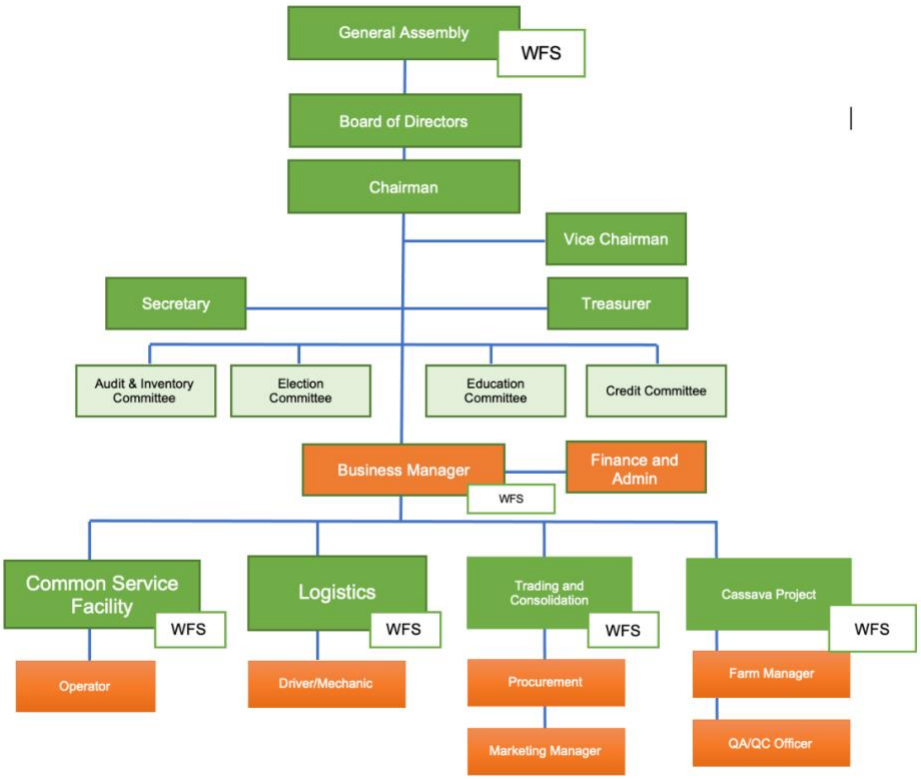
Name of AMIA village	BLISS Cooperative

Enterprise development

Proposed Enterprise: The BLISS Cooperative proposed enterprise is Cassva Supply Agreement with a Korean Starch Company based on Misamis Oriental. The starch company has a requirement of 400 metric tons of fresh cassava per day. The company also accepts semi processed cassava such as chips and granules. Given the capacity of the cooperative to produce cassava, the cooperative can supply the Korean Starch company through a marketing contract of supply agreement.

Proposed Business Operational Structure

The proposed operational structure of BLISS Cooperative presents the different business units or business activities of the cooperative. Business Units are created with specific Work and Financial System (WFS) per unit. This is to have a clearer needs and expectation per business unit. Initially the business units are (1) Common Service Facility; (2) Logistics; (3) Trading and Consolidation; (4) Cassava Project.



Name of AMIA village	BLISS Cooperative

Proposed Human Resource Plan

BLISS Cooperative will employ personnel to manage the business. Personnel may be hired full-time or part-time depending on the requirement of post.

Project/Business Manager: to manage the overall operation of the rice business of the cooperative. He or She may be hired through a recruitment process approved by the BOD.

Admin and Finance Officer: to be hired based on qualifications, track record and other qualifications that will be set by the BOD. The Admin and Finance officer will report to the Business Manager and will also have a reporting function to the Treasurer.

Common Service Facility Operator: to oversee the common service facility operation. He/She will be in-charge on the schedule, dispatching, maintenance of the equipment and other facilities. The Common Service Facility Operator will also oversee the logistics business in terms of truck maintenance.

Driver/Mechanic: to pick-up and deliver products on the agreed schedule. He will provide basic troubleshooting services of the truck.

Procurement Officer: to purchase corn and cassava from farmers for trading or cassava project.

Marketing Manager: to develop a marketing plan for both cassava and corn. He will negotiate with buyers for terms beneficial to the cooperative, the farmers and the company.

Farm Manager: to specifically provide technical supervision to cassava farms that will supply the starch company. He will work closely with the Marketing Manager and QA/QC to assure smooth deliveries and payments

QA/QC Officer: to ensure that cassava supply for the company meets the quality standard set by the buyer

In addition, labourers will support the manpower requirement for the loading of the cassava into trucks bound for processing unit.

Proposed Organizational Capacity and Action Plan

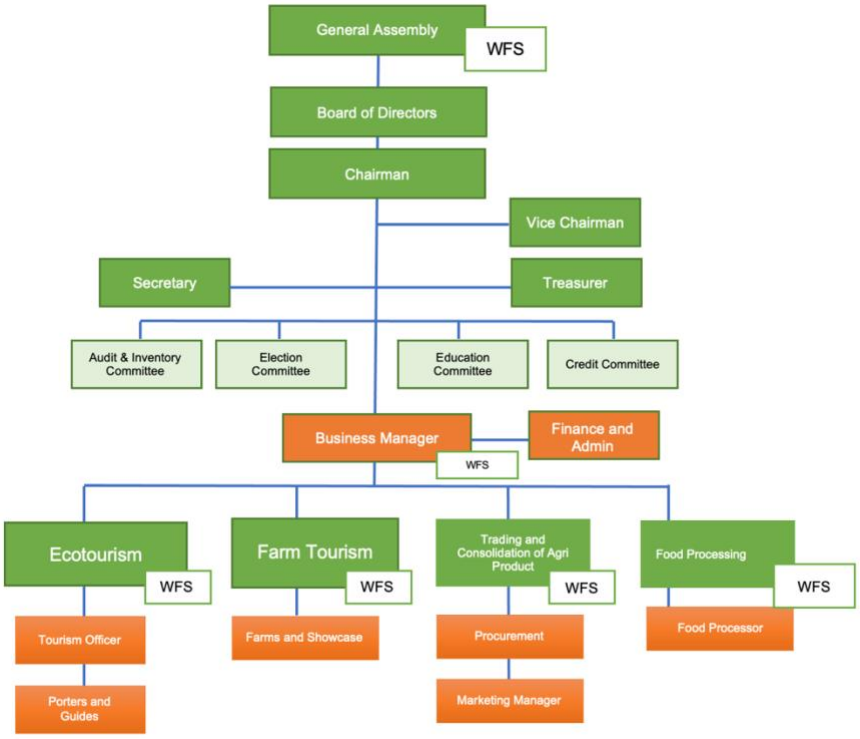
Activity	Year 1		Year 2		Year 3	
1. Formation of Business Units and Business Operational Structure						
2. Initial supply negotiation with the buyer						
3. Conduct of pre-feasibility study of cassava project						
4. Preparation of Business Plan to request funds						
5. Signing of buying agreement (BLISS Cooperative and Buyer)						
6. Signing of Supply Agreement (BLISS Cooperative and farmers)						
7. Production and post-harvest training						
8. Production of cassava and trial shipment/deliveries						
9. Commercial deliveries						
10. Work and Financial Planning (annual and quarterly						

D.4Jose Rizal Indigenous Peoples Association

The Jose Rizal Indigenous Peoples Association (JIPAS) propose to focus on the development of local tourism within their community.

Name of AMIA village	Jose Rizal Indigenous Peoples Association
Enterprise development	
Proposed Enterprise:	
The Jose Rizal Indigenous Peoples Association (JIPAS) proposed for the development of local tourism within their community. It will include both agri and ecotourism to promote smart agriculture. The activities of JIPAS are sustainable practices to ensure the protection of Mt Apo which is a Protected Area	
Proposed Business Operational Structure	
The proposed operational structure of JIPAS presents the different business units or business activities of the cooperative. Business Units are created with specific Work and Financial System (WFS) per unit. This is to have clearer needs and expectations per business unit. Initially the business units are (1) Ecotourism; (2) Agritourism; (3) Trading and Consolidation; (4) Food Processing. Ecotourism includes offering nature experience within the foothills of Mt Apo and ecotourism sites such as the Bamboo Peak. Agritourism will show the sustainable agriculture practices of indigenous people community to conserve water and soil for food production. Trading and consolidation and food processing of different products are the previous activity of JIPAS. Tourists are also the potential market of processed foods produced.	

Name of AMIA village	Jose Rizal Indigenous Peoples Association



Proposed Human Resource Plan

JIPAS will employ personnel to manage the business. Personnel may be hired full-time or part-time depending on the requirement of post.

Business Manager: to manage the overall operation of the different business of JIPAS. He or She may be hired through a recruitment process approved by the BOD.

Admin and Finance Officer: to be hired based on qualifications, track record and other qualifications that will be set by the BOD. The Admin and Finance officer will report to the Business Manager and will also have a reporting function to the Treasurer.

Tourism Officer: to promote Mt Apo Foothills and Bamboo Peak to tourists (local tourists, students, etc.). The Tourism Officer will also select farms that can be provide tourism experience to tourists.

Porters and Guide: the younger generation of the community that can be trained as porters and guides. The Department of Tourism and TESDA may provide certifications to porters and guides.

Procurement Officer: to purchase corn and cassava from farmers for trading (abaca, coconut, coffee, cacao).

Name of AMIA village	Jose Rizal Indigenous Peoples Association

Marketing Manager: to develop a marketing plan for both cassava and corn. He will negotiate with buyers for terms beneficial to the cooperative, the farmers and the company.

Food Processor: to process different products from cacao, coffee and coconut that can be sold locally or that can be served to tourists as part of the local experience.

Laborers may be hired for different activities from time to time.

Name of AMIA village	**Jose Rizal Indigenous Peoples Association**					
Proposed Organizational Capacity and Action Plan						
Activity	**Year 1**		**Year 2**		**Year 3**	
1. Formation of Business Units and Business Operational Structure						
2. Training of Tourism Officer, Porters and Guides						
3. Food Processing Training to processors (women)						
4. Formulation of Barangay Tourism Plan						
5. Preparation of Business Plan to request for funds						
6. Production and post=harvest training						
7. Work and financial planning (quarterly and annual)						

E. Review of existing agricultural value chain studies relating to climate resilience

The objective of this aspect of the work was to assess the available AVC studies that have been conducted on a range of commodities to determine the extent to which they have responded to the need for greater future climate resilience and identifying the best practices for achieving this shift both in terms of the mode of analysis as well as identifying the primary considerations for achieving the enhanced future climate resilience. It is now abundantly clear that Incorporating climate resilience into AVCs is crucial to ensure the sustainability and productivity of agriculture in the face of climate change. Climate resilience in agriculture involves strategies and practices that help farmers adapt to changing climate conditions, minimize risks, and maintain or enhance their agricultural productivity. Incorporating climate resilience into AVCs is a complex and ongoing process and requires a multi-dimensional approach involving various stakeholders and a commitment to long-term sustainability. Additionally, it is essential to tailor strategies to the specific climate challenges and local conditions of the region in question.

There are a wide range of VC studies, as well as Commodity Road Maps (CRMs) that have been prepared over recent years, and this process is still on-going as a prelude to the process of developing the Provincial Commodity Investment Plans (PCIPs). A brief review was completed of 12 such VC studies available for study, and the results are summarized below.

Table 1: Summary of analysis of available AVC studies

Name of study	Year	Assessment of climate resilience responses
Preparation of the Region 12 Strategic Investment Plan for Processed Fruit and Nuts Cluster (2022).	2022	No specific mention of climate im[pacts other threat of more intense rainfall. No description of any mitigation or adaptation measures.
Preparation of Region 12 & Maguindanao SIP for Cacao (2019)	2019	
Analysis of Fruit and Vegetable VCs in the Philippines: ADB TA-9689 (2022)	2022	Study focused on Mango, Banana, Cabbage, Tomato & Onion. The study did not include any specific mention of climate change impacts but identified a range of “climate smart” infrastructure requirements that focused on post-harvest processing and marketing facilities. Also included a recommendation on the need for climate change adaptation strategies for all commodities since there was limited information identified during the study on the preparedness of producers to deal with increasing extreme weather events associated with climate change. Further information on the strategies for these commodities and the required associated training for farmers.
Philippine Food Chain Logistics Master Plan 2023 - 2033: ADB TA-9971 (2023).	2023	Study includes VCA for eight commodities: rice, corn, banana, onion, pork, poultry, milkfish, tilapia. Very little mention of potential climate change impacts other than the need for genomic research to develop Tilapia stocks that are more resilient to unspecified climate impacts.

Name of study	Year	Assessment of climate resilience responses
Survey of Issue Analysis of Food Value Chain in the Philippines (2019).	2019	Frequent mention of the risks from climate change to food crops and the need for more support to enable farmers to adapt and recover from climate related crop losses. CSA mentioned as one mitigation measure, but no further specific details are provided and general mention of the need for climate resilient infrastructure.
Market and Value Chain Analysis of Priority Agrobiodiversity Commodities for Lake Sebu (2019).	2019	Potential resilience of each commodity to climate variability was assessed and the level of protection of farmers from moderate shock such as drought, flood, pest and disease was used in assessment. No description of any mitigation or adaptation measures.
Preparation of Region 12 + Maguindanao SIP for the Cacao cluster (2019).	2019	Mention of climate change as a potential threat to future cacao production but no further discussion of introduction of climate resilience into the value chains.
Philippine Rice Industry Road Map 2030 (2018).	2018	Description of the need for enhanced resiliency to disasters and climate risks and targets set for adoption rates as well as specific areas of support from extension services, enhanced crop insurance and further investment in R&D activities. Also mentioned is the need for reserve seed banks that can provide support to farmers who suffer crop losses during early establishment.
Philippine Banana Industry Road Map 2021 - 2025 (2022).	2022	No specific mention of climate impacts other than the threat of more intense rainfall. No description of any mitigation or adaptation measures.
Philippine Onion Industry Road Map 2021 - 2025 (2022).	2022	Includes various activities to address the impact of climate change including the need for the development of improved varieties that have greater drought resilience and pest/disease resistance, the need for expansion of crop insurance and the availability of credit lines for farmers. No description of the potential impact of climate change in the main production areas.
Philippine Yellow Corn Industry Road Map 2021 - 2040 (2022).	2022	Specific mention made of the impact of climate change on yellow corn production and the need for the introduction of climate smart farming systems although no detail provided of what this comprises other than increased delivery of training for farmers on climate smart practices. No description of the potential impact of climate change in the main production areas.
Philippine Seaweed Industry Road Map 2022 - 2026 (2022)	2022	No specific mention of climate im[pacts other threat of more intense rainfall. No description of any mitigation or adaptation measures

The preparation of further studies under the auspices of the Philippine Rural Development Project (PRDP) is on-going and many more commodity based AVCs are under preparation that cover a wide range of commodities. However, for the documents that have been studied the following observations have been made:

- Overall, the studies make relatively little mention of the potential impacts of climate change although most make some reference to the increasing risks that are imposed. But there is very little discussion of the potential mitigation measures that could be adopted and how these can be integrated into the value chains and the possibility that that they may incur

additional investment on the part of the farmers and agribusinesses at both upstream and downstream sectors of the chain.

- Given that climate change poses an increasingly significant risk to the agriculture sector, there is a need for much more rigorous analysis of these risks and for the potential economic impact to be factored into the analysis. However, this is now being addressed through the more detailed assessments that are being conducted through the Climate Vulnerability Risk Assessments (CRVAs) that are being conducted through the PRDP prior to the preparation of the PCIPs.

F. Best practices for developing climate resilient AVCs.

Firstly, there is a need to reflect on the essential differences between climate resilience, climate resilient agriculture and climate smart agriculture, concepts that are often used in the context of adapting agricultural practices to climate change but have their own distinct focus.

- Climate resilience (CR): The capacity for a socio-ecological system to (i) absorb stresses and maintain function in the face of external stressed imposed by climate change; and (ii) adapt, reorganize, and evolve into more desirable configurations that improve the sustainability of the system, leaving it better prepared for climate change impacts.
- Climate Resilient Agriculture (CRA): This approach primarily focuses on enhancing the resilience of agricultural systems to the adverse effects of climate change. It involves strategies and practises that reduce vulnerability to climate variability and extremes like droughts, floods, and heat waves. The goal is to ensure food security and protect livelihoods by making agricultural systems more robust and able to withstand or recover from climate induced shocks. CRA might include practises like diversifying crops to reduce the risk of failure, improving water management to deal with droughts or adopting crop varieties that are more tolerant to extreme conditions.
- Climate Smart Agriculture (CSA): CSA is a broader approach that encompasses three main objectives: increasing agricultural productivity and income (sustainable agriculture), adapting, and building resilience to climate change (as in CRA); and reducing and or removing greenhouse gas emissions where possible (climate mitigation). Thus, CSA is an integrated approach that looks not only at adapting to climate impacts, but also at how agricultural practises can contribute to climate change mitigation. This might include activities like improved soil management to enhance carbon sequestration, integrating farming with forestry or using renewable energy sources in agricultural operations.

In summary, while CR, CRA and CSA aim to address the challenges of climate change in agriculture, CRA is specifically focused on adaptation and resilience, whereas CSA incorporates both adaptation and mitigation, along with the goal of increasing productivity sustainably.

During the Inception Phase of the assignment there was a discussion on the value chains that should be prioritized for in-depth study. Although there was no formal agreement reached on the selection of the priority commodities, it was proposed that there could be up to a maximum of only three or four could be studied in detail due to the time limitations. Based on the above analysis of AMIA villages the priority choices are **Rice, Corn and Coconuts.**

As a preliminary task there has been an assessment conducted of the primary anticipated impacts of climate change characterized as relating to (I) drought and temperature rise and (ii) excessive rainfall that results from the increased frequency and intensity of typhoons. The analysis has been performed for the above three priority crops and can provide a methodology that can be extended to other crops also as needed. The analysis follows the four logical steps of assessing the consequences, determining the underlying vulnerability factors and sensitive groups, and identifying the adaptation measures proposed (see Tables 2 to 7).

Table 2: Impact and adaptation measures of drought/temperature rise: Rice

Rice	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
Hazard	**Drought/Temperature Rise**			
Consequences	• Poor seed quality produced by seed growers. • Scarce supply of good quality seed. • Increased requirement of pesticides. • Decrease quality of seeds due to power outage at storage facilities. • Increase energy consumption due to longer use of HVAC systems in seed storage rooms.	• Delayed planting schedules. • Reduce farm yield due to crop damage due to water stress. • Drought causes delayed flowering and spikelet sterility that affects grain filling. • In longer period of drought, rice plants die resulting to high farm yield loss. • Increased temperature during drought increases spread of pests, expands geographic range of insects and increases outbreak of insect transmitted diseases. • Increased need for government spending on irrigation.	• Lower milling recovery. • increased chalky grains. • Increased use of diesel fuel duel to power outage.	• Decrease of value of rice due to undesirable appearance and eating quality. • Decrease overall volume of rice produced.
Underlying vulnerability factors and sensitive groups	Biophysical • Low lying areas without sources of irrigation. • Drying of creeks that are sources of irrigation of non-irrigable lands. Socioeconomic • Increased prices of rice to consumers due to low supply • Reduced or loss of income of farmers. • Food security threatened. Institutional			

Rice	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
	• Affects quality of basic services from private and government organizations (e.g. water, electricity, communication, etc) • Increased dependence to importation • Limited capability of farmers organizations in providing services • Limited LGU support to climate resilient adaptation and mitigation programs			
Adaptation options proposed	• Planting of drought resistant varieties. • Development of short duration varieties that may avoid drought periods during critical growth periods (i.e. flower and panicle development). • Buffer stock of good quality seeds. • Use of renewable alternate source of energy at storage facilities. • Use of energy-efficient HVAC with motion sensors and programmable thermostats to optimize energy use.	• Crop Insurance. • Climate advisory. • Integrated pest management (biocontrol). • Diversified farming (Crop rotation to drought resistant crops such as legumes). • Soil fertility conservation technologies.	• R&D on improved milling techniques • Use of renewable energy (e.g solar).	• Buffer stock of milled rice. • Price regulation for rice. • Farm clustering for product consolidation and marketing.

Table 3: Impact and adaptation measures of typhoon and increased rainfall: Rice

Rice	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
Hazard	Typhoon/Heavy rainfall			
Consequences	• Reduced quality of seeds. • Damage of machineries. • Difficulty to transport of inputs due to inaccessibility of road networks. • Difficulty of drying of seeds.	• Lodging, striping and water stress in rice fields. • Flooding causes crop damage/mortality. • Overall production loss.	• Difficulty in drying of fresh paddies. • Germination of fresh paddies due to longer storage. • Deterioration of quality of milled rice due to high moisture at storage. • Destruction of processing facilities (rice mills, warehouse. • Power outage in rice mills, mechanical driers and warehouse.	• Difficulty in transport of milled rice in open trucks lead to exposure of milled rice to heavy rains. • inaccessible roads and bridges. • Inaccessibility of consumers to milled rice due to closure of wholesale and retail market outlets. •
Underlying vulnerability factors and sensitive groups	Biophysical • Farms located in landslide prone areas flood prone areas. • Farms inaccessible due to road damage Socioeconomic • Unavailability of farm workers/labor • Reduced or loss of income of farmers. • Food security threatened. Institutional			

Rice	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
	• Lack of participation or membership to farmers organizations • Limited capability of farmers organizations in providing services • Farmers lack of access to information regarding crop insurance • Limited LGU support to climate resilient adaptation and mitigation programs Infrastructure • Closure of roads and bridges due to landslides, floods, etc. • Non-voyage of ships to transport bulk purchase of rice			
Adaptation options proposed	• Buffer stock of good quality seeds. • Availability of seeds of flood tolerant varieties.	• Planting of flood tolerant varieties in flood prone areas. • Diversified farming (crops-livestock). • Soil fertility conservation technologies. • Construction of drainage in flood prone areas (LGU, NGA). • Use of climate information advisories for short term farm planning.	• Use of mechanical driers. • Use of renewable energy as source of alternate energy source. • Farm clustering to avail fully mechanized processing facility. • Climate resilient storage/warehouse design (Green warehouse)	• Investment on closed vans for transport of milled rice. • Operation of mobile stores or Kadiwa market outlets. • Buffer stock of rice in the locality. • Coordinate with LGU for construction and repair of farm to market roads.

Table 4: Impact and adaptation measures of drought/temperature rise: Corn

CORN	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
Hazard	Drought/Temperature Rise			
Consequences	• Poor seed quality produced by corn seed growers. • Reduced inventory of good quality corn seeds. • Decrease quality of seeds due to power outage at storage facilities. • Increase energy consumption due to longer use of HVAC systems in seed storage rooms. • Increased requirement of pesticides due to pest outbreaks during drought.	• Stunted growth of plants. • Yield drop due to reduction of number and weight of corn kernels • Drought reduced production of silk biomass that are necessary for kernel production. • Sudden increase of insect population due to shorten life cycle, increased amino acids in plants during drought causing population explosion of mites that damage corn stems. • Difficulties in scheduling of farm activities (e.g. fertilizer application). • Increased government spending on irrigation to mitigate impacts of drought.	• Drought creates grain quality issues such as threat of aflatoxin. • Increased post-harvest losses. • Reduction of corn kernel weight. • Faster deterioration of grains in high temperature storage conditions.	• Volume too low to supply to institutional buyers. • Higher cost of transportation per unit kg or corn. • Underutilized feed mills due to low supply. • High prices in the market.

CORN	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
Underlying vulnerability factors and sensitive groups	Biophysical • Low lying areas without sources of irrigation • Drying of creeks that are sources of irrigation of non-irrigable lands. Socioeconomic • Reduced or loss of income of farmers. • Food security threatened. • Will affect the livestock industry due to low supply of feeds. Institutional • Affects quality of basic services from private and government organizations (e.g. water, electricity, communication, etc). • Increased dependence to importation. • Limited capability of farmers organizations in providing services. • Limited LGU support to climate resilient adaptation and mitigation programs.			
Adaptation options proposed	Seed production of drought resistant varieties. Research and development of drought resistant varieties. Buffer stock of good quality seeds. Use of renewable alternate source of energy at storage facilities. Use of energy-efficient HVAC with motion sensors and programmable thermostats to optimize energy use.	• Crop Insurance. • Integrated pest management (biocontrol). • Diversified farming (Crop rotation to drought resistant crops such as legumes). • Soil fertility conservation technologies. • Rainwater harvesting. • Use of climate information advisories. for short term farm planning.	• R&D on improved milling techniques. • Poor quality of corn. • Use of renewable energy (e.g. solar power). •	• Farm clustering for product consolidation. • Promote production of free-range chickens, pigs to augment income loss and support household food security.

Table 5: Impact and adaptation measures of typhoon and increased rainfall: Corn

CORN / Typhoon /Heavy rainfall	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Post-harvest Storage and Processing	Product Marketing
Hazard	Typhoon/Heavy rainfall			
• Consequences	• Reduced quality of seeds. • Damage of farm machineries. • Difficulty to transport of inputs due to inaccessibility of road networks.	• Lodging of crop due to flooding that will result in crop damage/mortality. • Delayed farming activities. • Overall production loss.	• Deterioration of quality of corn kernels due to longer storage. • Destruction of processing facilities (rice mills, warehouse. • Power outage in rice mills, mechanical driers and warehouse. •	• Exposure of corn on cob, kernels, milled corn in rain that will affect quality of products. • inaccessible roads and bridges from farm/mill to market. • Underutilized feed mills due to low supply. • Increased cost of feeds that would result increased prices of meat, poultry, eggs, etc.
• Underlying vulnerability factors and sensitive groups	Biophysical • Farms located in landslide prone areas flood prone areas. • Farms inaccessible due to road damage. Socioeconomic • Unavailability of farm workers/labor. • Reduced or loss of income of farmers. • Food security threatened. Institutional • Lack of participation or membership to farmers organizations. • Limited capability of farmers organizations in providing services.			

	• Farmers lack of access to information regarding crop insurance. • Will affect the livestock industry due to low supply of feeds. • Infrastructure • Closure of roads and bridges due to landslides, floods, etc. • Non-voyage of ships to transport bulk purchase of rice. • Limited LGU support to climate resilient adaptation and mitigation programs.			
Adaptation options proposed	• Buffer stock of good quality seeds. • Availability of seeds of flood tolerant varieties.	• Planting of flood tolerant varieties in flood prone areas. • Diversified farming (crops-livestock). • Soil fertility conservation technologies. • Construction of drainage in flood prone areas (LGU, NGA). • Use of climate information advisories for short term farm planning. • Harmonization of CRA programs to the LGU Comprehensive Development Plan and Annual Investment Plans.	• Use of mechanical driers. • Use of renewable energy as source of alternate energy source. • Farm clustering to avail fully mechanized processing facility. • Climate resilient storage/warehouse design (Green warehouse).	• Farm clustering for product consolidation. • Promote production of free-range chickens, pigs to augment income loss and support household food security.

Table 6: Impact and adaptation measures of drought/temperature rise: Coconut

Coconut	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Storage and Processing	Product Marketing
Hazard	Drought			
Consequences	• High cost of nursery management as nursery operators would need to irrigate the seedlings. • Reduced quality of seedlings. Seedlings are sensitive to water stress (drought). • Scarcity of good quality seedlings.	• Longer span for crop recovery from climatic impacts. • Physiological problems e.g. slow-down leaf development which affects vitality of coconut to produce nuts due to loss of female flowers. • Increased incidence of pest infestation (e.g. rodents, scale insect). • Decrease in production. Water is critical in flower and nut development of coconuts. • Risk of accidental fire in plantation.	• Risk of fire at processing site and facilities (copra drying facility). • Reduced total harvest. • Compromised quality and volume of raw materials. • Shorter storage life of coconuts.	• Less copra to buy from farmers. • Under-utilization of oil mills.
Underlying vulnerability factors and sensitive groups	Biophysical • Farms with no access to irrigation or other water sources (rivers, irrigation system). Newly planted coconuts are sensitive to water stress and would require water for normal plant growth • Increased insect and other pest population during drought Socioeconomic • Limited access to governments services such as crop insurance • Limited knowledge in value added products of coconut • Reduced income due to tenancy and land mortgage issues among coconut farmers			

Coconut	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Storage and Processing	Product Marketing
	Institutional • Lack of participation or membership to farmers organizations • Limited capability of farmers organizations in providing services • Limited LGU support to climate resilient adaptation and mitigation programs • Tenancy and land mortgage issues among coconut farmers • Limited access to crop insurance or low insurance coverage Market • Reduced supply of raw materials			
Adaptation options proposed	• Establishment and management of coconut nurseries with complete facilities including irrigation systems.	• Crop Insurance. • Integrated pest management (biocontrol). • Diversified farming (intercropping with other crops). • Regular farm sanitation to reduce pest incidence. • Collective farm monitoring to prevent accidental fire.	• Product diversification (fresh young coconut, processed products, charcoal from coconut shells, coco coir).	• Farm/product consolidation through clustering. • Promotion and marketing of diversified products.

Table 7: Impact and adaptation measures of typhoon and increased rainfall: Coconut

Coconut	Provision of Seeds and Other Inputs	On-farm Production	Harvesting, Storage and Processing	Product Marketing
Hazard	Typhoon			
Consequences	• Destruction of nursery facilities. • Damaged plantlets. • Early germination of seed nuts due to continuous rains. • Difficulty of gathering seed nuts due to strong winds and accidental risks.	• Decreased yield due to nuts fall. • Uprooting of coconut trees due to strong winds, landslide, etc. • Increased mortality of newly planted seedlings due to flooding or water logging.	• Delayed drying of coco meat to copra. • Destruction of copra drying facilities. • Delayed in post-harvest activities (dehusking, splitting, etc. that would lead to nut germination).	• Difficulty of delivery of copra or other products due to road access difficulty. • Closure of operations of buyers lead to reduction of quality of product. • Longer storage time would initiate mold production that is not acceptable to the market. • Farm clustering for product consolidation and marketing.
Underlying factors and sensitive groups	Biophysical • Farms located in landslide prone areas. Socioeconomic • Unavailability of farm workers/labor • Farmers are not practicing GAP (e.g. fertilization) thus experiencing very low farm productivity. • Old and less productive coconut trees • Tenancy and land mortgage issues among coconut farmers • Limited access to crop insurance or low insurance coverage Institutional • Lack of participation or membership to farmers organizations			

	• Limited capability of farmers organizations in providing services • Limited LGU support to climate resilient adaptation and mitigation programs Infrastructure • Closure of roads and bridges due to landslides, floods, etc.			
Adaptation options proposed	• Proper nursery management planning and operation.	• Use of high yielding dwarf varieties. • Capacity building on GAP, institutional development. • Crop insurance.	• Construction of climate proof post-harvest and storage facilities. • Use of climate information system for scheduling of harvesting and post-harvest marketing.	• Selling of whole nuts (instead of copra).

The outcome of these analyses can be used to provide the basis for planning the institutionalization of CRA at the LGU level that can focus on two main areas of activity as follows:

- The integration of the proposed adaptation options as elements of a CRA program within the LGU Local Development Plans. These would mainly comprise the Barangay Development Plans, City/Municipal Comprehensive Development Plans and Comprehensive Land Use Plans, and the Provincial Development and Physical Framework Plan.
- Based on the identified options that are integrated into the above plans, the allocation of funds for CRA can be achieved through the Annual Investment Plan (AIPs) of the LGUs. To strengthen the response to achievement of climate resilience thresholds could be set within these AIPs for minimum percentage levels of annual investment that should be directed towards actions for the mitigation of climate induced impacts.
- Within the LGUs at both municipal and province level, the MAO and DA staff can contribute to this planning process to identify the most appropriate mitigation measures that are required whilst also ensuring optimal use of the available funds.

An important aspect of the AMIA village concept is to promote the wider adoption of sustainable farming practices that can contribute to a reduction in the carbon footprint of the agricultural sector alongside achieving an increase in its resilience to climate change impacts and improved food security. Some of the key elements that need to be considered are as follows:

- Improved farming practices: Implementing sustainable farming practices is one of the most effective ways to lower carbon emissions and increase resilience. This includes practices like organic farming, agroforestry, permaculture, and conservation agriculture which all emphasize soil health, biodiversity, and natural pest management.
- Precision agriculture: By using technologies that more accurately manage and apply inputs such as water, fertilizer, and pesticides. This can significantly reduce greenhouse gas emissions by minimizing waste and optimizing productivity.
- Agroecology: Combining the science of ecology with the practice of agriculture to encourage the use of local resources, recycling of nutrients, and improvement of soils, thereby reducing dependence on synthetic fertilizers and pesticides that contribute to greenhouse gas emissions.
- Climate-Smart Agriculture: CSA is an approach that helps to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. CSA aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gases emissions, where possible.
- Carbon Sequestration in Agriculture: Carbon sequestration in agriculture involves practices like cover cropping and agroforestry that pull carbon out of the atmosphere and store it in plants or the soil. It's a promising strategy for offsetting agricultural emissions.
- Renewable Energy in Agriculture: Renewable energy technologies like solar and wind can be used to power farm operations, reducing dependence on fossil fuels.

- Supply Chains innovations: Optimizing supply chains can minimize waste and reduce the carbon footprint of transporting agricultural products as well as investments in cool storage facilities and more efficient transportation to reduce post-harvest losses as well as emissions during transport.
- Policy Support: Government policies and international cooperation are critical for promoting a transition to low-carbon agriculture. This can include subsidies for sustainable farming practices, carbon pricing, research and development funding, and education and training programs for farmers.
- Training and Education: Farmers need to be educated about climate change and the benefits of low-carbon practices. Providing training and extension services can help farmers adopt these practices more widely.

In the light of the previous discussion and taking into account the key elements of sustainable farming practices, it is pertinent to now include a discussion of the key aspects that should be considered during the preparation of future AVC studies to ensure that there can be a more comprehensive discussion and response to the need for low carbon and climate resilient investments that build on enhancing value chain resilience to climate impacts and the integration of appropriate mitigation measures and costing of these in the value chain analysis.

- **Assessment of climate change risks:** This is of course a very self-evident necessary prelude for any AVC to enable a more detailed consideration of expected climate change impacts on each of the AVC sub-systems. By conducting a thorough assessment of the specific climate risks that affect the region and the crops within an AVC, there can be an estimate of the projected increases in temperatures, changes in precipitation measures, frequency of extreme weather events, and changes in the incidence of pests and diseases, and in turn an estimation of the likely economic impact of these changes as well as identify mitigation measures and the cost implications of their adoption. This will naturally impact mainly on the production sub-system but may have implications for the post-harvest/processing sub-system also. This information will then provide a basis for many other considerations required to integrate increased climate resilience into the AVCs.
- **Improved crop varieties and livestock breeds (input sub-system):** An element of the AVCs that is seldom considered is that of the extent of R&D that is supported specifically relating to the breeding and development of new crop varieties of livestock breeds that are more resistant to changing climate conditions, including drought resistant, heat tolerance or pest resistance. Although R&D costs themselves are not a public good, the outcomes or knowledge generated from R&S can be considered as such due to the non-excludability that ensures that once a new crop variety or livestock breed is released anyone can adopt it provided there is an affordable source of supply and the existence of non-rivalry since the use of an improved crop variety or livestock breed by one person does not diminish the ability of others to use it. Nevertheless, there are private entities engaged in the R&D process and they will be seeking a return on their investment in the development of say an improved crop variety through the sale of the seed of that variety, that will translate into higher costs in the input supply sub-system of the AVC that will need to be quantified. In the case of the rice value chain adaptation options should include increased availability of seed of varieties that are flood tolerant and drought resistant including the development

of short duration varieties, the establishment of buffer stocks of seed of these varieties that can be drawn upon in the case of crop failure. Similar measures apply to corn for wider availability of varieties with greater climate resilience. For coconuts there is a need for improved nursery facilities with proper management and irrigation systems so that better quality planting materials can be made available.

- **Diversification of production sub-system (production sub-system):** The promotion of crop diversification with an AVC is an important response to increasing climate resilience because different crops have varying degrees of resilience to specific-climate conditions. The plans for diversification of cropping systems and hence livelihoods can provide options for transitions to various end states. Some of the options include home gardening, perimeter plantings, and dry season cropping (including green manure, mungbean, and pigeon pea) provide means of diversification that do not compete with existing land uses (especially rice farming). Alternatively, alley cropping, or inter-cropping may facilitate transition to agroforestry. Seasonal rotation and trial plantings that cover only a portion of the land available are options for partial adoption. The discussion of diversification of production should not be confined only to crops but could be extended to other non-crop commodities that could be promoted to ensure greater resilience of livelihoods in response to the change climate. This in turn leads to the possible need for transformational change, which, although naturally a much longer-term response to climate change, may become of increasing importance in the event of significantly greater climate change impacts being experienced that pose severe constraints on the production of some crops in terms of the reduction in their production potential due to their lack of resilience to the changing climate parameters (see further discussion below). Conservation agriculture is an important element for consideration here as was discussed earlier.
- **Climate smart practices (production sub-system):** Protecting crops to maintain productivity in the face of changing climate impacts necessitates the promotion and adoption of CSA practices. These modified practices that take climate change impacts into account may include factors such as precision farming, integrated pest management, and also more efficient fertilizer use. Some additional costs may be incurred but CSA practices can also result in some cost savings for producers and a reduction in the production costs. One element of this can be improving soil health through practices like crop rotation, cover cropping, and reduced tillage since healthy soils are better at retaining moisture and nutrients, which can be critical during droughts. This may translate into changes in the annual cropping patterns as well as the use of other factors such as soil conditioning agents that will need to be taken account of in the AVC. The changes in investment costs that are incurred will also need to be reflected in the valuation of the processes within the production sub-system.
- **Improvement in efficiency of water management (production sub-system):** An important element of climate change adaptation is the introduction of more efficient water management practices, such as drip irrigation and rainwater harvesting, to ensure that crops receive adequate water, especially in times of water scarcity due to climate change, as well as ensuring that available water resources are used in the most efficient and effective manner. Greater precision in water utilization can be achieved through the adoption of sensor-based irrigation systems. The adoption of these changes will entail

additional investment costs, and these will need to be reflected in the valuation of these of these components of the production sub-system. In the case of lowland rice there is a need for the construction of improved drainage facilities for flood prone areas as well as for water impounding facilities for conservation of water for irrigation, in response to the increasing variability in rainfall patterns.

- **Climate information services and early warning systems (production sub-system):** An important element of the need to climate proof AVCs is to enable producers to have access to reliable weather information as well as early warning systems to enable them to make informed decisions and prepare for extreme weather events. Climate Information Services (CIS) refers to the provision of climate-related information, data, and knowledge to individuals, communities, organizations, and decision-makers. These services aim to enhance understanding of climate patterns, variability, and change, and assist in making informed decisions to manage climate risks and opportunities. CIS play a critical role in supporting climate change adaptation, disaster risk reduction, and sustainable development. The establishment of CIS involves the collection, analysis, and monitoring of climate data. This includes historical climate records, weather observations, satellite data, and climate model projections. These data sources can help to build a comprehensive understanding of climate patterns, trends, and variability. CIS are also used to provide climate forecasts and predictions top anticipate future climate conditions. These forecasts can include short term weather forecasting, seasonal predictions, and longer-term climate projections to assist individuals and organizations to make informed decisions and take appropriate actions based on expected climate conditions. CIS can also be used to assist in conducting climate risk assessments to enable an understanding of potential impacts of climate change on various sectors and regions of the country. These assessments analyse the vulnerabilities, exposure, and potential risks associated with changing climate patterns, extreme weather events, and other climate related hazards. The Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) is the government agency responsible for providing weather and climate information and services to the public, government agencies and other stakeholders. The range of services that are being provided include (i) weather forecasts including daily forecasts, storm warnings, and other weather-related advisories; (ii) climate data and monitoring to track climate trends and variability in the country; (iii) climate outlooks and seasonal predictions to guide farmers and water resource managers in planning their activities and adapting to climate variability; (iv) climate change studies and assessments; (v) early warning systems for extreme weather events; and (vi) dissemination of climate information t the general public. Enabling the effective communication and dissemination of climate information is an essential component of the CIS, and this involves translating complex climate data and scientific information into accessible formats that can be easily understood by different users. The dissemination of climate information can be achieved through various platforms such as websites, mobile Apps, radio broadcasts and community engagement activities. Furthermore, CIS can also provide tailored information products that meet the specific needs of user groups, that may include climate advisories, early warning systems, decision-supporting tools, training materials and capacity building resources. CIS provide a mechanism to integrate climate information into the decision-making processes at various levels, from community-level

adaptation to national policy making by providing relevant and timely climate information that contribute to building climate-smart societies and fostering sustainable development.

- **Green financing, insurance, and risk management (production and post/harvest processing subsystems):** Encouraging farmers to adopt crop insurance and risk management strategies to protect their livelihoods in the event of climate-related losses is an essential part of upgrading production as well as post-harvest/processing sub-systems. Additional cost is involved in meeting the insurance premiums but in the event of crop damage or loss there is compensation for producers, but the level of increase in production costs is minimal compared to other components of the production sub-system and it needs to be reflected as an essential need in any AVC analysis.
- **Farm infrastructure (post-harvest/processing subsystem):** Additional investment will be required in farm infrastructure that can withstand extreme weather events, such as stronger farm buildings and storage facilities in order to protect both crops and the AVC physical assets. Normally such types of fixed assets are not reflected in the AVC but nevertheless they will represent additional costs for the producer and should be costed into the AVC accordingly as additional investments. Where opportunities for additional value addition are being integrated into an AVC it is important to take account of the costs bearing in mind that improved processing and packaging can lead to a reduction in post-harvest losses and maintenance of product quality and thus improve the level of return for the producer. The need for farm clustering is also evident so that fully mechanized processing as well as bulk handling and storage can be introduced in response to the economies of scale that are achieved. This is particularly relevant to the rice and corn value chains.

G. Transformational adaptation in AVCs

The National Agriculture and Fisheries Modernization and Industrialization Plan (2021 - 2030) places a strong emphasis on the need for agricultural sector transformation and a move away from single commodity and production-centric plans and programs that have failed to achieve the desired improvement in productivity and incomes for smallholder farmers. It is becoming increasingly clear incremental adaptation is no longer adequate to deal with the more rapid shifts and tipping points for agricultural production in the wake of climate change and changing environmental risks. This implies the need for major non-marginal changes in the agriculture sector in response to climate change.

Transformational change adaptation in agriculture can be defined as "major, purposeful action undertaken at the farm or supra-farm level in response to potential or actual climate change impacts and opportunities in the context of other drivers".[14] It reinforces the realization that agricultural research can no longer remain insulated from off-farm, non-science or non-agricultural knowledge or processes. Support and guidance of transformational adaptation will require a deeper understanding on the state of the Philippine agri-fishery, and could be positioned within the landscape, rural communities, and broader social, political, and cultural environment. However, it is important to note that transformational change is a long process and entails a gradual transition to differing agricultural production modes or commodities that is driven by necessity, that is producers are faced with increasing difficulties or constraints within their existing farming systems that compels them to make changes. Government sponsored schemes that attempt to promote transformational adaptation within AVCs are unlikely to have any significant impact unless there are other factors present, namely changes to the production environment through climate change, that drive the process forward. Although there are demonstrable impacts of climate change already experienced, they do not yet appear to be sufficient in magnitude to provide adequate drivers for full transformational adaptation at least within the small sample of AMIA villages that were studied, but there are certainly opportunities for diversification of the production mix to safeguard livelihoods.

Some examples of the systems that would be needed to support a shift to transformational adaptation in agri-fisheries could include factors such as:

- Climate resilient AVCs (green infrastructure and logistics) as farmers diversify based on commodity systems.
- Early warning systems that offer efficient production from weather risks.
- Innovative crop insurance building resilience ion farm communities.
- Digital technologies that can expand inclusive growth to farmers in remote areas and scale up CIS and precision farming.

[14] Vermeulen, S et al., (2018). Transformation in practice: A revies of empirical cases of transformational adaptation in agriculture under climate change. *Front. Sustain. Food Syst. 2-65:*

- Improved regulation that can make agricultural and aquaculture more productive and sustainable.
- Appraised implementation of adaptation-oriented policies that enrich incremental or status quo behaviour among farmers - such as production subsidies - in the light of a potential need for more transformational change.
- Farmers and other food system participants provided with the tools to forecast and envisage possible futures and to monitor and evaluate processes to support transformation options through investment in information and knowledge systems.

An important part of an eventual transition to transformational adaptation will be the move towards understanding, and economically rewarding, farms as multi-functional systems that deliver not only calories and profits but also good jobs, health and nutrition, environmental benefits (importantly greenhouse gas mitigation and biodiversity conservation) and cultural value. These are the guiding principles of the NAFMIP, and evidence has shown that the communities most advanced in climate change innovation are those with coherent policies based on integrated and cooperative planning processes. The institutional and sectoral fragmentation, and competitive rather than cooperative settings across sectors, represent the key barriers to incorporating co-benefits in broader climate planning and an adaptation and mitigation co-benefits-based approach can help to bridge the organizational and disciplinary divides.

The NAFMIP commodity systems-based approach is intended to foster this transformation process towards climate change adaptation practices alongside the implementation of other integrative planning tools. This process seeks to diversify, upscale, and enhance smallholder farmers and fisherfolk as well as other stakeholders' income and employment opportunities in the following approaches to promoting greater diversification:

- Production diversification in which the household or enterprise combines crops, livestock, and/or fishery commodities.
- Diversification production of non-commodity or quality food to improve health and nutrition.
- Chain or value adding diversification in which the household or enterprise ventures into one or more of the post-harvest value chain segments to engage in a linked enterprise while continuing production of the original commodity.
- Farm diversification, in which the household or enterprise during the offseason undertakes other livelihood activities such as handicraft production, small scale manufacturing, construction, house repair or local transportation.

There are a number of transformational strategies that can be applied to this commodity systems planning approach enumerated within the NAFMIP:

Diversification in systems-based production as well as value adding and enterprise development, that could entail integration of livestock and/or fishery commodities into rice-based systems, production of speciality rice, or other niche market crops, or off-farm livelihoods during off-season.

Combining food security and nutrition security through increasing the production of vegetables, fruits, legumes and other nutritious commodities, and synchronising supply with the demand for healthy, nutritious food.

Question of consumption that. Is data and values driven to achieve better nutrition and care of the environment, while building on local dietary preferences.

Strengthening measures to address sustainable environmental concerns in commodity system plans with a shift away from monocropping practices and environmentally undesirable practices.

Inclusive and equitable sector growth and transformation to raise smallholder farmers and fisherfolks share of income.

Consolidation for greater efficiency in production and post-harvest activities through farmers groups and organisations/cooperatives with a greater focus on joint production planning and marketing.

Adoption of modern farm and fishery technologies with a focus on greater mechanisation and support services for equipment and machinery maintenance as well as extending the availability of credit for purchase.

Promotion of a circular economy through improved waste management strategies and greater emphasis on recycling.

Reduction in “food miles” that can be achieved by optimizing local production and post-harvest capacity, construction of processing facilities at strategic locations, to achieve reductions in transport costs and losses during transit.

Integration of non-food commodities and non-farm income and employment sources through programs to expand livelihood opportunities through promotion of alternative crops, local handicraft manufacture as well as other local employment opportunities.

H. Assessment of PCIPs and planning processes

The Provincial Commodity Industry Plans (PCIPs) are 3-year rolling plans that have been prepared by the DA in collaboration with the Department of Trade and Industry (DTI) and in partnership with LGUs and other stakeholders. These plans have been developed to serve as the basis for identifying the necessary infrastructure and enterprise development (I-BUILD and I-REAP) subprojects that could be funded through the World Bank funded Philippines Rural Development Program (PDRD). They are designed to promote the development of specific commodities or agricultural products in a particular province or region and provide a framework for developing the agricultural sector in a particular area by identifying the strengths and weaknesses of the local industry, analyzing market demand and supply, and identifying opportunities for growth and development. The plans also provide recommendations for addressing various challenges that may hinder the growth and development of the agriculture sector, such as inadequate infrastructure, lack of technical expertise, and insufficient access to finance and credit. PCIPs cover various aspects of the commodity industry, including production, processing, marketing, and financing. They aim to promote a VC approach to agricultural development, where different actors in the supply chain work together to enhance the quality and competitiveness of the product and are designed to ensure that local agricultural industries are well positioned to compete in local and international markets whilst also improving the livelihoods of farmers and other stakeholders involved in the industry.

The guidelines for the preparation of the PCIPs were enhanced (June 2021) by an additional module that focuses specifically on Climate Resilient Agro-Industry Oriented Value Chain Analysis Applications as an integral part of the PCIP preparation process. The PCIP preparation is now being further enriched by Climate Risk Vulnerability Assessments (referred to as “Protocol for Integrating CRVAs into PCIPs”) that provides a value-adding layer of analysis and critical information to the PCIP particularly in the areas of hazards, Adaptive Capacity (AC), and climate suitability, that is being integrated into the PCIPs during the on-going updating process. The Climate Risk Vulnerability Assessment (CRVA) is a systematic process with the aim of identifying and analysing the vulnerabilities of production systems or a community to current and future climate change impacts. It involves assessing the exposure of the system to climate hazards, evaluating its sensitivity to these hazards, and determining is adaptive capacity. The assessment typically involves analysing data on climate projections, socio-economic factors, infrastructure ecosystems, and vulnerable populations. The output of the CRVAs is a comprehensive understanding of the risks and vulnerabilities faced by the system, identifying areas, sectors, or populations that are most susceptible to climate change impacts. As already described under the AIMA program the CRVAs are the decision-support tools that are prepared by analysing three main indices, which include exposure to hazards (exposure to significant climate variations), sensitivity (climate suitability of crops), and adaptive capacity. They are created to generate information for the DA to guide its efforts to support resilience building initiatives, and therefore result in better and longer-term geographic targeting. There are already 58 provinces with completed municipal level CRVA maps that can provide an added layer of analysis and critical information to LGU planning such as in the preparation of the Provincial Commodity Industry Plans (PCIPs) particularly in the areas of hazard, adaptive capacity, and climate suitability. There are a series of other supplementary tools that have been developed that complement that

adoption of the CRVA data in planning resiliency-building initiatives are disaster risk reduction programs for the agriculture sector. These include (i) **CRA Investment Briefs** that highlight the potential of CRA practices for climate change adaptation and mitigation and present the economic feasibility of adopting CRA; (ii) **CRA Technical Briefs** that amplify the potential of CRA practices for climate change adaptation and mitigation and outline the benefits of adopting CRA practices over conventional non-CRA measures; and (iii) **CRA Compendium of CRA Technologies and Approaches**.

Currently the CRVAs have been completed for all provinces except for Romblon and Marinduque plus the five provinces of BARMM, and are still on-going for 11 provinces (Nueva Viscaya, Quirino, Palawan, Zamboanga del Norte, Zamboanga del Sur, Davao del Norte, Davao de Oro, Davao Occidental, Apayao, Ifugao and Abra). However, there an issue with the quality of the outputs since they have been undertaken by several different teams and there are observed to be differences in the quality and results. An important objective of this TA will be to assess all CRVAs that have been prepared and provide recommendations for improvement of the methodology. Based on the ToR the CRVA methodology adopted by CRAO will be used in the development of the CRVA for the remaining 22 provinces with priority given to BARRM and Region IX.

The Climate Resilient Agro-Industrialization Oriented Value Chain Analysis section of the PCIP is prepared by drawing upon various sources of data including (i) EVSA that shows commodity suitability by municipality based on the share of total farmers' area production, poverty index and climate factors; (ii) updated VCA with rationale for selecting commodity and geographical focus; (iii) commodity industry roadmaps; and (iv) NCCAG that provides rainfall and temperature data through the PCIP Planners Portal. The content of this section of the PCIP covers the following topics:

Table 8: Content of Climate Resilient Agro-Industrialization Oriented Value Chain Analysis of PCIPs

Topics	Parameters
Climate change considerations of prioritized commodities (from PCIP Planning portal) for each municipality	• Crop/commodity • Production area (ha) • Climate Sensitivity • Key hazards • Adaptive capacity • Vulnerability class.
Climate Resilient SWOT analysis	• Strengths • Weaknesses • Opportunities • Threats
Existing and potential Agro-industry investments for each municipality	• Nature of operations • Linked commodities • Scale of operations • Start of operations • Management scheme • Market reach • Potential agro-industry investments

Topics	Parameters
Functions per value chain participants	• List of functions • Identification of VC actors for each function
Financial Analysis/Price and Cost Structure	• Income • Expenses • Identified for each VC actors
Multi-factor risk assessment	• Identification of hazards • Impact on production, processing, and other VC segments
Market Analysis	• Demand • Supply • Issues/Concerns • Identified for each VC actor
Support Services	• Financial services • Non-financing services • Sources of support • Identified for each VC actor
Enabling environment	• Formal rules, regulations & policies. • Informal rules, regulations, and policies. • Impact on each segment of the VCs

The Climate Resilient Investment Plan section of the PCIP is prepared drawing on information from (i) PDPFP; (ii) LDIP/AIOP including information on PAPs, fund sources, timeframe, the updated VCAs and Commodity Road Maps; (ii) information form AMIA-CREATE risk profiles, investment priorities, targets and enterprise development; (iii) SUCs agribusiness studies and surveys, and (iv) Gender studies and reports. The content of this section covers the following topics:

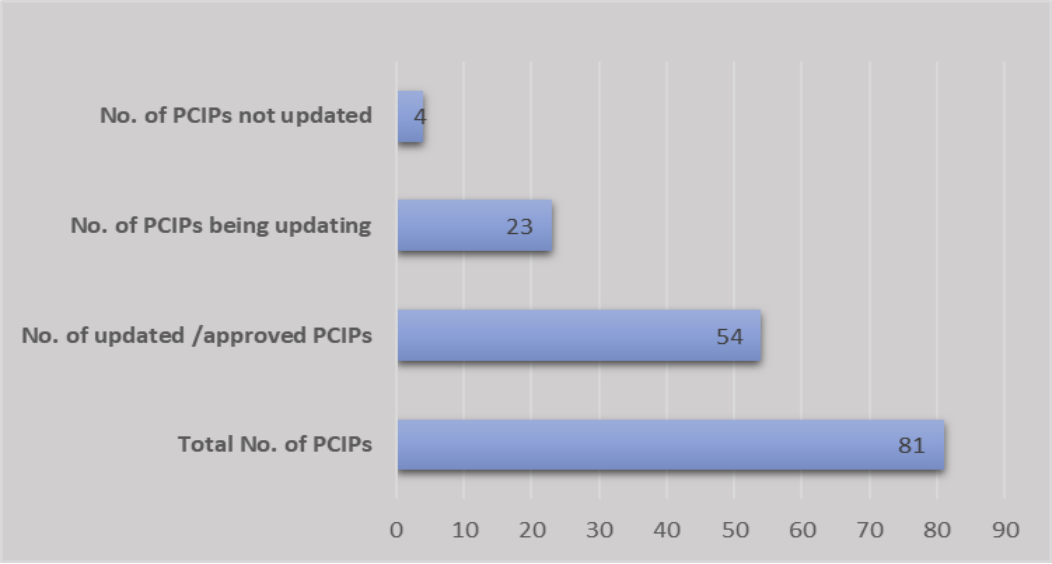
Table 9: Content of Climate Resilient Investment Plan of PCIPs

Topics	Parameters
Climate resilient VCA results	• Opportunities/constraints in VC upgrading. • Location (municipality) • Major risks • Remedial actions • Identified for each segment of VCs
Climate resilient VC map	• Value chain segments including input supply, production, processing, marketing, consumption, waste disposal, etc., • Identified for each segment/participant of the VC.

Topics	Parameters
Potential Hazards and Risk Management Measures	• Proposed measures for each VC segment and unit costs • Described for all identified types of risks
Climate-resilient VC Upgrading Plan	• Key constraints/ opportunities • Affected players. • Identified actions. • Responsibilities and incentives. • Risk management measures for each VC segment.

As of January 2024, 54 out of 81 PCIPs that cover every province had been updated and 23 were still in the process of being updated.[15] Based upon a review of a sample of the PCIPs it is evident that significant progress has been made towards a comprehensive consideration of climate resilience within the AVC analysis that is conducted for each of the commodities featured within each PCIP. The on-going updated process that is underway provides an opportunity to further strengthen this element of the PCIPs and ensure that CRA features strongly on all of the implementation strategies as well as achieving greater integration of the AMIA program and specifically the AMIA-CREATE networks into these plans.

Figure 6: Summary of PCIP status (January 2024)



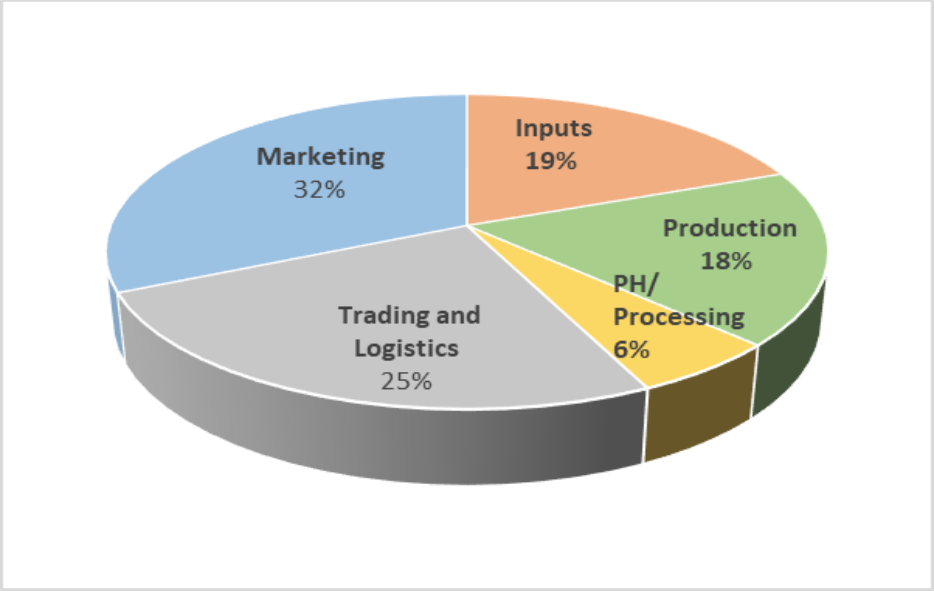
[15] See Annex 3 summary of all PCIPs and current status for every province.

I. Mapping development partner value chain funding preferences and priorities

Through the kind assistance of the team in the DA Special Projects Coordination and Management Assistance Division (SPCMAD) access was granted to a database for a large number of projects funded by a range of development partners (DPs). A total of 28 of these subprojects, with a combined total funding of PHP 96.1 billion, have been reviewed to examine the focus of the support and to categorize them accordingly into five sub-systems of the AVC that corresponded to (i) inputs; (ii) production; (iii) post-harvest & processing; (iv) trading & logistics; and (v) marketing.[16]

The results of the analysis are depicted below in terms of the fund allocations (Figure 7) and the number of projects (Table 8). Interestingly, the comparison of the proportional allocations of funds reveals rather differing pictures in that whilst the funding allocations for the marketing/trading and logistics subsystems of 57% of the total, this contrasts with only 24% in terms of the number of projects that are supporting these sub-systems. However, for the other sub-systems these differences are much smaller in magnitude. Nevertheless, the fund allocations are a more meaningful indicator of the priorities that have been applied in the recent and on-gong projects.

Figure 7: Distribution of DP funding support



[16] See Annex 4 for Analysis of ODA projects analyzed

Figure 8: Summary of DP projects evaluated

Project title	Year	AVC sub-systems				
	2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030	Inputs	Production	PH/ Processing	Trading/ Logistics	Marketing
1. Jalaur River Multi-Purpose Project Stage II		✓				
2. Profiling of Economically Important Diseases of Swine and Cattle in the Management, Surveillance and Control		✓				
3. Fish Rights Program			✓			
4. Building Safe Agricultural Food Enterprises				✓		
5. Intensified Community-Based Dairy Enterprise Development Project				✓		
6. Support to Agriculture and Agribusiness Enterprises in Mindanao for Sustainable Development (GCP/PHI/069/ROK)			✓			
7. Establishment of Smart Greenhouse and Capacity Building in the Philippines Project			✓			
8. Philippine Rural Development Project (PRDP) Additional Financing 2 with EU Grant		✓	✓	✓	✓	✓
9. Sustainable Development and Good Agricultural Practices in the Philippine Coconut Supply Chain Project			✓			
10. Improving Smallholder Livelihoods through Business Models (Cacao+)			✓			
11. Capacity Development and Experience Sharing for Rice Value Chains through South-South and Triangular Cooperation		✓	✓	✓		
12. Building Capacity on Promoting Economically and Environmentally Efficient Rice Production through Direct-Seeded Rice (DSR)			✓			
13. Farm Mechanization Program for Small Sugarcane Landholder		✓				
14. Enhancing Local Capability to Design, Develop and Manufacture Agricultural Machineries to Accelerate Mechanization of Philippine Agriculture			✓			
15. Development of Philippine Food Chain Logistics Masterplan					✓	
16. Project for Market-Driven Enhancement of Vegetable Value Chain in the Philippines						✓
17. National Seed Technology Park - Knowledge Transfer Project		✓				
18. Restoring Livelihoods and Enhancing Resilience of Farmers and Fisherfolks affected by typhoon Rai (Odette) Project of DA		✓				
19. Technical Support to develop livestock and poultry traders and transport registry system		✓			✓	
20. Development of Pilot Village Project through the Establishment of Protective Cultivation and Postharvest Management of Vegetables in the Philippines			✓	✓		
21.Safe Vegetable Production Technology Dissemination and Vegetable Distribution System Improvement (SAVERS) Project			✓			
22. Improving the Rice Supply Chain to Ensure Quality of seeds and Milled Rice for Distribtion and Buffer Stocks in the Philippines		✓				
23. Mindanao Inclusive Agriculture Development		✓	✓	✓	✓	✓
24. Philippine Fisheries and Coastal Resiliency Project (FishCore)				✓		✓
25. Mass Production of Three (3) NSIC Registered Garlic Varieties Adaptive to Selected Areas in CAR, Region 4A, and Region 5 with Potential to Bulbs/Bulbils Production		✓				
26. Agriculture Sector Readiness for enhanced climate finance and implementation of Koronivia joint Work on Agriculture priorities in Southeast Asia		✓	✓			
27. Philippine Rural Development Project (Scale Up)					✓	✓
28. Securing Long-term Sustainability of Multi-functional Landscapes in Critical River Basins in the Philippines (not commenced)			✓			
Sub-totals		**12**	**14**	**7**	**5**	**5**

A more detailed analysis could be performed to analyze the distribution of the funding preferences weighted by the magnitude of funding for each project. But the result of the preliminary analysis that is presented here provides a strong indication that the current priorities for DP value chain funding have a strong bias towards the downstream sub-systems of the value chains whereas the need for climate change adaptation measures, and including transformative measures, to be integrated into AVCs is undoubtedly to be found in the upstream sub-systems. Thus, in terms of current DP funding there does appear to be something of a mismatch in the lack of allocation of resources for both climate change adaptation measures.

The next logistical step in this process is a further examination of the country program strategies for the Philippines that are prepared by each DP to assess now each has determined their own priorities for climate change adaptation. Given the multiplicity of DPs that have supported the 28 projects that have been examined there has been insufficient time to attempt this ore comprehensive analysis and a brief summary has been prepared for the two most significant DPs to projects in the Philippines, namely the ADB the World Bank. Overall, neither of these program strategies show evidence of significant consideration of the direct impact of climate change to agricultural production systems but instead address other potential impacts that may exist for the support systems to the sector including notably transportation. The preparation of new strategies by both agencies is now due and there could be a need for greater interaction during this process to redirect more resources to support the urgent needs to address the impact of climate change on agricultural production systems and identify intervention measures that can be supported to achieve greater adaptation and mitigation.

(a) ADB Philippines Country Partnership Strategy, 2018 - 2023

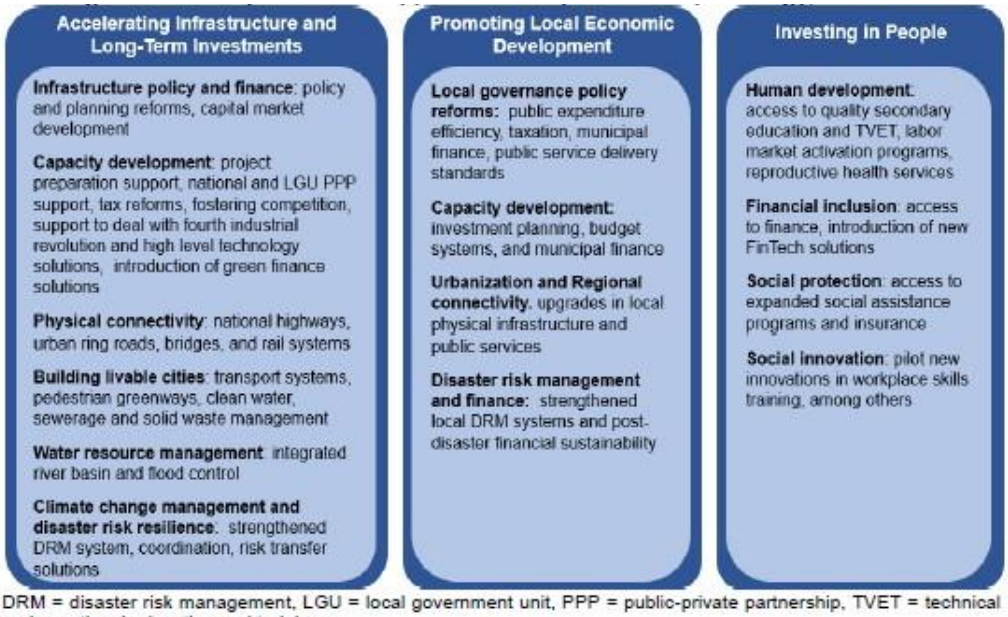
The current ADB Philippines Country Partnership Strategy (CPS) covers the period from 2018 - 2023. Within this strategy there is a focus on several key areas to enhance the country's resilience to climate change and other challenges, and there is a recognition that agriculture and natural resources, as well as the urban development, transport and energy sectors, are vulnerable to climate change and disasters, but they offer opportunities for implementing adaptation and DRM measures and strategies. The CPS notes that the Philippines is one of the world's most disaster-prone countries and one of the most likely to be economically affected by disasters. Up to 60% of the total land area is exposed to multiple natural hazards and 74% of the population is vulnerable to natural hazards and the annual losses due to earthquakes and typhoons has been a major contributing factor to the high levels of poverty and the poor's persistent vulnerabilities.

The impacts of climate change and disasters adversely affect sectors that are strategically important for economic growth, such as agriculture, water resources, transportation, energy, and urban development. These impacts are increased because of limited advance financial planning for post-disaster response by national and local governments to provide timely relief, early recovery, and reconstruction interventions. The CPS predicts that disaster and climate risk in the Philippines is set to increase in the medium term because of improper development that has left communities and their assets increasingly exposed to natural hazards. It also notes that among the poor, women are particularly vulnerable to the impacts of climate change because of social and economic factors. While the government is taking proactive measures to strengthen climate change management (CCM) and disaster resilience by putting in place legislative, policy, institutional, and financing mechanisms, implementation challenges exist largely because of the

lack of public awareness on CCM; inadequate capacity for mainstreaming CCM and disaster resilience in sector and local development planning and investments; and insufficient post-disaster financing solutions for national government agencies, provinces, cities, municipalities, and individuals.

- Accelerating infrastructure and long term investments. The CPS supports infrastructure development, particularly projects that contribute to resilience and sustainability, including efforts to strengthen infrastructure against natural disasters and climate impacts. The increased focus on infrastructure development intends to drive growth in the agriculture sector, as well as trade, commerce, and industry, and facilitate mobility to access knowledge, jobs for both women and men, health, education and multiply the social and economic facilities necessary to counteract poverty, gender inequalities, and social exclusion.
- Promoting Local Empowerment. The strategy emphasizes the importance of economic development that is inclusive and sustainable, considering the need to adapt and mitigate the effects of climate change. The intention is to address structural weaknesses in key government units to ensure culture-sensitive and gender-responsive governance policies are formulated to allow regionally integrated local development planning that includes improved resilience to climate change and natural hazards.
- Investing in people. ADB's strategy includes social investments that contribute to building resilience among communities, particularly in terms of health, education, and other essential services.

Figure 9: Overview of ADB Philippines Country Partnership Strategy, 2018 - 2023



DRM = disaster risk management, LGU = local government unit, PPP = public-private partnership, TVET = technical and vocational education and training.
Source: ADB staff.

There are three other features of the CPS that are worthy of mention:

- Supporting policy reforms and institutional capacity development. The strategy aims to assist the Philippines in implementing national climate policies, scaling up climate adaptation and mitigation, and enhancing disaster resilience.
- Financing investments for inclusive growth. The CPS includes the provision of financing for projects that promote high and inclusive growth, while being mindful of environmental sustainability and climate resilience.
- Innovative approaches top long-term financing. The strategy seeks to strengthen the links between sovereign and non-sovereign programmes to promote innovative approaches to financing, infrastructure, social investments, and disaster risk management.

The CPS is aligned with the Philippines Development Plan and Poverty Reduction goals and this implementation is designed to be In Sync with the country's development planning cycle. The strategy also supports the governments build, build, build (BBB) infrastructure programme with a focus on re balancing ADB financing towards infrastructure projects that are resilient to climate change and other disasters. However, there is no mention of the need for direct support to the agriculture sector that will benefit only from indirect investments in improved and climate resilient infrastructure as well as local capacity building to strengthen governance and to ensure development planning integrates appropriate responses to climate change impacts. However, the current TRTA represents a significant advance in ABD support for the agriculture sector, being the prelude to the proposed policy-based loan and to support the Government of the Philippines to advise the Climate Change Action Program (CCAP), specifically Subprogram 2 and the associated climate resilience policy actions.

(b) World Bank Group Country Partnership Framework for The Philippines, 2020 - 2023

The current World Bank Group (WBG) Country Partnership Framework (CPF) covers the period FY 2020 to December 2023 and has three focus areas for engagement: (i) investing in Filipinos to improve human capacity development and to help position the Philippines to harness its future demographic advantage; (ii) competitiveness and economic opportunity for job creation towards unlocking key constraints and increasing opportunities for expanded creation of good jobs; and (iii) promoting peace and building resilience to address the country’s core vulnerabilities of conflict alongside natural disasters and climate change. The CPF incorporates cross-cutting themes of strengthening governance, with a focus on implementation capacity including at the subnational level as some responsibilities are re-devolved to LGUs along with increased IRA, and digital transformation towards strengthening long-term foundations for government effectiveness and equitable growth. In line with WBG lessons learned, the CPF focus areas aim to be complementary and mutually-reinforcing, with activity in one area supporting outcomes in another. For example, activities to expand agricultural productivity in Mindanao support competitiveness as well as nutrition objectives; financial sector activities to boost capacity for distressed asset management also support resilience objectives. Importantly, the CPF objectives align with the Philippine Development Plan (PDP) 2017-2022, which integrates linkages to the Sustainable Development Goals (SDGs).

The WBG also seeks to deepen engagement on Mindanao peace and development during the CPF period, with a focus on supporting a successful transition in the BARMM. The Programmatic Approach to Peace and Development for Mindanao, a catalytic package of advisory services and analytical work, will continue to undergird the Bank's engagement through two work streams: (i) supporting post-conflict planning and conflict-sensitive development, and (ii) assisting in peace consolidation.

Figure 10: Overview of WBG Philippines CPF, 2020 - 2023

<table>
<tr><th>Key Constraints (SCD)</th><th>Focus Areas</th><th>CPF Objectives</th></tr>
<tr><td>Addressing wide disparities in human capital development by boosting quality and extending access to the poorest can help position the Philippines to harness its demographic advantage.</td><td> 
Focus Area #1: Investing in Filipinos</td><td>1) Improved access to quality education services
2) Increased access to affordable health services
3) Improved efficiency of social protection coverage for the poor and vulnerable</td></tr>
<tr><td>Fostering more inclusive growth in the Philippines will mean tackling core constraints, including lack of competition; restrictive legislation; weak infrastructure; and an underperforming agriculture sector.</td><td> 
Focus Areas #2: Competitiveness and Economic Opportunity for Job Creation</td><td>4) Improved budget execution and revenue management
5) Promote regulatory reforms to enhance competitiveness
6) Improved efficiency of infrastructure services in selected areas
7) Improved income opportunities in agriculture</td></tr>
<tr><td rowspan="2">Dual vulnerabilities to conflict and natural hazards pose the most significant risks to future growth in the Philippines. Conflict-affected and disaster-prone areas also account for the deepest levels of poverty, calling for tailored development solutions at national and local levels.</td><td rowspan="2"> 
Focus Area #3: Addressing Core Vulnerabilities by Building Peace and Resilience</td><td>8) Increased availability of basic services in conflict-affected areas
9) Support the normalization process in the Bangsamoro region</td></tr>
<tr><td>10) Increased resilience to natural disasters and climate change</td></tr>
<tr><th colspan="3">Cross-cutting themes</th></tr>
<tr><td colspan="2"> 
Governance: Scaling up development impact across the Philippine archipelago depends on strengthening implementation capacity, particularly at the local level.</td><td> 
Promoting digital transformation: Building digital infrastructure and skills will be integral to future economic dynamism in the Philippines.</td></tr>
</table>

- Investing in Filipinos: The PDP affirms that increasing the growth potential of the country's economy will require investing in the Filipino people. Towards achieving an equitable, knowledge-based economy, the PDP sets out several core priorities: (i) achieve quality, accessible, relevant and liberating basic education for all, also providing life-long learning and inclusive programs to reach stakeholders outside the formal system; (ii) expand access to quality and affordable health care service, including functional and efficient networks of health care providers; and (iii) reduce vulnerability of individuals and groups, including mitigating risks for vulnerable groups by enhancing the CCT; improving the social pension; and ensuring quality education to position the population with the skills needed for productive employment. This will include informing policy making on nutrition to address the deep challenge of childhood stunting, which affects one-third of Filipino children and particularly the poor.

- Competitiveness and Economic Opportunity for job creation: Generating quality jobs for the expanding Philippine workforce is integral to achieving the equitable middle-class society Filipinos desire. The environment for job creation and economic opportunity in the Philippines has been constrained by regulatory barriers that undermine competition, undercut entrepreneurship and foreign investment, and favor big players. Lack of infrastructure also increases costs for businesses and consumers. The 2017-2022 PDP outlines national ambitions to promote “inequality-reducing transformation” that will expand economic opportunities across sectors—from agriculture, forestry and fisheries to industry and services.
- Addressing core vulnerabilities by building peace and resilience: Ending poverty in the Philippines will require intensified effort to address the country’s dual vulnerabilities—conflict and risks associated with climate change, environmental, and disasters. The 2017-2022 PDP highlights key goals, including implementing peace-promoting and catch-up socioeconomic development in conflict areas; effort to empower communities by increasing their capacity to address conflicts and reduce their vulnerabilities; and strengthening the implementation of climate change adaptation and disaster risk reduction across sectors, particularly at the local level, as well as strengthening institutional response to disasters. As one of the world’s most vulnerable countries to climate change impacts, the Philippines can aspire to become a leading example of proactive climate change adaptation. Under this pillar there is specific mention relating to engagement on climate change and the environment. Although this is focused primarily on disaster resilience for infrastructure projects there is a specific proposal for the development of a vision for irrigated agriculture that encompasses (i) improved water management; (ii) increased agricultural production and water productivity; and (iii) strengthened knowledge and capacity building.

J. Key policy, technological, and institutional changes, projects, and/or investments to improve climate resilience of the value chains in the agriculture sector

In the light of the above discussions a number of recommendations can be made for further consideration that will contribute to the achievement of further improvement to the value chains in the agriculture sector. The discussion is focused specifically on the AMIA village approach since this is the flagship program of the CRAO and takes into consideration also the measures that can be taken to support the scaling up of activities through the adoption of broader agribusiness based approaches.

Firstly, it is essential to note that the strategic approach adopted needs to support a gradual transition from incremental to transformational adaptation, which will ultimately define the progression up the economic ladder towards a deeper understanding, and achievement, of **economically rewarding farms as multi-functional systems that deliver not only calories and profits but also good jobs, food, health and nutrition security, and environmental benefits and also importantly GHG mitigation as well as biodiversity conservation and respect for cultural values**. Indeed, the NAFMIP strategies can be used as important guiding principles and has as already been noted that evidence has shown that the communities most advanced in climate change innovation are those with coherent policies based on integrated and cooperative planning processes.

The main difference between the present AMIA vision and implementation compared to that which is now proposed is the need for a movement towards more of a transformational role for the CRAO in relation to their continued support to the AMIA program. At present progression up the agricultural development ladder tends to be measured on a physical incremental scale (more akin to an indicator than an actual outcome). The focus of the AMIA program is naturally on scaling-up, through the AMIA-CREATE networks. Strategic in the developmental phases of the AMIA-CREATE will be the development of groups of AMIA villages as climate resilient service hubs by providing climate information services (CIS) including early warning system advisories, climate risk vulnerability assessments, decision support tools, logistics tracking systems and mapping, risk management and insurance for AVCs, digital technologies, climate smart technologies for upstream, production, midstream and downstream, etc.

Undoubtedly, at the operational level for the achievement of climate resilient, inclusive, and sustainable AMIA-CREATE networks, that are integral to a decentralizing climate-resilient transformational change, the main intervention will be the continued development and further updating of the PCIPs, which should continue to be supported as a joint activity of the DA and DTI. As of January 2023, 54 out of 81 PCIPs prepared have been updated and a further 23 are in the process of being updated. However, It is essential that the updating process that is underway places greater emphasis on the role of the AMIA villages in supporting the on-going transitions towards greater climate resilience within the agriculture value chains. There may also be a need for further fine tuning to ensure that they are also aligned with the commodity priorities that are selected for the nine DA Regions that are in transition towards AMIA-CREATE. The PCIPs have two important sections to which the AMIA villages can meaningfully contribute: (i)

the Climate Resilient Investment Plan section, and (ii) the development of the Climate Resilient Agro-Industrialization Oriented Value Chain Analysis section.

Mention has already been made of the on-going F2C2 program that is being implemented by the DA as a means of achieving increased efficiency in smallholder farming systems through the grouping of contiguous farms into larger production units. This approach is highly relevant to the scaling up of the AMIA villages into the AMIA-CREATE networks and there should be learnings and experiences that can be studied to guide the further development of the AMIA-CREATE. The F2C2 program also benefits from access to a wide range of support programs under the DA that should also be accessible to the AMIA villages to assist them in further scaling up their production capacity and marketing systems. However, free or subsidized support that is available from these programs should not be regarded as a complete substitute for the adoption of sound business planning and the introduction if a more agribusiness oriented approach to development with increased access to and leverage of external financing for supporting identified viable enterprises.

The opportunity for AMIA villages to adopt organically certified production can be explored further through raising awareness of the OFBP under the DA, the OAP under the BSWM and the use of the PhilMeD organic farming program for the delivery of technical assistance to AMIA farmers wishing to practice organic farming. The PGS will probably provide the easiest pathway for AMIA farmers to transition into organic farming production systems because of the less stringent certification procedures, which might otherwise pose a significant barrier to their adoption.

A detailed quantitative assessment of the mid to long-term benefits of implementing some or all of these measures, which could be applied to further strengthen the AMIA program cannot be attempted within the remit of this assignment, since it would require significant additional time and study. But anecdotal evidence indicates that there is undoubtedly a need for interventions of this nature to support and expand the scope of support for the AMIA program and that these measures can certainly contribute to catalyzing the desired transition into transformational scaling up and adoption of agribusiness approaches to management of their production systems. Increased access to support services, whether through government subsidized programs or directly accessed from the private sector, are an urgent need. But the process must be demand driven with the AMIA villages identifying their actual needs based on viable business plans and the CRAO providing more of a facilitatory role in assisting in the identification of potential sources of the specific forms of support and assistance that are required. As already noted there appears to have been a tendency for the AMIA villages, as well as the cooperatives or associations within them, to wait for support and the accept whatever assistance or equipment was offered, rather than adopting the stance of determining their own needs and actively identifying and negotiating their provision from a range of sources. Thus, this becomes one of the important recommendations for the AMIA program to achieve the progression to the next stage, namely that the AMIA villages become pro-active and in future determine their own priorities and development needs.

A series of key recommendations can be identified that are designed to support the process of improving climate resilience of value chains in the agriculture sector:

- An urgent need is to complete the institutionalization of the national level CRAO as a formal entity within the DA tasked with the coordination of all aspects of the existing support programs as well as new programs that promote climate resilience within the

agriculture sector, and clear recognition of this status and the responsibilities by all other departments within the DA organization with the deployment of appropriate human and financial resources to enable the CRAO to fulfil its intended role. This will include the creation of an organizational structure that includes sufficient full time qualified technical staff who can support the AMIA program as well as the transition to the AMIA-CREATE networks.

- The future tole of the CRAO should focus on being the facilitator of support for mainstreaming climate resilience into all aspects of the work of the DA, rather than continuing in its present role of acting as a benefactor that lacks the capacity to support the growing needs of the expanding AMIA village network. The CRAO should therefore work towards ensuring that all departments of the DA that support field programs fully integrate considerations of climate resilience into all of their activities and the CRAO can provide guidance and direction to achieve this objective. For example, all of the DA banner programs should be reviewed and updated to ensure that they include appropriate measures responding to climate change and its impacts. This should be regarded as an immediate priority for the CRAO to support this process.
- The creation of a Climate Resilient Agriculture Unit (CRAU) embedded within each DA Regional Office staffed with qualified technical specialists that can work full time on supporting and the further expansion of the AMIA program in all regions, including coordinating the identification of new AMIA village sites and the identification of the AMIA-CREATE networks. An important role of these technical staff will be the delivery of training and capacity building support to the LGU level to increase the understanding of the causes of climate change and the identification of appropriate adaptation and mitigation measures, to rectify the apparent lack of knowledge and understanding that exists at present.
- The deployment of one CRA Specialist in the DA office under each provincial LGU who has received comprehensive training in climate resilient agriculture technologies by the CRAO team members and will provide on-gong support to the existing AMIA villages and AMIA-CREATE networks.
- The design and roll out of a comprehensive training program by the CRAO on climate smart agriculture tailored for each region and based on the priority commodities, in cooperation with the regional ATI offices, which targets specifically the CRA Specialists who are deployed within provincial LGUs as well as the staff of the CRAUs in each DA regional office.
- The roll out of a comprehensive training and awareness raising program in collaboration with the ATI for all LGUs, targeting the agricultural extension staff at both provincial and municipal level on CRA and understanding of climate change causes and impacts. The purpose of this training will be to ensure better dissemination of information to the AMIA villages so that farmers and to enable other community members gain a better understanding of the climate changes that are occurring and the importance of adaptation and mitigation measures for the priority commodities.
- Continuing support for the updating of the PCIPs with further elaboration of the Climate Resilient Agro-Industrialization Oriented Value Chain Analysis that is embedded in the

PCIP preparation, expanding the scope of coverage AMIA villages and with a strong focus on the priority commodities identified for the AMIA program in each province. The PCIP updating should be done in collaboration with the CRAU teams from regional level as well as the provincial LGU CRA Specialists and draw upon their own local knowledge as well as the identified needs for the AMIA villages in each province.

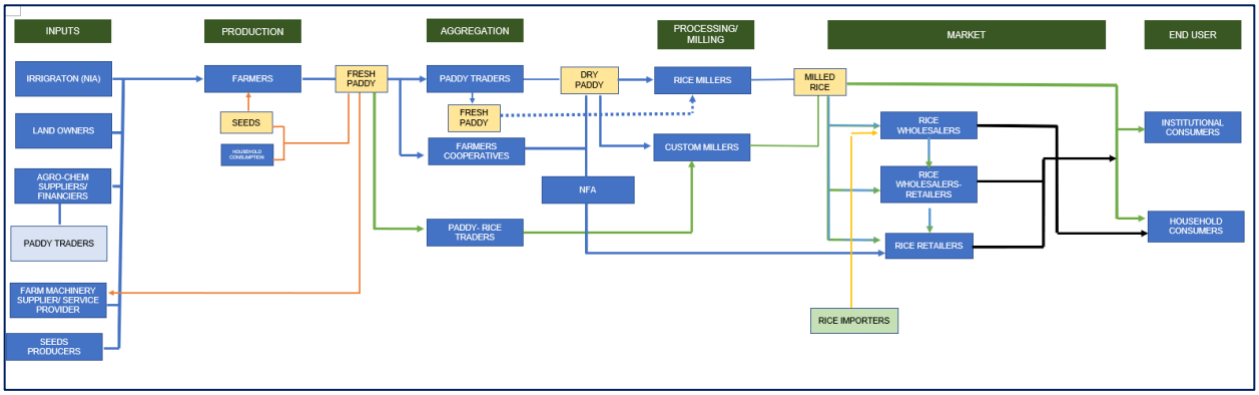
- AMIA villages need to also be made more aware of other opportunities such as the range of support that is available under the DA Banner Programs and provided with more technical support to enable them to access this support, as well as exploring opportunities for adoption of organic certification and the use of the PGS that can provide with a simpler mechanism for achieving the certification standards.
- An important element of future support to the AMIA villages is the provision of assistance for the preparation of business plans for their further development and expansion. This must include strategies for value addition and marketing based on consolidation of the production of individual members. This will require a substantial program of assistance to AMIA villages that can be coordinated through the DA regional offices. Depending on the level of skills available at regional and/or provincial LGU level, this may necessitate the hire of other staff who can work as professional managers to support an agribusiness approach to the scaling up of the production within each AMIA. Under the on-going F2C2 program that is being supported by ADB there are professional managers being deployed to regional offices as well as field staff to support the farm clusters by providing farm management and agribusiness skills. This approach should be studied to determine its efficacy and relevance to the AMIA villages.
- One of the essential needs as a part of the AMIA village scaling up and the AMIA-CREATE networks is that formal organizational structures need to be established for each association and the senior positions within these structures must be salaried at a reasonable level to provide the incentive for devoting much more time to the management of the association. This will in turn necessitate greater revenue generation within the AMIA village that can be achieved if there are proper marketing arrangements in place. The AMIA village association could also consider the recruitment of its own professional managers to supervise and provide management advice to the group.
- Given the relative low profitability of smallholder production of some commodities there could be consideration given to the consolidation of land holdings within the AMIA villages into larger contiguous production areas under which the individual farmers agree to the place their land under the overall management of the association with the provision of inputs and services being managed for them, alongside the opportunity for them to receive payment for their labor and a share of the profits from the final production. This would represent a further advancement of the F2C2 program and the improved farm management and optimal husbandry that can be achieved would result in higher productivity as well as improvements in quality, and farmers being better off financially with the association generating revenue from the marketing that can be reinvested into the procurement of farm equipment and facilities for storage, drying and processing. This approach would obviously require the support of a professional farm manager as well as other staff that could all ultimately be financed by the association.

- The major weakness in the current AMIA village operations is the absence of any formal marketing arrangements and given the importance of strengthening the marketing mechanisms for the AMIA villages there is a need for much more support to promote the entry into contract farming arrangements for specific commodities with larger traders and institutional buyers. Contract farming arrangements require the facilitation of increasing levels of trust between producers and buyers that takes time to foster but results in greater reliability and continuity in production and the achievement of satisfactory quality. The concept of farm consolidation can provide a mechanism for increasing the capacity to meet these requirements and simplifies the negotiation process through the buyer interacting with a professional manager for the production unit within the AMIA village. This concept could be taken one step further whereby the buyer invests in supporting the production group within these AMIA villages by the supply of inputs and technical advice to achieve further increases in productivity.
- Although the intention within the AMIA villages has been to focus on a small number of selected priority commodities, there can be interest groups within an AMIA village or AMIA-CREATE network who also focus on other crops, especially for some high value crops or those targeting niche markets. Such smaller groups of farmers could establish their own business operations within the AMIA village including the opportunity for adoption of the PGS to achieve certification, whilst also continuing to be engaged in production of one of the priority commodities for that village and enabling them to increase their income through increased diversification of their source of livelihood. In this regard. The opportunity for GI labelling should be explored for specific AMIA-CREATE networks that specialist in the production of one commodity that can be branded in this way.

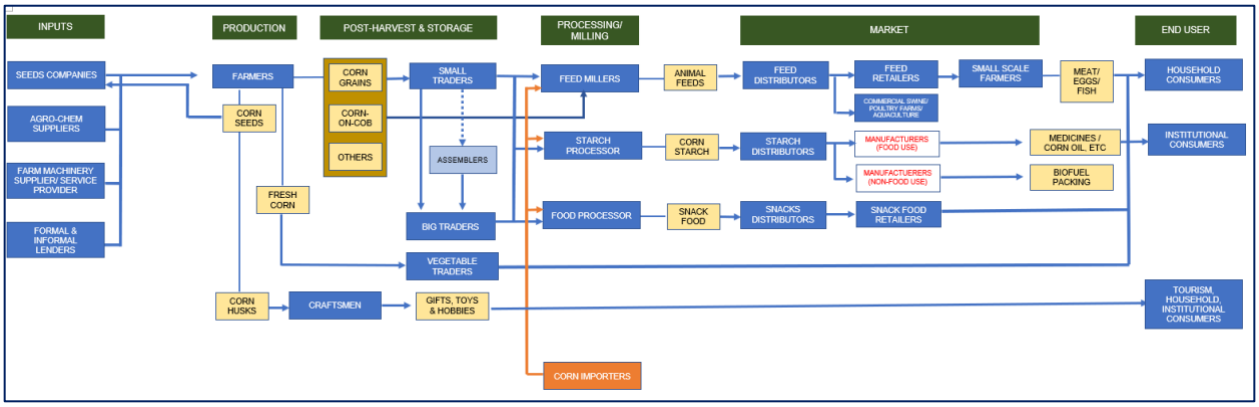
Although not directly related to enhancing climate resilience, the opportunity for AMIA villages to become engaged in eco-tourism is an attractive proposition through the creation of a network of homestays across the AMIA village network. This is an area of tourism that is expanding rapidly in many countries, including the Philippines, and can provide useful supplementary income. In order to attract more visitors, the construction of dedicated accommodation that can be rented by the visitors with other hospitality services provided for them by the AMIA village residents. As already noted, eco-tourism also provides an opportunity to raise awareness of the impacts of climate change and the measures that can be applied to mitigate and adapt and mitigate for these. The establishment of such a program would likely involve collaboration between the DA and the Department of Tourism to establish the necessary protocols and recognition for the program .

Annex 1 Value Chain – Diagram

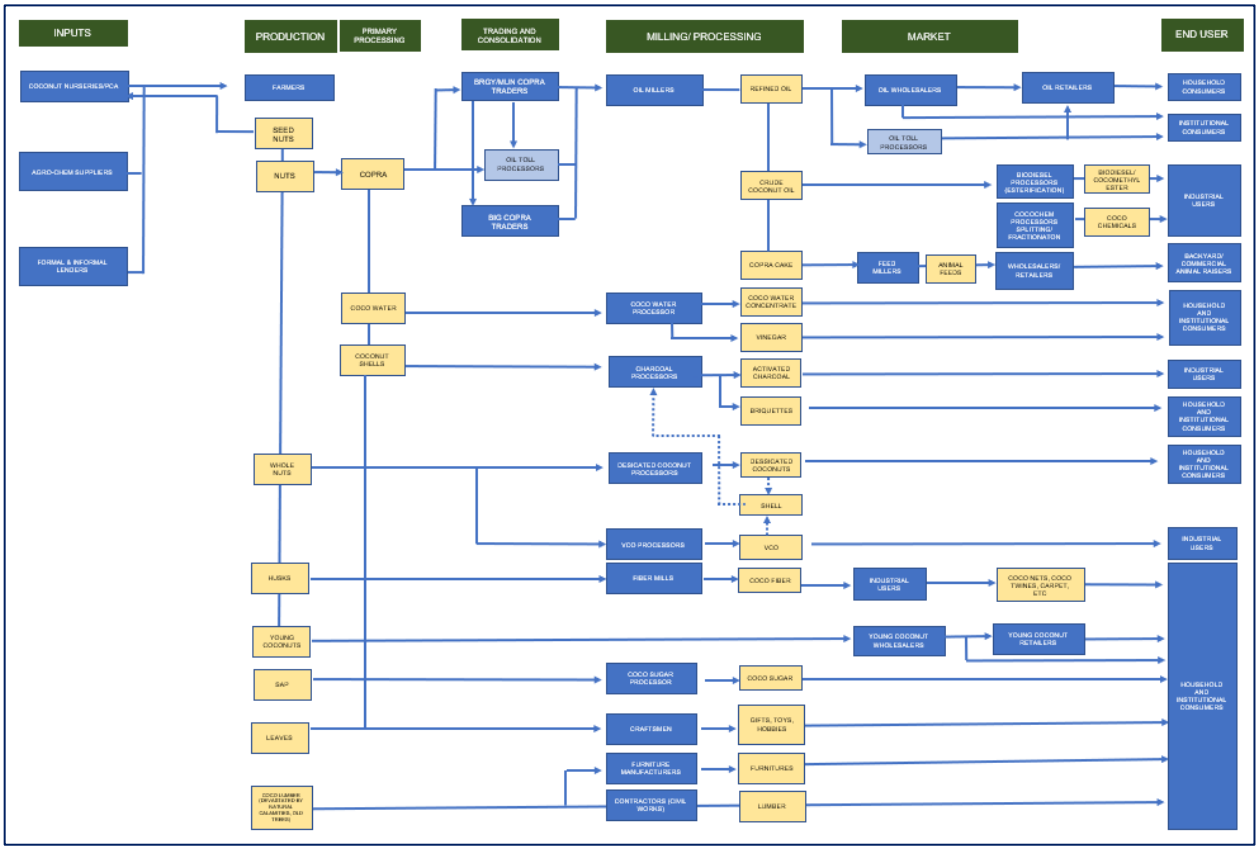
Rice Value Chain



Corn Value Chain



Coconut Value Chain



Annex 2: Summary of all PCIPs

CLUSTER	REGION	PROVINCE	No. of PCIPs	STATUS	COMMODITIES
Luzon A	CAR	Abra	6	All PCIP updated and approved by PDC	Coffee, Mango
		Apayao			Banana - Cardava, Coffee
		Benguet			Coffee, Ube, Vegetables - Highland vegetables, White potato
		Ifugao			Aromatic/Pigmented Rice, Banana - Cardava, Coffee, Vegetables - Highland vegetables
		Kalinga			Aromatic/Pigmented Rice, Banana - Cardava, Coffee
		Mountain province			Aromatic/Pigmented Rice, Coffee, Vegetables - Highland vegetables, White Potato
	Region 1	Ilocos Norte	4	All PCIP updated and approved by PDC	Coffee, Garlic, Mango, Mungbean, Peanut, Tomato
		Ilocos Sur			Coffee, Garlic, Goat, Mango, Mungbean, Peanut, Tomato
		La Union			Coffee, Goat, Mango, Mungbean, Peanut, Tomato
		Pangasinan		PCIP being updated	Bangus, Coffee, Goat, Mango, Mungbean, Onion, Peanut, Tomato
	Region 2	Batanes	5	All PCIP updated and approved by PDC	Beef cattle, Garlic, Sweet Potato
		Cagayan			Banana, Beef Cattle, Corn - White Corn, Dairy, Mango, Peanut
		Isabella			Aromatic/Pigmented Rice, Banana, Beef Cattle, Dairy, Mungbean, Pineapple, Tilapia
		Nueva Vizcaya		PCIP being updated	Banana, Citrus (Satsuma, Mandarin), Coffee, Corn - White Corn, Onion, Pineapple, Tomato
		Quirino		PCIP updated and approved by PDC	Banana, coffee
	Region 3	Aurora	7	PCIP updated and approved by PDC	Aromatic/Pigmented Rice, Coconut (matured & coir)
		Bataan		PCIP being updated	Cassava, Mango, Sardines - Dried Salted, Sweet Potato
		Bulacan		PCIP updated and approved by PDC	Ampalaya, Bangus, Goat
		Nueva Ecija		PCIP being updated	Ampalaya, Aromatic, Pigmented Rice, Dairy - Carabao, Goat, Mango, Onion, Tomato
		Pampanga		All PCIP updated and approved by PDC	Cassava, Tilapia
		Tarlac			Aromatic/Pigmented Rice, Beef cattle, Goat, Mango, Mungbean, Sweet Potato
		Zambales		PCIP being updated	Beef cattle, Cassava, Mango, Mungbean, Sweet potato

CLUSTER	REGION	PROVINCE	No. of PCIPs	STATUS	COMMODITIES
Luzon B	Region 4A	Batangas	5	All PCIP updated and approved by PDC	Banana, Cacao, Chicken - egg, Coconut - Virgin Coconot Oil & Sugar, Coffee, Dairy, Mango, Seaweed, Swine, Lowland Vegetables
		Cavite			Banana, Cacao, Coconut - Virgin Oil, Coffee, Dairy Milk, Mango, Pineapple, Tuna, Vegetables - Lowland Vegetables
		Laguna			Banana, Cacao, Coconut - Virgin Coconut Oil, Coffee, Dairy Milk, Mango, Pineapple
		Quezon			Banana, Cacao, Coconut - Sugar, Coconut - Virgin Coconut Oil, Coffee, Dairy Milk, Mango, Pineapple, Seaweeds, Swine
		Rizal			Banana, Chicken - Egg, Mango, Pineapple, Swine, Vegetables - Lowland Vegetables
	Region 4B	Marandique	5	PCIP being updated	Arrowroot, Coconut - Geonet
		Occidental Mindoro			Cassava - Chips, Onion, Swine, Tuna
		Oriental Mindoro		All PCIP updated and approved by PDC	Banana - Cardava, Calamansi, Coconut - Virgin Coconut Oil, Swine
		Palawan			Banana - Chips, Cashew, Coconut - Sugar, Coconut - Geonet, Mango - Processed, Seaweeds, Seaweeds - Raw Dried Seaweeds, Swine, Tuna
		Rombon			Coconut - Sugar, Coconut - RBDO, Mango - Fresh, Seaweeds, Swine
	Region 5	Albay	6	All PCIP updated and approved by PDC	Abaca, Native Chicken, Coconut - Geonet, Sugar & Charcoal, Dairy - cattle, Sweet Potato, Swine
		Camarines Norte			Abaca, Cacao, Chicken - Native Chicken, Coconut - Geonet, Coconut - Geonet, Coconut - Sugar, Dairy - Cattle, Pineapple, Rice - Organic Rice, Seaweeds, Smoke Fish, Swine, Tuna
		Camarines Sur			Abaca, Cassava, Chicken - Native Chicken, Coconut - Sugar, Dairy - Cattle, Gabi, Pili, Swine
		Catandanues			Abaca, Chicken - Native Chicken, Crablets, Dairy - Cattle, Swine
		Masbate			Chicken - Native Chicken, Coconut - Charcoal, Dairy - Cattle, Goat, Swine
		Sorsogon			Abaca, Chicken - Native Chicken, Dairy - Cattle, Pili, Seaweeds, Swine

CLUSTER	REGION	PROVINCE	No. of PCIPs	STATUS	COMMODITIES
Visayas	Region 6	Aklan	6	All PCIP updated and approved by PDC	Abaca, Native Chicken, Coconut - matured, Goat, Oyster
		Antique			Abaca, Chicken - Native Chicken, Coconut - Matured Coconut, Goat, Muscovado
		Capiz			Chicken - Native Chicken, Coconut - Matured Coconut, Goat, Oyster, Swine
		Guimaras			Chicken - Native Chicken, Coconut - Matured Coconut, Goat, Mango, Seaweeds
		Iloilo		PCIP being updated	Chicken - Native Chicken, Coconut - Matured Coconut, Goat, Seaweeds, Swine
		Negros Occidental		PCIP updated and approved by PDC	Chicken - Native Chicken, Coconut - Matured Coconut, Coffee, Goat, Muscovado, Swine
	Region 7	Bohol	4	All PCIP being updated	Banana chips, Native Chicken, Coconut - Virgin Coconut Oil & Coir, Seaweed, Highland Vegetables
		Cebu			Cassava, Chicken - Native Chicken, Coconut - Virgin Coconut Oil, Coconut - Coir, Seaweeds, Vegetables - Highland Vegetables
		Negros Occidental		PCIP updated and approved by PDC	Abaca, Cassava, Chicken - Native Chicken, Coconut - Virgin Coconut Oil, Vegetables - Highland Vegetables
		Siquijor		PCIP being updated	Beef Cattle, Cassava, Chicken - Native Chicken
	Region 8	Biliran	6	PCIP updated and approved by PDC	Abaca, Banana - Cardava
		Eastern Samar		All PCIP being updated	Abaca, Cacao, Coconut - Geonet, Seaweeds
		Leyte			Banana - Cardava, Coconut, Jackfruit, Seaweeds
		Northern Samar			Abaca, Coconut - Geonet, Coconut
		Samar			Banana - Cardava, Cacao, Jackfruit
		Southern Leyte			Abaca, Coconut, Coconut - Geonet

CLUSTER	REGION	PROVINCE	No. of PCIPs	STATUS	COMMODITIES
Mindanao	Region 9	Zamboanga del Norte	3	All PCIP updated and approved by PDC	Abaca, Banana - Cardava, Banana - Lakatan, Bangus, Cacao, Cassava - Chips and Granules, Chicken - Native Chicken, Coconut - Sugar, Coconut - Fiber and Peat, Coconut - Coconut Oil, Coffee - Green Coffee Beans, Dairy - Cattle, Goat, Mango - Fresh, Rubber - Crumb, Sardines - Fresh & Processed, Seaweeds, Swine, Vegetables - Lowland Vegetables,
		Zamboanga del Sur			Abaca, Banana - Cardava, Banana - Lakatan, Bangus, Cacao, Cacao, Calamansi, Cassava - Chips and Granules, Chicken - Native Chicken, Coconut - Fiber and Peat, Coconut - Sugar, Coconut - Coconut Oil, Coffee - Green Coffee Beans, Dairy - Cattle, Goat, Mango - Fresh, Rice - Organic Rice, Rubber - Crumb, Rubber - Crumb, Sardines - Fresh & Processed, Seaweeds, Seaweeds, Swine, Vegetables - Lowland Vegetables
		Zamboanga Sibugay			Abaca, Cacao, Calamansi, Coconut - Fiber and Peat, Coconut - Sugar, Coconut - Coconut Oil, Coffee - Green Coffee Beans, Rubber - Crumb, Seaweeds
	Region 10	Bukidnon	5	All PCIP updated and approved by PDC	Abaca, Banana - Lakatan, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coffee - Green Coffee Beans, Dairy - Cattle, Goat, Oil Palm, Rice - Organic Rice, Rubber - Crumb, Swine
		Camiguin			Banana - Cardava, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coconut - Coconut Oil
		Lanao del Norte			Abaca, Banana - Cardava, Bangus, Cacao, Coconut - Fiber and Peat, Coconut - Sugar, Coffee - Green Coffee Beans, Rice - Organic Rice, Seaweeds, Swine
		Misaamis Occidental			Abaca, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Mango - Fresh, Rubber - Crumb, Seaweeds
		Misamis Oriental			Abaca, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coconut - Sugar, Coffee - Green Coffee Beans, Dairy - Cattle, Mango - Fresh, Swine
	Region 11	Compostella Valley	5	Updated PCIP approved by PDC	Abaca, Banana - Lakatan, Banana - Cardava, Bangus, Cacao, Cassava - Chips and Granules, Coconut - Coconut Oil, Coconut - Fiber and Peat, Coconut - Sugar, Coffee - Green Coffee Beans, Dairy - Cattle, Goat, Oil Palm, Rice - Organic Rice, Rubber - Crumb, Seaweeds, Swine
		Davao del Norte		PCIP approved by PDC	Abaca, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Mango - Fresh, Oil Palm, Rubber - Crumb, Seaweeds
		Davao del Sur		Updated PCIP approved by PDC	Abaca, Banana - Cardava, Bangus, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Dairy - Cattle, Durian - Fresh & Processed, Goat, Mango - Fresh, Rubber - Crumb, Seaweeds, Swine
		Davao Occidental		PCIP approved by PDC	Abaca, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat
		Davao Oriental		PCIP approved by PDC	Abaca, Banana - Cardava, Cacao
	Region 12	North Cotabato	4	PCIP being updated	Banana - Cardava, Banana - Lakatan, Cacao, Coconut - Sugar, Coconut - Coconut Oil, Coffee - Green Coffee Beans, Mango - Fresh, Rice - Organic Rice, Rubber - Sheet, Rubber - Crumb
		Sarangani			Abaca, Banana - Lakatan, Cacao, Coconut - Virgin Coconut Oil, Coffee - Green Coffee Beans
		South Cotabato		Updated PCIPs approved by PDC	Abaca, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Dairy - Cattle, Mango - Fresh
		Sultan Kudarat			Banana - Cardava, Coconut - Fiber and Peat, Coconut - Sugar, Coconut - Coconut Oil, Coffee - Green Coffee Beans, Mango - Fresh, Rice - Organic Rice
	Region 13	Agusan del Norte	5	PCIP being updated	Abaca, Banana - Cardava, Bangus, Cacao, Cassava - Chips and Granules, Coconut - Coconut Oil, Coconut - Fiber and Peat, Coconut - Sugar, Coffee - Green Coffee Beans, Dairy - Cattle, Goat, Mango - Fresh, Oil Palm, Rice - Organic Rice, Rubber - Crumb, Sardines - Fresh & Dried, Seaweeds, Swine
		Lanao del Sur		Updated PCIP approved by PDC	Abaca, Banana - Cardava, Banana - Lakatan, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Oil Palm, Rice - Organic Rice, Rubber - Crumb, Swine
		Dinigat Islands		PCIP being updated	Banana - Cardava, Bangus, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Rice - Organic Rice, Seaweeds
		Surigao del Norte		Updated PCIP approved by PDC	Banana - Lakatan, Banana - Cardava, Bangus, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Goat, Seaweeds, Swine, Tuna - Fresh
		Surigao del Sur			Abaca, Bangus, Cacao, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Seaweeds, Swine, Tuna - Fresh
	ARMM	Basilan	5	Updated PCIPs approved by PDC	Coconut - Fiber and Peat, Rubber - Crumb, Seaweeds
		Lanao del Sur			Abaca, Banana - Cardava, Cacao, Cassava - Chips and Granules, Coconut - Fiber and Peat, Coffee, Coffee - Green Coffee Beans
		Maguindanao			Banana - Cavendish, Coconut - Fiber and Peat, Coffee - Green Coffee Beans, Goat, Oil Palm, Rubber - Crumb
		Sulu			Abaca, Cassava - Chips and Granules, Coffee - Green Coffee Beans, Mangosteen - Fresh & Processed, Seaweeds
		Tawi-Tawi			Cassava - Chips and Granules, Coconut - Fiber and Peat, Seaweeds

Annex 3. Summary of DP funded projects

VC Subsystem	Inputs
1. Project Title	**Jalaur River Multi-Purpose Project Stage II**
Project Description	Large scale water reservoir constructed in the Visayas and Mindanao. JRMP II aims to demonstrate inclusive development among stakeholders achieved through harnessing the potential of Jalaur River for multi-purpose benefit while minimizing feasible impacts to the environment and communities. JRMP II involves 3 major components: Irrigation Development, Environmental and Watershed Management and Institutional Development Primary areas that shall be served by the project include the towns of Calinog, Lambunao, Badiangan, Janiuay, Cabatuan, Sta. Barbara, Pavia, Alimodian, Leon, San Miguel, Oton, Tigbauan, Duenas, San Enrique, Anilao, Dingle, Barotac Nuevo, Dumangas, Mina, New Lucena, Pototan, Zarraga and Leganes, Passi City, and Iloilo City.
Project Duration	Dec 2012 - Dec 2023
Funding Agency	KEXIM Bank
IA	NIA
Project Cost (PHP)	11,262,130,050

VC Subsystem	Inputs
2. Project Title	**Profiling of Economically Important Diseases of Swine and Cattle in the Management, Surveillance and Control**
Project Description	The project is aligned with the Philippine Development Plan (PDP) 2011- 2016, geared towards food security, specifically in protecting local swine and cattle (meat and dairy) businesses and for the improvement of goods (meat and dairy products) that are for public consumption. It is also consistent with the guiding and interrelated principles under the Agrikulturang Pinoy Framework as the project will enhance animal health to ensure safe and quality meat products. Specifically, the project aims (1)To confirm and genetically characterize economically important diseases of swine and cattle present in the Philippines using modern methods and tools ; (2) To create a disease profile information database on farm demographics, epidemiological status, risk factors and economic costs of identified diseases of swine and cattle in the Philippines; (3) To establish a research network among state universities in the Philippines that will institute collaboration and capacitating of personnel on studies involving economically important diseases of swine and cattle; (4) To formulate recommendations for community and farm-based disease control programs and management practices; and (5) To improve research laboratories in the targeted state universities in the Philippines
Project Duration	June 2015 - Dec 2017
Funding Agency	UP PL480
IA	UPLB-CVM
Project Cost (PHP)	167,558,000

VC Subsystem	Production
3. Project Title	**Fish Right Program**
Project Description	Fish Right is a partnership between the Government of the Philippines and the U.S. Agency for International Development launched 2018 and extended to 2025 to improve marine biodiversity and the fisheries sector in three key ecological areas. The program is implemented by the Coastal Resources Center at the University of Rhode Island (URI) in collaboration with a team of core implementing partners, which were selected for their complementary expertise. This program was developed through a consultative process involving all implementing partners, local stakeholders and government representatives. Fish Right fosters substantial change in fisheries management and climate resilience in the Philippines to achieve a ten-percent increase in fish biomass in Calamianes, Southern Negros, and Visayan Seas. Through improved management of fisheries, mangroves, and other coastal resources, the program will also increase resilience and improve livelihoods among households engaged in the fisheries within the 39 municipalities of these marine key biodiversity areas (MKBA). In the process, Fish Right ensures that women and other marginalized groups benefit and participate as equals. Fish Right is designed to meet the need for biodiversity conservation in the MKBA by addressing threats to several marine ecosystem types, including mangroves, reefs, open-water pelagic and shallow, soft-bottom demersal ecosystems. The program holds that marine biodiversity targets can only be achieved if fisheries are sustainably managed by an ecosystem-based approach to varied and diverse combinations of management areas, fish stocks, and habitats. Each of the three MKBA has unique characteristics of scale, complexity, and dominant fisheries ecosystems. Therefore, approaches will be tailored to socio-ecological conditions. Taken together, Fish Right MKBA provides for several ecosystem-based approaches to be modeled in a wide range of settings. The success of Fish Right relies on a sense of ownership within, and full participation by, the MKBA's coastal communities. The program will take a multi-tiered governance approach that requires close coordination with the Bureau of Fisheries and Aquatic Resources to manage fisheries exploited beyond municipal jurisdictions. For inshore waters, close coordination is made with local government units. The program alsos works with national, regional, and multinational partners to catalyze and leverage economic incentives and private sector leadership for sustainable fisheries, coastal resource management, and community resiliency building.
Project Duration	March 2018 to March 2025
Funding Agency	USAID
IA	BFAR
Project Cost	1,647,435,800

VC Subsystem	Post-harvest/Processing
4. Project Title	**Building Safe Agricultural Food Enterprises (B-SAFE)**
Project Description	The Building Safe Agricultural Food Enterprises (B- SAFE) is a four-year project that aims to increase agricultural productivity by improving sanitary and phytosanitary standards (SPS) in production and management of cold chain and supply chains and to expand trade of agricultural products by improving the Government of the Philippines' (GOP's) regulatory agencies' capacity to manage risk-based systems, promote awareness of biotechnology, enhance regulatory standards and processes, enhance domestic and export linkages and build the capacity of the private sector to leverage investment. B-SAFE is funded by the United States Department of Agriculture (USDA) under its Food for Progress (FFPr) program. This approach is built on two distinct, but interrelated pillars: (1) GOP regulatory agencies' capacity in risk-based SPS systems; and (2) SPS-compliant supply chain linkages. Winrock used funds from the monetization of 23,000 metric tons of American soybean meal to implement this project. Program Goal Food safety – the proper handling, preparation and storage of food – is imperative in preventing food-borne illness and disease outbreaks. B-SAFE's goal is to improve the trade of safe, wholesome food and agricultural products. It does so by working with the GOP in providing agencies with the tools and information needed to implement evidence-based risk analysis and helping the government meet obligations under domestic law as well as international food safety and trade protocols. B-SAFE will improve private sector access to services, information and relationships to access food safety-conscious export and domestic markets. Activities: • Conduct Sanitary and Phytosanitary Gap Assessment and Benchmark Capacity Needs • Enhance Government of Philippines Capacity in Risk-Based Systems • Support Biotechnology Decision-Making and Awareness-Building • Build Technical Capacity of the Private Sector to Meet International Standards • Build Cold Chain Systems
Project Duration	October 2019 - September 2023
Funding Agency	USDA
IA	PRS Winrock International
Project Cost	442,439,200

VC Subsystem	Inputs/Production/Market
5. Project Title	**Intensified Community-Based Dairy Enterprise Development Project**
Project Description	The project was originally approved in 2018 by the IS Department of Agriculture (USDA) to provide opportunities to rural farm families through goat raising. The project expanded to include dairy cattle and carabao, infrastructure development, technology transfer and other initiatives to ensure increased fresh milk production. The project components are: (1) dairy animal procurement and distribution (2) expanded artificial insemination; (3) feed production and development; (4) dairy enterprises development; (5) capacity building; and (6) program management, monitoring, and evaluation. The expanded dairy project also involves (1) Infusion of purebred and crossbred dairy stocks; (2) Use of advanced breeding technologies; (2) Establishment and strengthening of community-based dairy enterprises within identified impact dairy zones; (3) Increase average family income of dairy farmers by 20% annually through the development of carabao-based enterprises; (4) Increase average income of dairy goat farmers

	by 18%;and (5) Double the income of dairy farmers with the establishment and enhancement of goat-based and cattle-based dairy enterprises.
Project Duration	Aug 2019 - Dec 2026
Funding Agency	US PL480
IA	NDA/PCC
Project Cost (PHP)	1,967,000,000

VC Subsystem	Inputs/Marketing
6. Project Title	**Support to Agriculture and Agribusiness Enterprises in Mindanao for Sustainable Development (GCP/PHI/069/ROK)**
Project Description	The overall goal of the project is to contribute to the attainment of sustainable peace and development and inclusive growth in Mindanao through support to the improvement of agriculture and fisheries-based livelihoods, and accelerated agriculture-based enterprises. EXPECTED OUTPUTS Improved productivity in agriculture and fishery-based livelihoods of small farmers, marginal fishers, indigenous people, and returned internally displaced persons through the provision of agriculture and fisheries inputs, appropriate trainings and technical assistance on improved agricultural and diversified farming systems and fishery technologies. Small farmers, marginal indigenous peoples, and returned internally displaced persons and their households, especially women and women's groups are fully integrated into the agriculture value chains by developing and strengthening their skills and capacity to link with market opportunities in growth centers. Increased resilience of farming, fishing and related livelihoods against multiple hazards through the application of disaster risk reduction and management tools, principles and approaches that consider specific livelihoods, agro-ecological and socio-political-institutional contexts.
Project Duration	January 2019-December 2023
Funding Agency	FAO
IA	DA RFO 12 and BARMM
Project Cost	269,360,000

VC Subsystem	Production
7. Project Title	**Establishment of Smart Greenhouse and Capacity Building in the Philippines Project**
Project Description	The state-of-the-art agricultural project was granted by the South Korean government through its Ministry of Agriculture, Food and Rural Affairs (MAFRA) and in partnership with the Department of Agriculture of the Republic of the Philippines. The Smart Greenhouse is a self-regulating, micro-climate-controlled environment in which 'climatic conditions inside the greenhouse, such as, temperature, humidity, luminosity, soil moisture are continuously monitored.' The project features Smart Greenhouse Technology for innovative production of strawberry, cherry tomato, and white potato. The technology could increase the local production of high-value crops, as well as help improve the small and mid-sized farmers' production competitiveness. The Smart Greenhouse has been established based on Korean Smart Greenhouse Technology after customizing the Philippine climate and various conditions The Smart Greenhouse Project was subdivided into four components namely, the (1) establishment of a Smart Farm composed of fully automated Smart Greenhouses and one cold storage facility; (2) development of a local distribution system; (3) dispatch of experts; and (4) capacity-building for potential technology adopters
Project Duration	September 2020 to December 2023
Funding Agency	MAFRA
IA	DA RFO 6 and 10
Project Cost	186,040,500

VC Subsystem	Inputs/Production/Trading/Processing/Marketing
8. Project Title	**Philippine Rural Development Project (PRDP) Additional Financing 2 with EU Grant**
Project Description	The Project Development Objective (PDO) of the PRDP is to increase rural incomes and enhance farm and fishery productivity in the targeted areas. The project supports smallholders and fisherfolk to increase their marketable surpluses and their access to markets. The PDO indicators are: (a) increase in real household incomes of farmer and fisherfolk beneficiaries; (b) increase in income of beneficiaries involved with enterprise development; (c) increase in value of annual marketed output; and (d) increase in the number of farmers with improved access to DA services. The Global Environment Objective (GEO) linked to the GEF Grant is to strengthen the conservation of the coastal and marine resource base in targeted project areas. The GEO indicator is the increase in Marine Protected Areas (MPAs) management effectiveness in selected sites in GEF target areas. The PRDP PDO indicators are achieved through four interlinked project components: (a) Local and National Level Planning(I-PLAN); (b) Infrastructure Development (I-BUILD); (c) Enterprise Development (I-REAP); and (d) Project Implementation Support (I-SUPPORT). The planning component provides the policy and institutional framework for determining the selection and type of infrastructure and enterprise investments, while the implementation support component provides for harmonization of procedures, capacity building, monitoring and evaluation (M&E), and implementation support. The design of AF2 has been adapted to support the government's effort to ensure economic recovery and strong agricultural value chains in response to the COVID-19 pandemic. The AF2 is closely re-aligned with the Government of the Philippines' (GOP) "We Recover As One"6 plan, which directs the agri-fishery sector to focus on food security and sustainability. Plans to ensure that food

	is available and affordable are set out in the DA's Stimulus Package, also referred as the Plant, Plant, Plant Program, which includes the Ahon Lahat, Pagkain Sapat (ALPAS) Kontra COVID-19 (Survive, Reboot, Grow)7 and a Food Logistics component. This program realigns the current budget of major DA programs and seeks supplemental budget from the national government and financing institutions to achieve food security in the short to long term. The AF2 will serve as an important platform to support these initiatives, because it can use the well-established nationwide mechanisms of the PRDP to scale up investments in infrastructure and enterprises that will in turn restore and contribute to improving the availability, accessibility, and affordability of commodities produced by the agri-fishery sector. The AF2 has therefore been adapted from the original Additional Financing (AF) government request to also provide funding to the Local and National Planning Component (I-PLAN) and the Enterprise Development Component (I-REAP), as further described in Section II of this Project Paper. The previously received AF request had only included support for the Infrastructure Development (I-BUILD) and Project Implementation Support (I-SUPPORT) components.
Project Duration	September 2021 – July 2025
Funding Agency	World Bank
IA	PRDP
Project Cost	19,175,362,000

VC Subsystem	Production
9. Project Title	**Sustainable Development and Good Agricultural Practices in the Philippine Coconut Supply Chain (SDGCoco Project)**
Project Description	The SDGCoco project is designed to improve the income, productivity, and sustainability of 500 smallholder coconut farmers in the Philippines over a 4-year period. The main goals of the project are to strengthen Good Agricultural Practices, introduce a business mindset in farming, enhance coconut farms to achieve international sustainability standards, and develop a premium scheme for smallholder coconut farmers in the provinces of Quezon and Camarines Norte. SDGCoco also seeks to bridge the generation gap for ageing Filipino coconut farmers through mainstreaming the engagement of women and youth in its approaches.
Project Duration	August 2021 to March 2024
Funding Agency	GIZ
IA	DA-PCA
Project Cost	108,090,350

VC Subsystem	Production
10. Project Title	**Improving Smallholder Livelihoods through Business Models (Cacao+)**
Project Description	Project aimed at capacity building, sustainable agriculture and improving smallholder livelihoods. GIZ works with DA on promoting cacao to help farmers produce in more efficient ways for better yield and income. The Project is implemented in Misamis Oriental, Bukidnon, Davao de Oro, Davao del Norte, Davao Occidental, Sarangani, Agusan del Sur and Agusan del Norte
Project Duration	June 2021-June 2024
Funding Agency	GIZ
IA	DA. HVCDP

Project Cost	435,510,950

VC Subsystem	Inputs/Production/Post-Harvest/Processing
11. Project Title	**Capacity Development and Experience Sharing for Rice Value Chains through South-South and Triangular Cooperation (SSTC) - GCP/GLO/229/ROK**
Project Description	The Food and Agriculture Organization of the United Nations (FAO) is implementing the "Capacity Development and Experience Sharing for Rice Value Chains through South-South and Triangular Cooperation (SSTC)" project, kindly funded by the Republic of Korea (MAFRA). The project aims at improving capacity to develop competitive and inclusive rice value chains. The SSTC initiative will enable the Philippines to find sustainable, cost-effective, and economically viable solutions that will reinforce and enable the country to further improve its rice value chains and contribute to the overall development of its rice sector.
Project Duration	January 2021 – June 2024
Funding Agency	FAO
IA	DA PhilRice
Project Cost	3,540,170

VC Subsystem	Production
12. Project Title	**Building Capacity on Promoting Economically and Environmentally Efficient Rice Production through Direct-Seeded Rice (DSR)**
Project Description	The Project aims to help rice farmers reduce production costs through direct seeding. The project conducted a study on impact and adoption pathways for direct seeded rice.
Project Duration	January 2021 – October 2023
Funding Agency	FAO
IA	DA PhilRice
Project Cost	2,685,820

VC Subsystem	Inputs
13. Project Title	**Farm Mechanization Program for Small Sugarcane Landholder**
Project Description	Provision of farm machineries (tractors, sugarcane planters, flail mowers, power harrow) to sugarcane farmers in : Region 2 – Cagayan, Isabela; Region 3 – Pampanga, Tarlac; Region 4A – Batangas, Region 5 – Camarines Sure, Region 6 – Iloilo, Capiz, Negros Oriental, Region 7 – Negros Oriental, Cebu, Region 8 – Leyte, Region 10 – Bukidnon, Region 11-Davao, North Cotabato
Project Duration	June 2021 – June 2026
Funding Agency	JPEPA
IA	DA-SRA
Project Cost	374,754,100

VC Subsystem	Inputs

14. Project Title	**Enhancing Local Capability to Design, Develop and Manufacture Agricultural Machineries to Accelerate Mechanization of Philippine Agriculture**
Project Description	Establishment of Agricultural Machinery Design and Prototyping Center that will accelerate mechanization in the agricultural sector by enhancing local technological capacity to design, develop and manufacture agricultural machineries. The grant project also includes development of new agricultural machineries, dispatch of Korean experts and providing building to PHIL Mech and technicians.
Project Duration	January 2021 - December 2026
Funding Agency	KOICA
IA	PhilMech
Project Cost	370,545,600

VC Subsystem	Trading and Logistics
15. Project Title	**Development of Philippine Food Chain Logistics Masterplan**
Project Description	The project helped the Government of the Philippines to formulate the Philippine Food Logistics Masterplan which serve as a roadmap for governments, private sector and other key stakeholders to develop modern, efficient and sustainable food logistics ecosystem with policy recommendations and investment gaps.
Project Duration	May 2022 - May 2023
Funding Agency	ADB
IA	DA OUSC
Project Cost (PHP)	19,236,000

VC Subsystem	Marketing
16. Project Title	**Project for Market-Driven Enhancement of Vegetable Value Chain in the Philippines (MV2C-TCP) (formerly Improvement of the VC of Selected Vegetables in Selected Areas in the Philippines)**
Project Description	Planning Phase – To formulate and have stakeholders agree on a draft roadmap for Food Value Chain modernization to be undertaken jointly by the public and private sectors. Implementation Phase – Conduct pilot projects on FVC starting from the target provinces, build the capacity of FVC stakeholders and develop, verify and update and inclusive FVC model for horticultural crops, The FVC model will be shares with DVC stakeholders nationwide and help improve farmers' profitability, thus contributing to the self-sustaining expansion of a profitable FVC of horticultural crops.
Project Duration	February 2022 - February 2028
Funding Agency	JICA
IA	DA AMAS
Project Cost	230,296,440

VC Subsystem	Inputs
17. Project Title	**National Seed Technology Park - Knowledge Transfer Project**
Project Description	The National Seed Technology Park - Knowledge Transfer Project supports the development of improved seed sector focusing of effective seed quality system, plant variety protection, and capacitated public-private seed production system. The NTSTP will gather key players in the seed industry in an area of at least 50 hectares where they can set up research, facilities for drying, processing, and packaging.
Project Duration	April 2022 - March 2024
Funding Agency	Kingdom of Netherlands
IA	BPI
Project Cost	14,980,930

VC Subsystem	Inputs
18. Project Title	**Restoring Livelihoods and Enhancing Resilience of Farmers and Fisherfolks affected by typhoon Rai (Odette) Project of DA**
Project Description	The project entails the utilization of the ¥251 million donation from the Government of Japan for 4,000 small-scale coconut farmers, landless coconut farm workers, coconut farmers' organizations, fishers, and fisherfolk organizations in 12 Odette affected municipalities. This is to rebound as farmers struggle to replace lost/damaged to include seeds, tools, livestock or fishing gear.
Project Duration	July 2022 to June 2024
Funding Agency	FAO
IA	DA FPOPD
Project Cost	100,000,000

VC Subsystem	Trading
19. Project Title	**Technical Support to develop livestock and poultry traders and transport registry system**
Project Description	The project aims to streamline the current application process by migrating from current manual/paper-based to a web-based or online application for a more efficient, transparent and reliable delivery of Handler's License and Livestock Transport Carriers Certificate of registration to the stakeholders. This system is expected to improve efficiency and effectiveness of the services of the BAI. The registry system will be integrated with the BAI's Online Local Shipping Permit System.
Project Duration	July 2022 – December 2023
Funding Agency	FAO
IA	DA-BAI
Project Cost	5,500,000

9	Production/ Post Harvest
20. Project Title	**Development of Pilot Village Project through the Establishment of Protective Cultivation and Postharvest Management of Vegetables in the Philippines**
Project Description	The pilot village project will focus on the implementation of protective cultivation techniques and efficient post-harvest management of vegetables in the Philippines. Th project will introduce innovative agricultural practices and technologies to enhance the productivity and sustainability of vegetable cultivation within the country. DA and KOPIA will work closely to develop and implement comprehensive strategies for the successful establishment of protected cultivation systems. The partnership further aims to empower Filipino farmers with the latest technologies and practices ultimately improving their livelihoods and contributing to the overall development of the Philippine agricultural sector.
Project Duration	June 2023 - December 2025
Funding Agency	KOPIA
IA	BPI-LB NCRDPSC and PhilRice
Project Cost	12,000,000

VC Subsystem	Production
21. Project Title	**Safe Vegetable Production Technology Dissemination and Vegetable Distribution System Improvement (SAVERS) Project**
Project Description	The project is designed to minimize production costs and increase farmers' revenue through dissemination involving the application of charcoal, wood vinegar and locally sources compost available in vegetable fields. Furthermore, the project intends to enhance to process of distributing vegetables
Project Duration	July 2022 to June 2024
Funding Agency	JAEC
IA	DA-ATI
Project Cost	83,269,820

VC Subsystem	Inputs
22. Project Title	**Improving the Rice Supply Chain to Ensure Quality of Seeds and Milled Rice for Distribution and Buffer Stocks in the Philippines**
Project Description	The project is set to enhance the capacity of rice seed distribution. Key components include the establishment seed processing facility and warehouse equipped with cold storage and acclimatization rooms. Furthermore, the project will provide essential equipment and office automation suppliers to PhilRice and NFA to optimize operational efficiency. The project will also encompass a comprehensive capacity building program such as operational training and information system consulting. These initiatives will facilitate the widespread distribution of government-certified high-quality rice seeds and buffer stocks, contributing to the mitigation of chronic rice shortages and improving overall food security in the country.
Project Duration	November 2022 to December 2026
Funding Agency	MAFRA
IA	DA-PHILRICE and NFA
Project Cost	281,036,610

VC Subsystem	Inputs/ Production/ Trading and Logistics/ Processing/ Marketing
23. Project Title	**Mindanao Inclusive Agriculture Development (MIADP)**
Project Description	The Mindanao Inclusive Agriculture Development Project (MIADP) addresses the lingering poverty among the indigenous peoples (IPs) in Mindanao. MIADP seeks to improve the economic situation of selected number of indigenous communities and further develop the approach and capacity, especially of local government units (LGUs) to continue a program of support to address the low incomes due to weak marketing linkages and poor infrastructure within the ancestral domains. The development objective of MIADP is "to sustainably increase agricultural productivity, resiliency, and access to markets and services or organized farmer and fisherfolk groups in selected ancestral domains and selected value chains in Mindanao"
Project Duration	2023 - 2028
Funding Agency	World Bank
IA	MIADP PSO Mindanao
Project Cost (PHP)	6,163,076,700

VC Subsystem	Production/Marketing
24. Project Title	**Philippine Fisheries and Coastal Resiliency Project (FishCore)**
Project Description	The development objective of the Fisheries and Coastal Resiliency Project for Philippine is to improve management of targeted fisheries resources and enhance the value of fisheries production to coastal communities in selected fisheries management areas (FMAs). The project comprises of three components: (1) fisheries and coastal resilient resource planning and management (FishCRRM) aims to strengthen FMA governance through climate-resilient planning to recover fishery resources and build ecosystem resilience; (2) modern and resilient livelihood investments (MARLIN) objective is to enhance the economic value of fisheries and aquaculture to fishing communities through strategic and climate-resilient investments to reduce postharvest losses, expand aquaculture production, and add value to fisheries production; and (3) support to project implementation and management (SuPrIM) will finance technical and operational support for project management and coordination, including financial management (FM), independent audits, procurement, environmental and social (E and S) impact management, stakeholder engagement, grievance redress mechanisms, monitoring, reporting and evaluation, capacity-building support, and development of a knowledge management system for sharing project-related knowledge products.
Project Duration	2023 - 2029
Funding Agency	World Bank
IA	DA-BFAR/Fishcore PMO
Project Cost (PHP)	10,260,649,900

VC Subsystem	Inputs
25. Project Title	**Mass Production of Three (3) NSIC Registered Garlic Varieties Adaptive to Selected Areas in CAR, Region 4A, and Region 5 with Potential to Bulbs/Bulbils Production**
Project Description	Garlic adaptability trials of 3 NSIC registered garlic varieties in selected areas in Cordillera, Laguan and Albay. The garlic adaptability trials result medium to large bulbs which implies that the garlic varieties adapted to the biophysical and climatic features of the locality,
Project Duration	January 2023 – December 2023
Funding Agency	KOPIA
IA	BPI-LB NCRDPSC
Project Cost	1,500,000

VC Subsystem	Trading and Logistics/ Marketing
26. Project Title	**Philippine Rural Development Project (PRDP) Scale Up**
Project Description	The development objective of the Rural Development Project Scale-Up Project for Philippine is to improve farmers and fisherfolk access to markets and increase income from selected agri-fishery value chains. The project comprises of five components: (1) I-PLAN will support the planning and refinement of strategies to guide and evaluate: (a) the effectiveness of investments under the project; and (b) their contribution to the agri-fishery sectoral transformation goals of the Philippine development plan (PDP) (2023-2028) and national agriculture and fisheries modernization and industrialization plan (NAFMIP) (2021-2030); (2) rural infrastructure, and market linkage component (I-BUILD) will finance the current and new types of public infrastructure subprojects covered under the PRDP; (3) enterprise development component (I-REAP) will support implementing proponents, defined as legally established and registered farmer cooperatives and associations (FCAs), FCA clusters (composed of two or more FCAs which have bonded together to implement the enterprise), or local government unit (LGUs), which are selected according to the eligibility criteria as per the project operations manual (POM); (4) project implementation support component (I-SUPPORT) will finance project management, technical assistance, studies, training, and capacity building for project staff during the project period; and (5) contingent emergency response component (CERC) will allow for rapid reallocation of uncommitted project funds towards urgent needs in the event of a geophysical, climate-related, or man-made disaster or public health emergency.
Project Duration	2024 - 2029
Funding Agency	World Bank
IA	PRDP NPCO
Project Cost (PHP)	38,570,000,000

VC Subsystem	Inputs/Production
27. Project Title	**Agriculture Sector Readiness for enhanced climate finance and implementation of Koronivia joint Work on Agriculture priorities in Southeast Asia**
Project Description	Philippines is among the top ten Southeast Asian countries most affected by extreme weather events such as cyclone and hurricanes between 1999 and 2018. SEA countries have piloted

	innovative and practical agricultural solutions to climate change impacts, such as agro-advisories, participatory community-based approaches and technology-based farm information and financial management technologies. However, scaling-up such climate action has been difficult due to several limiting factors. The target goal of the project is to enhance the capacity of countries in Southeast Asia to develop national climate finance investment programs and projects linked to adaptation and mitigation priorities for the agriculture sectors and exchange knowledge and learning to promote innovative mechanisms for public and private sector climate finance at national and regional levels. Specifically, the outcomes of the project aligned with the GCF Readiness Objectives and Outcomes will be: 1. Agriculture investment programs to strengthen GCF Country Programs and leverage national, regional and global climate finance to support implementation of national, sector-specific climate change policy frameworks developed; 2. Development of quality GCF concept notes and proposals by building capacities of agriculture sector stakeholders and especially LDCs supported; and 3. Opportunities for knowledge capture, learning and dissemination on climate-friendly agriculture through partnership networks enhanced.
Project Duration	July 2023 - July 2027
Funding Agency	FAO
IA	DA-CRAO
Project Cost	24,750,000

VC Subsystem	Production
28. Project Title	**Securing Long-term Sustainability of Multi-functional Landscapes in Critical River Basins in the Philippines**
Project Description	The project objective is to create an enabling environment for the realization of the National Land Degradation Neutrality (LDN) target to mainstream biodiversity-friendly agricultural practices (BDFAP) in the Cagayan deo Oro Basin (CDORB) through national policy framework implementation and capacity strengthening. Project Components and Outcomes 1. National LDN and BDFAP policy created, and implementation capacity strengthened • Enabling policy environment created for LDN and BDFAP and capacity for integrated landscape management enhanced at sub-national level leading to improved biodiversity and ecosystem services in the Cagayan de Oro River Basin (CDORB) indicated by: a. Two Joint Administrative Orders (LDN and BDFAP) and CDORB Comprehensive Land Use Plans (CLUP) approved. b. At least 20% increase in capacity scorecard scores of sub- national level entities involved in basin management (i.e. Provincial Agriculture Offices Provincial National Commission on Indigenous People (NCIP) office, Cagayan de Oro City Local Government Unit (LGU), Iligan City LGU, Municipalities of Baungon, Talakag and Libona) c. At least 20% increase in capacity scorecard scores of the Indigenous People (IP) communities' ability to actively engage in integrated landscape management. 2. Demonstration of Sustainable Land Management (SLM) practices and BDFAP. • Improved management of 58,159 ha of cultivated landscapes ensured by smallholder farmers, IP communities and multi-national companies through adoption of SLM practices and BDFAP.

	• At least 2,500 households were involved in improved cropland management using BDFAP and SLM practices, with a minimum of 10% increase in household income. 3. Awareness- raising, knowledge management, and M&E. • Capacity and awareness of stakeholders raised on SLM, LDN, BDFAP and integrated landscape management approaches by effective knowledge management, M&E, measured by: . At least 20% increase in awareness, knowledge, and capacity of project stakeholders [measured through changes in Knowledge, Attitudes and Practices (KAP) survey scores] . Online knowledge exchange portal is actively used as measured by at least 1000 platform visits per year. . At least 74,670 persons reached through the project's learning events
Project Duration	NEDA Endorsement – November 2, 2022
Funding Agency	UNDP-GEF
IA	DA-BSWM
Project Cost	3,964,583,900

Annex 6: Basic features of the F2C2 Program and support programs

GENERAL F2C2 PROGRAM GUIDELINES	
Coverage	- Pasture lease agreements - Ancestral domain land (with agriculture/fishery potential) - Fishpond lease agreements - Marine areas & inland waters - Community based livestock production networks and common service facilities - Large scale family-owned crop production lands/facilities in partnership with F2C2 registered community group
Location	- Contiguous production areas - Non-contiguous production areas that are in close proximity among beneficiaries within one village - Non-contiguous production areas that are managed as single going concern within municipality or district.
Value chain anchor	- Opportunity for improving value chain, product quality and marketing of the agricultural or fishery commodity including relevant support facilities/activities.
Registration	- At least 75% of members of participating groups and beneficiaries are bona-fide farmers and fishers listed in the DA Registry System for Basic Sectors in Agriculture (RSMSA) or the (FISHR) databases.
Professional Management/ Technical Support	- Evidence of key manager and technical advisers with appropriate training and professional experience to coordinate the clustered enterprise activities and ensure access to reh required services.
"Big Brother-Small Brother" partnerships	- Program participants encouraged to link up or joint venture with established business enterprises that can provide relevant support and expertise in terms of production, processing and storage technologies as well as equipment, transport, and logistics and better access to finance and marketing networks.

F2C2 SUPPORT AND ASSISTANCE FROM DA ROGRAMS	
Pre-production (F2-PAP)	- Assistance in search for competent community based F2C2 managers. - Trainers Training and Capacity Building in the areas of (i) enterprise organization and management; (ii) simplified business systems; (iii) marketing of agricultural commodities; (iv) access to financing and investments; (v) promotion of ICT in agriculture.
Production (F2-PSP)	- Programs to facilitate access to (i) high quality seeds, breeds, and brood stocks; (ii) feeds, fertilizers, and crop protection supplies; (iii) tractors, mechanical tillers and harvesters; (iv) crop protection and support to climate change adaptation; and (v) land preparation/land levelling services.
Post-harvest/ Processing (F2-PHP)	- Support and assistance for the acquisition, establishment and use of equipment and technologies to preserve and prolong the shelf life of agri-products including (i) post-harvest equipment and specialized sorting services; (ii) rain proofed solar-drying systems and air drying for grains and root crops.
Packaging & storage (F2-PacS)	- Technical and financial support in packaging and storage aimed at prolonging the shelf life of primary farm and fishery produce and agricultural commodities including (i) bagging, box and pouch packaging and labelling equipment; and (ii) community owned warehouses, cold storage/ blast freezing facilities.
Transport & logistics (F2-TL)	- Strengthening the market positioning and competitiveness of agriculture and fisheries commodities and products through support projects and assistance programs on (i) transport equipment for farm produce; (ii) ICT hardware and relevant software for digital logistics; and (iii) communication equipment to support marketing networks.

Credit and Project financing (F2-CPF)	- Empowerment of clustered farmers/fisherfolk to access credit and financing through (i) agricultural credit rating system; (ii) indexed based insurance for crops; and (iii) support for feasibility studies.
Marketing Assistance (F2-MarA)	- Linking to promotion and marketing services to enable stronger engagement with sales channels and networks including (i) participation in KADIWA/eKADIWA networks; (ii) market matching with institutional/corporate buyers; (iii) establishing Advanced Harvest Information Portal; (iv) capacity building for marketing professionals and assistance in market plan formulation; (v) organising trade fairs and exhibitions in partnership with LGUs & trade associations; and (vi) F2C2 Producer Catalogue and Directory.

FOCUS FOR F2C2 PROGRAM		
Program Focus	Rice/palay	100 ha
	Corn/grain	75 ha
	High value vegetables	50 ha
	Fruit trees & perennials	100 ha
	Fibre crops	100 ha
	Livestock	Feedmill centered (pigs, poultry and egg production); (ii) Agri-pasture, natural grazeland, feed production system (small & large ruminants); and (iii) Delineated community production for free range chicken and other livestock
	Fishery/Aquaculture	(i) Marine/fishery production zones w/in municipal waters; (ii) Community fishery fleet' (iii) Community fishpond areas

F2C2 COMPLIMENTARY PROGRAMS AND PROJECTS	
Special partnerships with Social Security System (SSS)	- Separate social security arrangement for the agriculture sector taking account of the advanced age of many farmers and fishers by provision of subsidies provided by the DA through budgetary allocations from DBM and Congress. - SSS Finance window for F2C2 to provide financing assistance for the operational as well as other long-term facilities requirements of the clustered projects of active SSS member-farmers and fisherfolk groups that may include special partnership with the Agriculture Credit and Policy Council (ACPC) and the Philippine Crop Insurance Corporation (PCIC).
F2 Basic Living Expenses Support System (F2-BLESS)	- DA will institutionalize a system to provide subsistence support for the family living expenses of F2C2 participating farmers and fishers in partnership with the LGUs at provincial, municipal and barangay levels to ensure families received adequate support for minimum basic needs whilst awaiting the sales of harvested products.
F2 Support for Communication and Networking (F2-SCAN)	- DA will assist F2C2 organized groups to access modern ICT facilities (including drones for agriculture) to enhance the production efficiency and farm/fishery management including access to their operational activities and updated market information for their products.
F2 Scholarships and Education Initiatives (F2 – SEI)	- DA will endeavor to partner with Department of Education (DepEd) and Commission on Higher Education (CHED) through non-formal education and distance learning programs to advance learning among F2C2 production entities and groups, as well as scholarship programs for the children of F2C2 families.

F2 Partnerships and Investor Linkages (F2-PI Link)	- DA Agriculture and Marketing Assistance Service (AMAS) together with DA Regional Offices and Bureaus will encourage and initiate the conduct of business between the F2C2 clusters and their potential partners/investors and provide the necessary assistance to promote the "Big Brother – Small Brother" partnerships.
F2 External Trade (F2-Extra)	- DA Foreign Agricultural Service (FAS) mobilized to gather information on trade and partnership opportunities from respective Posts and neighboring countries and assist in realizing marketing links for export trade as well as attracting potential foreign investment towards F2C2 production ventures.

F2C2 INCENTIVES	
Incentives facilitation	- Duty free importation on agri-fishery inputs, machinery and equipment. - Tax holdings under the BOI and other relevant legislation.
Credit enhancements	- Technical enhancements on-line trainings from ARTI, ACPC and DA Regional Offices in project proposal preparation and documentation. - Training for F2C2 finance officers and accountants on financial management and reporting.
Product development	- Bureau of Agricultural Research will prioritize support for the development and promotion of technologies for processing and packaging of goods and intermediary commodities produced by F2C2 community groups.

Annex 5 - Content of Capacity Building Development and Training Program on Climate Smart Agriculture for LGUs

1. Introduction to Climate Smart Agriculture (CSA)

- Definitions and principles of CSA**.**
- Importance of CSA in addressing climate change impacts.
- Key objectives and benefits of adopting CSA practices.

2. Climate Change and Agriculture

- Understanding climate change and its implications for agriculture.
- Impacts of climate change on crop production, water resources.
- Vulnerabilities and adaptation strategies for agriculture.

3. CSA Practices for Adaptation and Mitigation

- Outline of conservation agriculture.
- Definitions of agroforestry and silvopastoral systems.
- Applications of precision agriculture and digital technologies.
- Strategies for sustainable soil management.
- Efficient water management and irrigation techniques.
- Introduction of crop diversification and resistance varieties.
- Livestock management in changing climate.

4. Integration of CSA into farming systems

Use of farm-level planning for CSA.

- Adoption of integrated crop-livestock systems.
- Application of participatory approaches for CSA adoption.
- Financial and economic analysis of CSA practices.
- Scaling up of CSA at the landscape level.
- Use of Alternate Wetting and Drying techniques.

5. Climate information and decision support tools

- Climate data and information sources.
- Climate forecasting and early warning systems.

- Decision support tools for CSA planning and management.
- Risk assessment and management in CSA.

6. Gender and social considerations in CSA

- Gender dynamics and roles in agriculture.
- Women's empowerment and access to resources.
- Social inclusion and equity in CSA planning and implementation.
- Engaging stakeholders and building partnerships for CSA.

7. Policy and institutional support for CSA

- National and international policies and frameworks for CSA.
- Institutional arrangements for promoting CSA.
- Policy integration and coherence for CSA.
- Financial mechanisms and incentives for CSA adoption.

8. Case studies and best practices

- Successful examples of CSA implementation.
- Lessons learned and challenges in adopting CSA practices.
- Innovations and emerging trends in CSA.

9. Field visits and practical demonstrations

- Visits to sites where CSA techniques are being introduced including demonstration sites.
- Hands-on training on CSA practices and techniques.
- Field exercises and data collection for CSA planning.

10, Preparation of CSA Action Plans and Monitoring Systems

- Development of CSA Action Plans for the AMIA members.
- Group discussions and knowledge sharing sessions.
- Establishment of networking mechanisms and collaboration opportunities for CSA through AMIA CREATE networks.
- Identification of indicators and tools for assessment of CSA impacts.
- Techniques for sharing lessons learned and on-going evaluation of the mitigation and adaptation measures.

Annex 6: Inventory of all AMIA villages

Annex 6: Inventory of all AMIA villages

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
CAR	Benguet	Buguias	Abatan, Banagao & Calamagan	Typhoons & Monsoons Drought Wind Damage Erosion and crop saturation Water stress Loss of one cropping season.	Vegetable-Based Agro-Forestry Water Saving Technologies (Diversion Dam, SFR, Plastic Drums, and Water Pump, Plastic Hose) Crop-Livestock Integration Green House Seedling Nursery Structural Wind Breaks, Climate-resiliency field school (CRFS), Climate information service (CIS)	2
		Tublay	Capongga, Ambassador, Baa-yan, Daclan & Tublay Central	Typhoons & Monsoons Drought Wind Damage Erosion and crop saturation Water stress Loss of one cropping season.	Crop Livestock Integration and Establishment of Greenhouse, Structural windbreaks, rain shelter and nursery.	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Ilocos Sur	San Emilio	Kalumsing	Drought Soil erosion Landslide Typhoon	Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops - mungbean, ginger, turmeric, and ube Vermicomposting Rootcrop and fruit bearing trees production Value-Adding/Commodity Development	3
			Kalumsing, Lancuas & Sibsibbu	**Drought Soil erosion Landslide Typhoon**	**Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops such as mungbean, ginger, turmeric, ube Value-adding/commodity development Vermicomposting Root crop and fruit bearing trees production**	
			Sibsibbu	Drought Soil erosion Landslide Typhoon	Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops such as mungbean, ginger, turmeric, ube Value-adding/commodity development Vermicomposting Root crop and fruit bearing trees production	
		Lidlidda	San Vicente	Drought Soil erosion Landslide Typhoon	Free range chicken production Value-adding/ Meat Processing (Poultry production, agricultural supplies, food processing equipment, packaging materials)	2
		Alilem	Poblacion	Drought Soil erosion Landslide Typhoon	Free-range chicken and turkey production Fruit-bearing trees (Poultry production, Agricultural equipment and supplies, food processing, packaging materials, planting materials) Upgraded goat production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
I (Ilocos Region)	Ilocos Norte	Solsona	Nalasin, Talugtog, Lipay, San Julian	Typhoon Drought	Farm mechanization (combine harvester with baler) Silage production (pre-existing practice) Cattle production	1
		Badoc	**Madupayas**	**Landslide Erosion Typhoon, Flood**	**Vermicomposting, Soyabean production, Native pig production, Free-range chicken production, Organic vegetable production, value-adding, Crop-livestock integration & diversified vegetable farming**	3
		Marcos	Cacafean	Typhoon Landslide Drought Soil erosion	Integrated farming system of crops, livestock and poultry Free range chicken	1
	La Union	Luna	Nalvo Sur	Sea level rise Flood Storm surge Typhoon	Fermented Plant Juice (FPJ) Indigenous Microorganisms (IMO), Soyabean production, Native Pig Production, Vermicomposting, Silage making, Native pig production, Mushroom production, Crop-livestock integration & utilization of alternative feeding material such as the Trichantera and value-adding (meat processing)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	La Union	San Gabriel	Lipay Proper & Polipol	Landslide Drought Soil Erosion Typhoon	Free-range chicken production Vermicomposting , Mushroom production, Value-adding (Meat processing, noodle making, banana chips processing)	2
		San Fernando City	Bato Santiago Sur	Drought Landslide Erosion Flood Storm Surge Typhoon	Provision of Food processing equipment, Provision of Agricultural Supplies and Equipment Livestock and Poultry Production	2
I (Ilocos Region)	Pangasinan	Sison	Calunetan	Flooding Drought Typhoon Soil erosion Landslide	Free-range chicken production Vermicomposting Native pig production Value adding	2
		Anda	**San Jose**	**Typhoon Storm Surge Drought Sea level rise Soil erosion**	**Mushroom production Free-range chicken production Mallard duck production Value adding**	3
		Binalonan	Sta. Maria Norte	Typhoon Flood Landslide Drought Erosion	Free-range chicken production Turkey Production Upgraded Goat Production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Mabini	Caranglaan & San Pedro	Typhoon Landslide Drought Erosion	Free-range chicken production	1
		City of Ilagan	Santa. Victoria	Drought Flood Typhoon S\il erosion	AMIA Climate Information and Learning Center Agricultural machinery(4-wheel drive tractor, direct rice seeder) Nursery for fruit trees Forest tree seeding production Citrus Foundation Groove Crop diversification/integrated farming (communal garden, mushroom production, swine production, and chicken layer production) Soil analysis Provision of hybrid rice seeds Training on Organic Agriculture Production NC II funded by TESDA R02)	4

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
II (Cagayan Valley)	Isabela	Benito Soliven	Lucban	Drought Flood Tropical cyclone	Agricultural machineries (combine harvester, 4-wheel dive tractor,direct rice seeder) AMIA Climate Information and Learning Center Solar-powered irrigation system Alternate wetting and drying in rice Provision of hybrid rice seeds Soil analysis Greenhouse for vegetable seedling production Vermicomposting facility Brown rice mill Watershed development for Lucban SWIP Crop diversification/integrated farming (SWIP-based tilapia production, mushroom production, gulayan sa bakuran, dragon fruit production"	4
			Maluno Sur	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	2
			Maluno Norte	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	2
			Yeban Norte	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Cagayan	Buguey	Calamegatan	Tropical Cyclones Flooding Drought Salt Water Intrusion Sea Level Rice Storm Surge	Multi-purpose drying pavement (MPDP) Rice Production: Mono-cropping & low land irrigated & rainfed farming Aquaculture Extensive fish farming-cage system Irrigation ditch or pond systm Composite fish culture system	2
			Madalero	Typhoon Drought Flooding	Establishment of post-harvest facilities Farm mechanization	1
			San Lorenzo	Typhoon Drought Flooding	Establishment of post-harvest facilities Farm mechanization	1
		Ballesteros	**Nararagan**	**Typhoon Drought Flooding**	**Mono cropping (Rice-rice, corn-corn, vegetales-vegetables) Perennial crops(citrus) & vegetable inter cropping Multi-purpose drying pavement (MPDP) Palay Storage Greenhouse**	3
			Mala Weste	Typhoon Drought Flooding	Establishment of post-harvest facilities	1
	Quirino	Nagtipunan	Giayan	Typhoon Drought Flooding	Establishment of post-harvest facilities Greenhouse Nursery	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Tarlac	Victoria	Mangolago	Flood Drought Typhoon	Alternate Wetting and Drying (AWD) Rice, Climate-Smart Variety Corn, Crop rotation & zero tillage Corn, Climate-Smart Variety Sweet Potato DAR's CLA Stress Tolerant Varities AWD Livestock production Vegetable Production	1
			Cruz	**Flood Drought Typhoon**	**Hand Tractor Combine Harvester Mechanical Transplanter Bailer Portable Rice Mill Goat STW Water Buffalo Free Range Chicken Cattle Dairy Box Ice Cream Processing Automated Weather Station Greenhouse**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
III (Central Luzon)		Lapaz	**Caut**	**Flood Drought Typhoon**	**Hand Tractor Solar Powered Fertigation System Reaper Thresher Combine Harvester Mechanical Dryer Rice Mill Generator Set Warehouse w/ Recirculating Dryer Hauling Mungbean trading post Poultry**	3
		Paniqui	Salomague, San Isidro	Typhoon Flooding	System of rice intensification and use of adapted varieties Use of quality and well adapted seeds Organic fertilization Livelihood diversification	1
	Zambales	San Antonio	Burgos	Landslide Erosion	Livestock (Carabao and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			San Gregorio	Landslide Erosion		1
			San Esteban	Landslide Erosion	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Nueva Ecija	Carranglan	Carranglan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			Putlan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			Capintalan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
	Bulacan	Pandi	Cacarong Matanda	Typhoon Drought Flood	Garden Tools Vegetable Seeds	1
			Malibong Bata	Typhoon Drought Flood	Garden Tools Vegetable Seeds Training on Meat Processing	1
			Siling Matanda	Typhoon Drought Flood	Garden Tools Vegetable Seeds Training on Mushroom Production	1
		San Luis	San Jose	Typhoon and flood		1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-A	Quezon	San Francisco	Huyon-Uyon	Typhoon Drought Soil Erosion.	Use of stress-tolerant varieties Use of mungbean as alernate crop during El Nino Rockwall terracing Coconut-based integrated farming Rainwater harvesting – Vegetable Use of stress-tolerant varieties Strip cropping (corn and ubi) Distribution of jackfruit and tamarind seedlings and corn seeds SUREAid	3
			Casay	Typhoon Drought Soil Erosion.	Use of mungbean as alternate crop during El Nino Coconut-based integrated farming Low External Input Native Pig Production Rainwater harvesting – Vegetable Distribution of corn seeds SUREAid	3
			Sto. Nino	Typhoon Drought Soil Erosion.	Use of stress-tolerant varieties Use of mungbean as alternate crop during El Nino Corn-based cropping systemts Sloping Agricultural Land Technology (SALT) and agro-forestry Coconut-based integrated farming Rainwater harvesting – Vegetable Strip cropping (corn and ubi) CIS	3
			Gapas	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-A (CALABARZON)		Guinayangan	Magsaysay	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4
			Himbubulo Weste	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4
		Lopez	**Bacungan**	**Drought, Typhoon Flood**	**Rice - Rice + Vegetables + Corn (Organic fertilizers, complete fertilizer, ammophos), CIS**	3
			Villa Hermosa	**Drought, Typhoon Flood**	**Rice - Rice + Vegetables + Corn (Organic fertilizers, complete fertilizer, ammophos), CIS**	3
		San Juan	Hugom	Typhoon Storm Surgex Flood Drought	Seeds (rice, mungbean, peanut) Tissue-cultured banana seedlings Organic and Inorganic Fertilizer Pesticides Climate Information Services CRA Technology Trainings and Seminars (Tissue-cultured bananas planting and management)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Batangas	San Juan	Talahiban	Typhoon Storm Surgex Flood Drought	Seeds (rice, mungbean, peanut) Tissue-cultured banana seedlings Organic and Inorganic Fertilizer Pesticides Climate Information Services CRA Technology Trainings and Seminars (Tissue-cultured bananas planting and management)	1
		Nasugbu	**Bulihan**	**Landslide Drought Erosion**	**Trainings (technical, management, financial, and marketing Rice mill operation and management Bookkeeping and financial reporting) Provision of weighing balance and portable filled bag closing machine**	3
		Bulalacao	**San Roque, San Juan, Benli**	**Drought High temperatures Soil erosion Flooding**	**Native chicken and pig Planting materials (upland rice, tissue cultured lakatan and saba, corn, budded calamansi, pineapple slips, cassava, vegetable seeds) Garden tools Farm machineries (hand tractor with trailer, water pump and engine set, mechanical shredder and mini palay thresher) Vermicomposting, trainings (Bio-Intensive gardening, Native animal production, SALT, IPM, Bee products and by-products, Ube Production) Geotagging and fertilizer recommendation based on soil analysis Animal HealthCare (vitamin supplementations, deworming, treatment of diseases, supplemental of iron, anti anemia and castration for piglets) Organic and inorganic fertilizers**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-B (MIMAROPA)	Oriental Mindoro	**Mansalay**	**Sitio Inakay Cabalwa Sitio Bait, Panaytayan**	**Drought High temperatures Soil erosion Flooding Storm surge**	**Native Pig and Upgraded buck Planting Materials (papaya, calamansi, vegetable seeds, tissue cultured lakatan and saba, ube, pineapple, forage seeds and cuttings) Garden tools Trainings (Bio-Intensive gardening, Native animal production, SALT, Ube production) Geotagging and fertilizer recommendation based on soil analysis Animal Health Care (vitamin supplementations Deworming Treatment of diseases Supplemental of iron Anti anemia and castration for piglets) Farm machinery (water pump) Plastic mulch Organic and inorganic fertilizers**	3
		Pola		Drought High temperatures Soil erosion Flooding Storm surge	Native Pig and chicken Planting Materials (papaya, dalandan, vegetable seeds, banana, pineapple, langka) Garden tools Trainings (Bio-Intensive gardening, Native animal production, SALT, Ube Production) Water pump Geotagging and fertilizer recommendation based on soil analysis Organic and inorganic fertilizers	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Marinduque	Torrijos	Tigwi & Sibuyao	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Planting materials (Corn, Rice, Mungbean), Ube planting materials (layouting and planting), 1 unit mini palay thresher	2
		Buenavista	Yook, Tungib Lipata & Timbo and Sihi	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Planting materials (Corn, Rice, Mungbean), Ube planting materials (layouting and planting),	
		Boac	Daypay, Apitong, Agat Boac, Bantay & Bantad	Erosion Landslide Drought,	CIS, CRFS	1
	Palawan	San Vicente	Caruray & Decala	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Ube planting materials (layouting and planting) Native Pigs	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Palawan	Roxas	Dumarao & Minara	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Native Pigs Trainings on Native Pig Production and Bio Intensive Gardening	1
	Camarines Sur	Pamplona	Cagbunga	Saltwater intrusion Drought Flood Typhoon Strong wind	Production support (Rice Stress-tolerant Varieties Seeds, Farm Machinery, High Value Crops Seeds, Poultry [Mallard Duck], Poultry feeds Fertilizers) Trainings Incubator Knapsack Sprayer Laminated sacks, Various garden tools	2
			Tampadong	Droughtx Flood Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] High Value Crops Seeds; Poultry [Mallard Duck] Poultry feeds, fertilizers) Various garden tools Knapsack Sprayers Laminated sacks Incubator Trainings Farm mechanization	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
			Veneracion	Droughtx Flood Typhoon	Production support (Rice Stress-tolerant Varieties Seeds; Poultry (White Leghorn) Poultry feeds Cages Supplements and accessories High Value Crops Seeds, fertilizers) Solar Powered Irrigation System Tractor Trainings Various garden tools Knapsack Sprayers Laminated sacks	2
	Camarines Norte	Paracale	Labnig	Drought Flooding Salt water intrusion Landslide Soil erosion Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
V (Bicol)		Capalonga	Alayao	Drought Typhoon Salt water intrusion Strong wind Landslide Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) arm inputs and machineries Incubator Rain shelter/UVS Plastic	2
	Albay	Tiwi	Joroan	Drought Flooding Salt water intrusion Landslide Soil erosion Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds Cages Supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Pio Duran	Marigondon	Drought Typhoon Salt water intrusion Strong wind Landslide Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, RIR] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Livestock [Carabao, Goat]) Incubator Rain shelter/UVS Plastic	2
	Sorsogon	Prieto Diaz	San Isidro	Drought Typhoon Salt water intrusion Strong wind Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2
		Castilla	Dinapa	Drought Typhoon Strong wind Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Catanduanes	Viga	Peñafrancia	Drought Flooding Salt Water Intrusion	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2
	Catanduanes	Gigmoto	Biong	Flood (and flash flooding brought by rains in Pedro Summit) Storm Surge Landslide Drought Sea level rise	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
V (Bicol)	Masbate	Uson	San Mateo	Drought Flooding Salt Water Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2
			Quezon	Drought, Flooding Salt Water Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2
		Mandaon	Alas	Drought Flooding Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VI (Western Visayas)	Iloilo	**Banate**	**Carmelo, Merced & Libertad**	**Dry Spell Typhoon Flood**	**Sloping Agricultural Land Technology (SALT) Integrated Farming Small Water Impounding Project (SWIP) System for rice intensification (SRI) Native Pig and Babuyang Walang Amoy Production Technology Corn-Husk Utilization in Handicraft Making Buri and Pandan Weaving Training Banana Production Rain Water Harvester for Backyard vegetable gardening/cutflower Rice production Organic fertilizer production Goat raising Squash production**	3
		Bingawan	Alabidhan, Poblacion, Quinangyana & Quinar-upan	Flood Dry Spell Typhoon	System of Rice Intensification	2
		Estancia	Lonoy, Tabua & Cano-an	Typhoon Drought Flood Landslide Sea level rise Erosion Storm surge Saltwater intrusion	Rainwater Harvester Project Babuyang Walang Amoy Project Organic Vegetable Production Technology Organic Fertilizer Production Technology (Vermicomposting System of Rice Intensification	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		San Rafael	Poblacion, Ilong Bukid & San Andres	Typhoon Flooding Soil Erosion	Organic Vegetable Production Technology Babuyang Walang Amoy Production Technology Native Pig Production Technology System of Rice Intensification Organic Fertilizer Production (Vermicomposting)	2
	Aklan	**Banga**	**Mambog , Muguing & Linabauan Sur**	**Flood, Typhoon Dry Spell**	**Native Pig Production Native Chicken CRFS & its Components (Organic Vegetable Production, SRI, Organic Fertilizer and Soil enhancer production (Bokashi and KNF) Agro-Ecosystem Analysis (AESA)-Ecological Pest Management (EPM) Use of 10-day weather forecast and Advisory Rice Phenology Biodiversity and Climate Change) Incubation packages (egg layer production, & Swine production)**	3
		Batan	Palay, Ambolong	Flooding Dry spell	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
		Numancia	Aliputos, Laguinbanwa East, Bubog & Laguinbanwa	Flood Typhoon Dry Spell Earthquake		2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Antique	Valderrama	Ubos & Takas	Flood Typhoon Landslide Earthquake	Babuyang Walang Amoy Production Technology Native Chicken Production Technology Native Pig Production Technology Organic Vegetable Production Technology Organic Fertilizer Production Technology (Vermicomposting) Brown Egg Laying Production Technology System of Rice Intensification (SRI) and Feed Formulation	2
		Anini-y	Nato-Butuan, San Roque, Magdalena & Salvacion	Typhoon Flood Landslide Soil Erosion Drought		2
		Sibalom	Bontol & Pis-anan	Flood Typhoon Landslide Earthquake	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
		Pontevedra	**San Pedro, Jolongajog & Binuntucan**	**Typhoon Drought Flood Landslide Sea level rise Erosion Storm surge**	**Native Pig Production Native Chicken Production CRFS and its components (Organic Vegetable Production, CRFS and SA Orientation, SRI, Organic Fertilizer and Soil Enhancer Production [Bokashi and KNF] Incubation packages (Vegetable Production & Swine Production)**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VI (Western Visayas)	Capiz	Dao	Duyoc, Lacaron	Typhoon Landslide Flooding Flash Floods	System of Rice Intensification	2
		Panit-an		Typhoon Drought Flood, L:andslide sea level rise Erosion Storm surge Saltwater intrusion	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
	Guimaras	**Sibunag**	**Sebaste, Sabang & Bubog**	**Storm surge Sea level rise Drought Erosion Landslide Flood, typhoon**	**Native Pig Production Native Chicken CRFS & its Components (SRI, Organic Vegetable Production, Production, Tilapia Production, CRFS and SA Orientation, Organic Fertilizer and Soil Enhancer Production (Bokashi and KNF) Agro-Ecosystem Analysis (AESA)-Ecological Pest Management (EPM) Use of 10-day weather forecast and Advisory, Biodiversity and Climate Change) Incubation packages (Organic Vegetable Garden, Native Chicken meat & egg production, seed reserve/rice bending, native/organic hog raising, fresh water tilapia)**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		San Lorenzo	M. Chavez, Cabano, Igcawayan	Typhoon Earthquake Landslide	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Negros Occidental	**Pontevedra**	**Gen. Malvar & San Isidro**	**Droughtx Typhoon Flooding**	**Organic Red Rice Production Native Pig Production CPAR on Rice-based farming system (Rice – Rice – Mungbean + Vegetables and Spices), Vegetable Production (Pakbet) Soil Ameliorants Production and Onion Bulb Production Soybean production Enhanced papaya production Muscovado production and processing Quail Egg Production through the use of climate-resilient incubator Solar Power Irrigation System Rainwater Harvester Installation of Automated Weather Station Climate AMIA Training Center Soybean Production and Processing Enhanced Papaya Production Muscovado Processing, Quail Egg Production Solar Power Irrigation System Season-Long Climate Resiliency Field School AMIA Training Center Automated Weather Station Rain Water Harvester Native Pig Production Vegetable Production, Onion Production CPAR Rice-Based Farming Soil Ameliorants**	3
		Cauayan	Masaling			2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Sagay City	Rizal & Lopez Jaena	Typhoon	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
VII (Central Visayas)	Cebu	Daanbantayan	Bagay	Typhoon Drought	Trainings Farm inputs (organic fertilizers such as chicken dung and vermicast, molasses and drum) Climate information Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken Technical assistance	2
			Bitoon	Typhoon Drought some areas are prone to flooding	Trainings upgraded goats Farm inputs (organic fertilizers such as chicken dung and vermicast) Molasses and drum), Climate information Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken, Technical assistance	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Dalaguete	Montalongon	Landslide Erosion Drought	Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken Trainings Technical assistance	2
	Bohol	Carmen	Buenos Aires	Flooding Drought Landslide	Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
VII	Bohol	Danao	Taming	Drought Flooding	Corn seeds Corn sheller Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
		Mabini	Paraiso	Flooding Drought Landslide Salt water intrusion	Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
		Ayungon	Carol-an	Landslide Soil Erosion Typhoon	Techno Demo on Corn-Peanut Intercropping (CRA), Climate Information System (CIS)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
(Central Visayas)	Negros Oriental	Zamboanguita	Mayabon	Soil erosion Drought Flood Tropical Cyclone	Balanced Fertilization Strategy technology demonstration (for conduct)	2
	Siquijor	San Juan	Tubod	Flood	Vegetable Seeds HDPE Drums Farm Tools and Materials Trainings and technical assistance	2
	Cebu	Daanbantayan		Landslide Erosion Wind Sea level rise Storm surge		1
		Bantayan	Guiwanan	Wind Erosion	CIS, CRFS	1
			Tamiao	Landslide Erosion Wind	CIS, CRFS	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Leyte	**Babatngon**	**Uban**	**Typhoon; Soil Erosion; Saltwater Intrusion; Rise in Temperature ; and Strong Winds**	**Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut, Jackfruit and Calamansi]; and Farm Tools and Equipment) Biological Assets (Native Chicken) Stainless Tank Weather Board Vermibed Construction Materials, Trainings (Climate Resilient Rice Production, Climate Resilient Vegetable Production, Climate Resilient Mushroom Production, Climate Resilient Native Chicken Production, Community Organizing and Leadership, Values Orientation and Formation, Farm Record Keeping, Farm Marketing Strategies Orientation, Meat Processing and Preservation (Value-Adding), Food Processing on Vegetable and Fruit (Value-Adding), Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting, CIS)**	3
		Burauen	Matin-ao	Typhoon, Landslide, Earthquake	Production support (Vegetable Seeds) Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting) CIS	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VIII (Eastern Visayas)	Samar	San Sebastian	Camanhagay	Flood, Typhoon, Drought, Saltwater Intrusion, and Soil Erosion	Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut, Jackfruit and Calamansi] Farm Tools and Equipment), Biological Assets (Native Chicken, Swine and Ducks), Stainless Tanks Weather Board Piggery and Poultry House construction materials Trainings (Climate Resilient Rice Production; Climate Resilient Vegetable Production; Climate Resilient Mushroom Production; Climate Resilient Native Chicken Production; Community Organizing and Leadership; Values Orientation and Formation) Farm Record Keeping Farm Marketing Strategies Orientation Meat Processing and Preservation (Value-Adding) Food Processing on Vegetable and Fruit (Value-Adding) Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting CIS	discontinueed ; for relocation
		Pinabacdao	Parasanon	Flood, Typhoon, Landslide, Earthquake, Drought	Training Supplies; Vegetable Seeds Weather Board Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting) Climate Information Services	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Biliran	**Caibiran**	**Manlabang**	**Flood, Rise in Temperature , Sea Level Rise, Typhoon, Landslide, Drought, and Strong Winds,**	**Stainless Tank Weather Board Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut] Farm Tools and Equipment) Discharge PVC pipes/Hoses and Garden Hoses Trainings (Climate Resilient Rice Production, Climate Resilient Vegetable Production, Climate Resilient Mushroom Production, Climate Resilient Native Chicken Production, Community Organizing and Leadership, Values Orientation and Formation, Farm Record Keeping, Farm Marketing Strategies Orientation, Meat Processing and Preservation (Value-Adding), Food Processing on Vegetable and Fruit (Value-Adding)**	3
	Southern Leyte	Libagon	Pangi	Flood Saltwater Intrusion Landslidex Earthquakex Drought	Production support (Vegetable Seeds) Weather Board Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting; CIS)	2
VIII (Eastern	Northern Samar	Gamay	Uban	Tropical Cyclones Flood Sea Level Rise	Orientation on Organic Fertilizer Production Orientation on Livestock and Poultry Farm Management Practices Orientation on Values Formation and Community Organizing	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
Visayas)	Eastern Samar	General Mcarthur	Pingan	Landslide Drought Erosion	Orientation on Values Formation and Community Organizing	2
	Samar	Catbalogan	Iguid & Old Mahayag	Flooding Drought Storm surge	CIS, CRFS	1
	Zamboanga Sibugay	Imelda	La Victoria	Flooding Drought Soil erosion	Production Support (Vegetable production, Duck production) Training (Vegetable, cacao and coffee, rubber production) Farm machineries and equipment	2
			Mali Little Baguio	Flooding Drought Soil erosion	Production Support (Vegetable production, Duck production) Training (Vegetable, cacao and coffee, rubber production) Farm machineries and equipment	2
	Zamboanga del Sur	Tambulig	Maya Maya	Insufficient waterdrought Soil erosion	Production support (Pineapple sucker, Drums, Complete Fertilizers, Foliar Fertilizer, Plastic crates, Assorted vegetable seeds, Banana plantlets, Garden tools) Trainings (Banana Production, SALT, Vegetable Production, Technology Caravan) CIS	2
		San Pablo	Mabuhay	Insufficient waterdrought Soil erosion	Production support (Banana Plantlets, Foliar Fertilizers, Vegetable Tray, Vegetable Seeds, Complete Fertilizers) Trainings (Banana Production, SALT, Technology Caravan) CIS	1
		Dimataling	Sugbay Uno	Insufficient waterdrought Soil erosion	Production support (Banana Plantlets, Foliar Fertilizers, Vegetable Tray, Vegetable Seeds, Complete Fertilizers) Trainings (Banana Production, SALT, Technology Caravan) CIS	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IX (Zamboanga Peninsula		Ramon Magsaysay	Bambonduit & Poblacion	Landslide Erosion Drought		1
		Manukan	Don Jose Aguirre	Drought Fooding Landslide	Production support (Concrete post for dragon fruit production) Vegetable seeds and trays, fertilizer, mulching materials Banana Lakatan Plantlets Hybrid Rice Corn seeds Livestock and Poultry) Farm machineries and equipment (Corn sheller, Water pump, Hand tractor, Knapsack Sprayer) CIS Trainings (Vegetable Production, Banana Production, SALT), Technology Demonstration on SALT	2
		Jose Dalman	Labakid	Flooding Drought Soil erosion/landslide	Production support (Banana Plantlets Vegetable Seeds, foliar fertilizer, plastic mulch); Training (CIS, Banana Production, Technology Caravan, SALT), CIS	1
		Labason	Gabu	Flooding Drought Soil erosion/landslide	Production Support (Banana Plantlets, Foliar Fertilizer, Vegetable Seeds, UV Film, Garden Hose, Fertilizers) Trainings (Technology Caravan) CIS Banana Production, SALT)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Zamboanga del Norte	Liloy	San Francisco	Flooding Drought Soil erosion/land slide Storm surge	Production support (Banana plantlets; Vegetable Seeds with fertilizer, plastic mulch, UV film) Nursery facility Hand tractor with rotavator Pump irrigation for open source Trainings (SALT, Banana production, Peanut Production) CIS	2
		Mutia	Alvinda	Droughtx Soil erosion/land slide	Production Support (Banana Plantlets, Vegetable Seeds with foliar fertilizer and plastic mulch) SALT [upland rice + banana]) Trainings (Banana Production, Vegetable Production, SALT) CIS	2
		Piñan	Teresita	Flooding Drought Landslide/soil erosion.	Production Support (Vegetable seeds, Complete Fertilizers, Foliar Fertilizers, UV film, Garden Hose, Banana Plantets), Trainings (SALT, Banana Production, Vegetable production), CIS	1
		Siayan	Litolet	Flooding Drought Soil erosion Insufficient water supply	Trainings (SALT, Banana production, Technology caravan) Production support (Banana plantlets, Foliar Fertilizers) CIS	1
		Siocon	Siay	Flooding Drought Soil erosion Insufficient water supply	Production support (Banana Plantlets, Vegetable Seeds, Biological Control Agents, Foliar Fertilizers, Plastic Mulch) Trainings (CIS, Banana Production, Technology Caravan, SALT) CIS	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Tampilisan	Lawaan	Flooding Drought Soil erosion/land slide	Production support (Banana plantlets, Foliar Fertilizers, Vegetable Seeds, UV Film, Plastic Mulch), Trainings (Banana Production, Technology Caravan, SALT, CIS), CIS	1
		Dapitan	Barcelona	Floodx Insufficient water supplyx Drought Soil Erosion	Production Support (Vegetable seeds with foliar and inorganic fertilizer, UV film, garden hose, Banana Plantlets) Trainings (SALT, Banana Production) CIS	1
		Libona	**Gango, Kinawe, Kiliog**	**Drought Landslide Soil erosion**	**Corn (Biodynamics/Organic Farming, Maize-banana crop diversification) Crop (corn, cassava) Livestock (native swine, cattle, and Itik Pinas) integration**	3
		Baungon	Liboran	Floods Erosion Drought	Tolerant variety/Corn/cassava relay; crop diversification Native swine Native chicken Itik pinas production Cattle production Plastic net dryer Water harvesting various fruit treesClimate information services Financial institutions(ACPC/PCIC/MCCB/LBP/DBP)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
X (Northern Mindanao)	Bukidnon	**Manolo Fortich**	**Lingi-on**	**Erosion**	**Tolerant variety/Corn/cassava relay** **Cop diversification** **Native swine** **Native chicken** **litik pinas production** **Cattle production** **Plastic net dryer** **Water harvesting** **various fruit treesClimate information services** **Financial institutions(ACPC/PCIC/MCCB/LBP/DBP)** **Corn Hybrid Seeds** **Fertilizers** **RTL 8 modules** **Goat production** **Corn hammer mill** **Forage chopper**	3
	Camiguin	Sagay	Bonbon	Tropical cyclone Flood Landslide Storm surge Sea level rise Drought Erosion	Soil conservation; Tolerant corn cultivars; vegetables; fruit trees; CIS; Financial Institutions (ACPC/MCCB/LBP/DBP)	2
		Cagayan de Oro City	Pagalungan	Soil Erosion Landslide Drought	Soil conservation Tolerant corn cultivars Vegetables Fruit trees CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Misamis Oriental	Opol	Bagocboc	Soil Erosion Landslide Drought	Soil conservation Tolerant corn variety Cassava Coffee production in the contour Native chicken Water harvesting CIS Institutions (ACPC/MCCB/LBP/DBP)	2
		Magsaysay	Gumabon, Mindulao, Tama & San Isidro	Drought Srosion Floods	Trainings (CIS, CRA & CrFFS) Goat Production RTL Swine Production Poultry Production Hybrid corn seeds Inorganic Fertilizers Vegetables seed 5 in1 Fruit trees Certified Seeds (Peanut, Soybean) Farm tools (Empty drum, Knapsack sprayers, bolos, seedling tray, garden hose with nozzles, garden wreck, shovels)	2
		Balingasag	Dumarait	Drought Landslide Erosion Flooding	Organic matter application, crop and poultry and fishery integration(ACPC/MCCB/LBP/DBP)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Misamis Occidental	Baliangao	Sinian	Flood Soil erosion Drought	Soil conservation tolerant corn variety Cassava Coffee production in the contour Native chicken Water harvesting CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	1
	Lanao del Norte	Sultan Naga Dimaporo	Mamagum, Bansarvil II & Campo Islam	Soil Erosion Drought Landslide	Soil conservation tolerant corn variety Cassava Coffee production in the contour native chicken water harvesting CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	1
	Davao del Sur	Davao City	**Suawan, Marilog Dist.**	**Landslide Soil Erosion Flash Floods**	**Adlay production Provision of seeds and fertilizers Fertilizers Farm Tools & Supplies**	3
			Tamugan & Marilog Dist.	Flooding Flash Floods (near from the river sides).	Technology on production of adlay Provision of seeds and fertilizers Farm Tools & Supplies	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
XI (Davao)			Magsaysay	Soil erosion Landslide Flash floods (near from the river sides)	Fertilizers Farm Tools & Supplies	2
		Sta. Cruz	**Jose Rizal**	**Long drought Soil erosion**	**Coffee Rehabilitation/Rejuvenation Integrated Farming System (Coffee + Cacao + Abaca + Banana)**	3
	Davao Oriental	Governor Generoso,	Surop	Long drought High tide Storm Surge during Habagat	Cacao rehabilitation and integrated farming system (e.g., formative pruning; pest & disease detection and control; pod sleeving) Soil sampling collection & analysis Provision of fertilizers, ameliorants and pesticides Pod borer detection	2
		Lupon,	Marayag	Land slide Flood prone	Cacao rehabilitation and integrated farming system (e.g. formative pruning; pest & disease detection and control; pod sleeving) Soil sampling collection & analysis Provision of fertilizers, ameliorants and pesticides Pod borer detection	2
			Calapagan	Land slide Flood prone	Diversified farming- Coconut based farming system (Coconut+Cacao+Banana), Coffee and vegetable farmings	2
			Mariano Marcos	**Land slide Flood prone**	**Diversified farming- Coconut based farming system (Coconut+Cacao+Banana), Coffee and vegetable farming**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Manay	Del Pilar	Long drought High tide Storm Surge during Habagat	Fertilizers Trainings Corn Sheller Corn Seeds Cacao Grinder	2
	Davao del Norte	Tagum City	Pagsabangan, Nueva Fuerza, Cuambogan, La Filipina, New Balamban,& San Agustin	Flooding	Adlay production Provision of seeds and fertilizers Farm Tools & Supplies Trainings	1
	North Cotabato	Pigcawayan	Bulocaon	Drought Flood Landslide	Adoption of high yielding/stress/drought Tolerant varieties of crops and seeds Backyard gardening Integrated Farming Agro forestry Mallard ducks Native Swine and Goat Production; Low cost rain water harvesting facility; Intercropping; Crop Rotation	2
			New Igbaras			2
			Malu-ao			2
		Tulunan	Culasi	Drought Flood Landslide	Adoption of high yielding/stress/drought tolerant varieties of crops and seeds Swine Production Organic Farming Vermicomposting Issuance of climate weather forecast Integrated farming; Provision of hauling truck and horses	2
			Bacong			1
			New Panay			1
			Nabundasan			1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
XII (SOCCSKSARGEN)		President Roxas	Datu Sundungan	Landslide Drought Wind	Goat Production Vegetable Production Upland Rice Production Corn Production Coconut Production Rubber Production Backyard Gardening Organic Farming Issuance of climate weather forecast	2
			Bato			1
			Lama Lama			1
	South Cotabato	Lake Sebu	Lake Lahit	Drought Landslide Erosion	Corn Production Organic Vegetable Production Organic Farming Integrated Farming Food Processing Issuance of climate weather forecast	2
			Seleton			2
			Malipayon			2
			Lamlahak			2
	Sultan Kudarat	Columbio	Sucob	Tropical Cyclone Erosion Landslide.	Adoption of high yielding/stress/drought tolerant varieties of crops and seeds; Goat Production; Free Range Chicken Production; Vegetable Production; Mallard Duck Production; White Corn Production; Issuance of climate weather forecast; Low cost rain water harvesting	1
			Sinapulan	Tropical Cyclone Erosion Landslide.		2
			Mayo	Tropical Cyclone Erosion Landslide.		2
	Saragani	Malapatan		Drought Flash flood Landslide	Issuance of climate weather forecast;	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
CARAGA	Agusan del Norte	Jabonga,	Magsaysay	Flood Typhoon	Swine Production, Free-Range Native Chicken, Goat Production, Vegetable Production (assorted vegetables)	2
			Cuyago	Flood Typhoon	Swine Production, Free Range Native Chicken, Organic Production (Vermi production and vermicomposting)	2
			Libas	Flood Typhoon		1
	Surigao Del Norte	San Francisco,	Jubgan	Landslide Flood Earthquake Typhoon	Vegetable Production Cassava Production Multi-purpose shed Greenhouse	2
			Banbanon	Landslide Flood Earthquake Typhoon	Poultry Production Vegetable Production Cassava production Rice Production Greenhouse	2
			Diaz	Flood Earthquake Typhoon Salt water intrusion	Mallard Duck Production Vegetable Production Rice Production Greenhouse	2
			P-1 Navarro	**Tropical Cyclone Landslide Drought Soil Erosion**	**Vegetable seeds Corn seeds Cassava planting materials Plastic drums Greenhouse Multi-purpose shed Swine production**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Dinagat Island	Tubajon	**P-6 Sitio Bagong Silang, Santa Cruz**	**Tropical Cyclone Landslide Drought Soil Erosion**	**Vegetable seeds Cassava seed pieces Plastic drums Greenhouse Native chicken production Corn seeds**	3
			P-2 Diaz	Tropical Cyclone Landslide Drought Soil Erosion	Vegetable seed Cassava planting materials Corn Rice seeds Greenhouse Mallard ducks	2
	Surigao del Sur	Lanuza	Agsam	Flood Drought Typhoon	Rice Corn Vegetable Livestock Poultry	2
			Sibahay	Flood Strong wind Landslide Typhoon	Rice Corn Coconut	2
			Bunga	Flood Drought		2
			Labnig	Flood Landslide Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Agusan del Sur	Talacogon	Buena Gracia	Flood Strong winds Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2
			Zillovia	Flood Strong winds Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2
BARMM	Maguindanao	Upi	Nangi	Landslide	CIS, CRFS	1
			Rempes	Landslide Erosion	CIS, CRFS	1

Annex 6: Inventory of all AMIA villages

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
CAR	Benguet	Buguias	Abatan, Banagao & Calamagan	Typhoons & Monsoons Drought Wind Damage Erosion and crop saturation Water stress Loss of one cropping season.	Vegetable-Based Agro-Forestry Water Saving Technologies (Diversion Dam, SFR, Plastic Drums, and Water Pump, Plastic Hose) Crop-Livestock Integration Green House Seedling Nursery Structural Wind Breaks, Climate-resiliency field school (CRFS), Climate information service (CIS)	2
		Tublay	Capongga, Ambassador, Baa-yan, Daclan & Tublay Central	Typhoons & Monsoons Drought Wind Damage Erosion and crop saturation Water stress Loss of one cropping season.	Crop Livestock Integration and Establishment of Greenhouse, Structural windbreaks, rain shelter and nursery.	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Ilocos Sur	San Emilio	Kalumsing	Drought Soil erosion Landslide Typhoon	Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops - mungbean, ginger, turmeric, and ube Vermicomposting Rootcrop and fruit bearing trees production Value-Adding/Commodity Development	3
			Kalumsing, Lancuas & Sibsibbu	**Drought Soil erosion Landslide Typhoon**	**Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops such as mungbean, ginger, turmeric, ube Value-adding/commodity development Vermicomposting Root crop and fruit bearing trees production**	
			Sibsibbu	Drought Soil erosion Landslide Typhoon	Crop-livestock integration (goat, free-range chicken, duck (itik), native pig) Planting drought tolerant crops such as mungbean, ginger, turmeric, ube Value-adding/commodity development Vermicomposting Root crop and fruit bearing trees production	
		Lidlidda	San Vicente	Drought Soil erosion Landslide Typhoon	Free range chicken production Value-adding/ Meat Processing (Poultry production, agricultural supplies, food processing equipment, packaging materials)	2
		Alilem	Poblacion	Drought Soil erosion Landslide Typhoon	Free-range chicken and turkey production Fruit-bearing trees (Poultry production, Agricultural equipment and supplies, food processing, packaging materials, planting materials) Upgraded goat production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
I (Ilocos Region)	Ilocos Norte	Solsona	Nalasin, Talugtog, Lipay, San Julian	Typhoon Drought	Farm mechanization (combine harvester with baler) Silage production (pre-existing practice) Cattle production	1
		Badoc	**Madupayas**	**Landslide Erosion Typhoon, Flood**	**Vermicomposting, Soyabean production, Native pig production, Free-range chicken production, Organic vegetable production, value-adding, Crop-livestock integration & diversified vegetable farming**	3
		Marcos	Cacafean	Typhoon Landslide Drought Soil erosion	Integrated farming system of crops, livestock and poultry Free range chicken	1
	La Union	Luna	Nalvo Sur	Sea level rise Flood Storm surge Typhoon	Fermented Plant Juice (FPJ) Indigenous Microorganisms (IMO), Soyabean production, Native Pig Production, Vermicomposting, Silage making, Native pig production, Mushroom production, Crop-livestock integration & utilization of alternative feeding material such as the Trichantera and value-adding (meat processing)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	La Union	San Gabriel	Lipay Proper & Polipol	Landslide Drought Soil Erosion Typhoon	Free-range chicken production Vermicomposting , Mushroom production, Value-adding (Meat processing, noodle making, banana chips processing)	2
		San Fernando City	Bato Santiago Sur	Drought Landslide Erosion Flood Storm Surge Typhoon	Provision of Food processing equipment, Provision of Agricultural Supplies and Equipment Livestock and Poultry Production	2
I (Ilocos Region)	Pangasinan	Sison	Calunetan	Flooding Drought Typhoon Soil erosion Landslide	Free-range chicken production Vermicomposting Native pig production Value adding	2
		Anda	**San Jose**	**Typhoon Storm Surge Drought Sea level rise Soil erosion**	**Mushroom production Free-range chicken production Mallard duck production Value adding**	3
		Binalonan	Sta. Maria Norte	Typhoon Flood Landslide Drought Erosion	Free-range chicken production Turkey Production Upgraded Goat Production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Mabini	Caranglaan & San Pedro	Typhoon Landslide Drought Erosion	Free-range chicken production	1
		City of Ilagan	Santa. Victoria	Drought Flood Typhoon S\il erosion	AMIA Climate Information and Learning Center Agricultural machinery(4-wheel drive tractor, direct rice seeder) Nursery for fruit trees Forest tree seeding production Citrus Foundation Groove Crop diversification/integrated farming (communal garden, mushroom production, swine production, and chicken layer production) Soil analysis Provision of hybrid rice seeds Training on Organic Agriculture Production NC II funded by TESDA R02)	4

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
II (Cagayan Valley)	Isabela	Benito Soliven	Lucban	Drought Flood Tropical cyclone	Agricultural machineries (combine harvester, 4-wheel dive tractor,direct rice seeder) AMIA Climate Information and Learning Center Solar-powered irrigation system Alternate wetting and drying in rice Provision of hybrid rice seeds Soil analysis Greenhouse for vegetable seedling production Vermicomposting facility Brown rice mill Watershed development for Lucban SWIP Crop diversification/integrated farming (SWIP-based tilapia production, mushroom production, gulayan sa bakuran, dragon fruit production"	4
			Maluno Sur	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	2
			Maluno Norte	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	2
			Yeban Norte	Typhoon Drought Flooding	Establishment of post-harvest facilities Swine and poultry production	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Cagayan	Buguey	Calamegatan	Tropical Cyclones Flooding Drought Salt Water Intrusion Sea Level Rice Storm Surge	Multi-purpose drying pavement (MPDP) Rice Production: Mono-cropping & low land irrigated & rainfed farming Aquaculture Extensive fish farming-cage system Irrigation ditch or pond systm Composite fish culture system	2
			Madalero	Typhoon Drought Flooding	Establishment of post-harvest facilities Farm mechanization	1
			San Lorenzo	Typhoon Drought Flooding	Establishment of post-harvest facilities Farm mechanization	1
		Ballesteros	**Nararagan**	**Typhoon Drought Flooding**	**Mono cropping (Rice-rice, corn-corn, vegetales-vegetables) Perennial crops(citrus) & vegetable inter cropping Multi-purpose drying pavement (MPDP) Palay Storage Greenhouse**	3
			Mala Weste	Typhoon Drought Flooding	Establishment of post-harvest facilities	1
	Quirino	Nagtipunan	Giayan	Typhoon Drought Flooding	Establishment of post-harvest facilities Greenhouse Nursery	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Tarlac	Victoria	Mangolago	Flood Drought Typhoon	Alternate Wetting and Drying (AWD) Rice, Climate-Smart Variety Corn, Crop rotation & zero tillage Corn, Climate-Smart Variety Sweet Potato DAR's CLA Stress Tolerant Varities AWD Livestock production Vegetable Production	1
			Cruz	**Flood Drought Typhoon**	**Hand Tractor Combine Harvester Mechanical Transplanter Bailer Portable Rice Mill Goat STW Water Buffalo Free Range Chicken Cattle Dairy Box Ice Cream Processing Automated Weather Station Greenhouse**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
III (Central Luzon)		Lapaz	**Caut**	**Flood Drought Typhoon**	**Hand Tractor Solar Powered Fertigation System Reaper Thresher Combine Harvester Mechanical Dryer Rice Mill Generator Set Warehouse w/ Recirculating Dryer Hauling Mungbean trading post Poultry**	3
		Paniqui	Salomague, San Isidro	Typhoon Flooding	System of rice intensification and use of adapted varieties Use of quality and well adapted seeds Organic fertilization Livelihood diversification	1
	Zambales	San Antonio	Burgos	Landslide Erosion	Livestock (Carabao and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			San Gregorio	Landslide Erosion		1
			San Esteban	Landslide Erosion	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Nueva Ecija	Carranglan	Carranglan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			Putlan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
			Capintalan	Drought Typhoon Erosion Landslide	Livestock (Cattle and Chicken) Fertilizer (Urea and Complete) Garden Tools Vegetable Seeds Zoological	1
	Bulacan	Pandi	Cacarong Matanda	Typhoon Drought Flood	Garden Tools Vegetable Seeds	1
			Malibong Bata	Typhoon Drought Flood	Garden Tools Vegetable Seeds Training on Meat Processing	1
			Siling Matanda	Typhoon Drought Flood	Garden Tools Vegetable Seeds Training on Mushroom Production	1
		San Luis	San Jose	Typhoon and flood		1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-A	Quezon	San Francisco	Huyon-Uyon	Typhoon Drought Soil Erosion.	Use of stress-tolerant varieties Use of mungbean as alernate crop during El Nino Rockwall terracing Coconut-based integrated farming Rainwater harvesting – Vegetable Use of stress-tolerant varieties Strip cropping (corn and ubi) Distribution of jackfruit and tamarind seedlings and corn seeds SUREAid	3
			Casay	Typhoon Drought Soil Erosion.	Use of mungbean as alternate crop during El Nino Coconut-based integrated farming Low External Input Native Pig Production Rainwater harvesting – Vegetable Distribution of corn seeds SUREAid	3
			Sto. Nino	Typhoon Drought Soil Erosion.	Use of stress-tolerant varieties Use of mungbean as alternate crop during El Nino Corn-based cropping systemts Sloping Agricultural Land Technology (SALT) and agro-forestry Coconut-based integrated farming Rainwater harvesting – Vegetable Strip cropping (corn and ubi) CIS	3
			Gapas	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-A (CALABARZON)		Guinayangan	Magsaysay	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4
			Himbubulo Weste	Typhoon Landslide Soil Erosion Flood Drought	Coconut (Intercropping and crop diversification) Coconut+vegetables (eggplant, squash, hot pepper) Coconut+blackpepper production, CIS	4
		Lopez	**Bacungan**	**Drought, Typhoon Flood**	**Rice - Rice + Vegetables + Corn (Organic fertilizers, complete fertilizer, ammophos), CIS**	3
			Villa Hermosa	**Drought, Typhoon Flood**	**Rice - Rice + Vegetables + Corn (Organic fertilizers, complete fertilizer, ammophos), CIS**	3
		San Juan	Hugom	Typhoon Storm Surgex Flood Drought	Seeds (rice, mungbean, peanut) Tissue-cultured banana seedlings Organic and Inorganic Fertilizer Pesticides Climate Information Services CRA Technology Trainings and Seminars (Tissue-cultured bananas planting and management)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Batangas	San Juan	Talahiban	Typhoon Storm Surgex Flood Drought	Seeds (rice, mungbean, peanut) Tissue-cultured banana seedlings Organic and Inorganic Fertilizer Pesticides Climate Information Services CRA Technology Trainings and Seminars (Tissue-cultured bananas planting and management)	1
		Nasugbu	**Bulihan**	**Landslide Drought Erosion**	**Trainings (technical, management, financial, and marketing Rice mill operation and management Bookkeeping and financial reporting) Provision of weighing balance and portable filled bag closing machine**	3
		Bulalacao	**San Roque, San Juan, Benli**	**Drought High temperatures Soil erosion Flooding**	**Native chicken and pig Planting materials (upland rice, tissue cultured lakatan and saba, corn, budded calamansi, pineapple slips, cassava, vegetable seeds) Garden tools Farm machineries (hand tractor with trailer, water pump and engine set, mechanical shredder and mini palay thresher) Vermicomposting, trainings (Bio-Intensive gardening, Native animal production, SALT, IPM, Bee products and by-products, Ube Production) Geotagging and fertilizer recommendation based on soil analysis Animal HealthCare (vitamin supplementations, deworming, treatment of diseases, supplemental of iron, anti anemia and castration for piglets) Organic and inorganic fertilizers**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IV-B (MIMAROPA)	Oriental Mindoro	**Mansalay**	**Sitio Inakay Cabalwa Sitio Bait, Panaytayan**	**Drought High temperatures Soil erosion Flooding Storm surge**	**Native Pig and Upgraded buck Planting Materials (papaya, calamansi, vegetable seeds, tissue cultured lakatan and saba, ube, pineapple, forage seeds and cuttings) Garden tools Trainings (Bio-Intensive gardening, Native animal production, SALT, Ube production) Geotagging and fertilizer recommendation based on soil analysis Animal Health Care (vitamin supplementations Deworming Treatment of diseases Supplemental of iron Anti anemia and castration for piglets) Farm machinery (water pump) Plastic mulch Organic and inorganic fertilizers**	3
		Pola		Drought High temperatures Soil erosion Flooding Storm surge	Native Pig and chicken Planting Materials (papaya, dalandan, vegetable seeds, banana, pineapple, langka) Garden tools Trainings (Bio-Intensive gardening, Native animal production, SALT, Ube Production) Water pump Geotagging and fertilizer recommendation based on soil analysis Organic and inorganic fertilizers	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Marinduque	Torrijos	Tigwi & Sibuyao	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Planting materials (Corn, Rice, Mungbean), Ube planting materials (layouting and planting), 1 unit mini palay thresher	2
		Buenavista	Yook, Tungib Lipata & Timbo and Sihi	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Planting materials (Corn, Rice, Mungbean), Ube planting materials (layouting and planting),	
		Boac	Daypay, Apitong, Agat Boac, Bantay & Bantad	Erosion Landslide Drought,	CIS, CRFS	1
	Palawan	San Vicente	Caruray & Decala	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Ube planting materials (layouting and planting) Native Pigs	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Palawan	Roxas	Dumarao & Minara	Drought High temperatures Soil erosion Flooding Saltwater intrusion	Native Pigs Trainings on Native Pig Production and Bio Intensive Gardening	1
	Camarines Sur	Pamplona	Cagbunga	Saltwater intrusion Drought Flood Typhoon Strong wind	Production support (Rice Stress-tolerant Varieties Seeds, Farm Machinery, High Value Crops Seeds, Poultry [Mallard Duck], Poultry feeds Fertilizers) Trainings Incubator Knapsack Sprayer Laminated sacks, Various garden tools	2
			Tampadong	Droughtx Flood Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] High Value Crops Seeds; Poultry [Mallard Duck] Poultry feeds, fertilizers) Various garden tools Knapsack Sprayers Laminated sacks Incubator Trainings Farm mechanization	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
			Veneracion	Droughtx Flood Typhoon	Production support (Rice Stress-tolerant Varieties Seeds; Poultry (White Leghorn) Poultry feeds Cages Supplements and accessories High Value Crops Seeds, fertilizers) Solar Powered Irrigation System Tractor Trainings Various garden tools Knapsack Sprayers Laminated sacks	2
	Camarines Norte	Paracale	Labnig	Drought Flooding Salt water intrusion Landslide Soil erosion Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
V (Bicol)		Capalonga	Alayao	Drought Typhoon Salt water intrusion Strong wind Landslide Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) arm inputs and machineries Incubator Rain shelter/UVS Plastic	2
	Albay	Tiwi	Joroan	Drought Flooding Salt water intrusion Landslide Soil erosion Typhoon	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds Cages Supplements and accessories Corn and High Value Crops Seeds Cassava Stalks Production Fertilizers Livestock [Goat]) Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Pio Duran	Marigondon	Drought Typhoon Salt water intrusion Strong wind Landslide Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, RIR] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Livestock [Carabao, Goat]) Incubator Rain shelter/UVS Plastic	2
	Sorsogon	Prieto Diaz	San Isidro	Drought Typhoon Salt water intrusion Strong wind Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck, Quail] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2
		Castilla	Dinapa	Drought Typhoon Strong wind Flashflood	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Catanduanes	Viga	Peñafrancia	Drought Flooding Salt Water Intrusion	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2
	Catanduanes	Gigmoto	Biong	Flood (and flash flooding brought by rains in Pedro Summit) Storm Surge Landslide Drought Sea level rise	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
V (Bicol)	Masbate	Uson	San Mateo	Drought Flooding Salt Water Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic Livestock (Goat) Azolla Tank Trainings Various Garden Tools	2
			Quezon	Drought, Flooding Salt Water Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2
		Mandaon	Alas	Drought Flooding Pest Infestation	Production support (Rice Stress-tolerant Varieties Seeds [GSR 11, NSIC Rc 222 and 226] Poultry [White Leghorn, Mallard Duck] Poultry feeds, cages, supplements and accessories Corn and High Value Crops Seeds Fertilizers Farm inputs and machineries Incubator Rain shelter/UVS Plastic	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VI (Western Visayas)	Iloilo	**Banate**	**Carmelo, Merced & Libertad**	**Dry Spell Typhoon Flood**	**Sloping Agricultural Land Technology (SALT) Integrated Farming Small Water Impounding Project (SWIP) System for rice intensification (SRI) Native Pig and Babuyang Walang Amoy Production Technology Corn-Husk Utilization in Handicraft Making Buri and Pandan Weaving Training Banana Production Rain Water Harvester for Backyard vegetable gardening/cutflower Rice production Organic fertilizer production Goat raising Squash production**	3
		Bingawan	Alabidhan, Poblacion, Quinangyana & Quinar-upan	Flood Dry Spell Typhoon	System of Rice Intensification	2
		Estancia	Lonoy, Tabua & Cano-an	Typhoon Drought Flood Landslide Sea level rise Erosion Storm surge Saltwater intrusion	Rainwater Harvester Project Babuyang Walang Amoy Project Organic Vegetable Production Technology Organic Fertilizer Production Technology (Vermicomposting System of Rice Intensification	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		San Rafael	Poblacion, Ilong Bukid & San Andres	Typhoon Flooding Soil Erosion	Organic Vegetable Production Technology Babuyang Walang Amoy Production Technology Native Pig Production Technology System of Rice Intensification Organic Fertilizer Production (Vermicomposting)	2
	Aklan	**Banga**	**Mambog , Muguing & Linabauan Sur**	**Flood, Typhoon Dry Spell**	**Native Pig Production Native Chicken CRFS & its Components (Organic Vegetable Production, SRI, Organic Fertilizer and Soil enhancer production (Bokashi and KNF) Agro-Ecosystem Analysis (AESA)-Ecological Pest Management (EPM) Use of 10-day weather forecast and Advisory Rice Phenology Biodiversity and Climate Change) Incubation packages (egg layer production, & Swine production)**	3
		Batan	Palay, Ambolong	Flooding Dry spell	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
		Numancia	Aliputos, Laguinbanwa East, Bubog & Laguinbanwa	Flood Typhoon Dry Spell Earthquake		2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Antique	Valderrama	Ubos & Takas	Flood Typhoon Landslide Earthquake	Babuyang Walang Amoy Production Technology Native Chicken Production Technology Native Pig Production Technology Organic Vegetable Production Technology Organic Fertilizer Production Technology (Vermicomposting) Brown Egg Laying Production Technology System of Rice Intensification (SRI) and Feed Formulation	2
		Anini-y	Nato-Butuan, San Roque, Magdalena & Salvacion	Typhoon Flood Landslide Soil Erosion Drought		2
		Sibalom	Bontol & Pis-anan	Flood Typhoon Landslide Earthquake	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
		Pontevedra	**San Pedro, Jolongajog & Binuntucan**	**Typhoon Drought Flood Landslide Sea level rise Erosion Storm surge**	**Native Pig Production Native Chicken Production CRFS and its components (Organic Vegetable Production, CRFS and SA Orientation, SRI, Organic Fertilizer and Soil Enhancer Production [Bokashi and KNF] Incubation packages (Vegetable Production & Swine Production)**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VI (Western Visayas)	Capiz	Dao	Duyoc, Lacaron	Typhoon Landslide Flooding Flash Floods	System of Rice Intensification	2
		Panit-an		Typhoon Drought Flood, L:andslide sea level rise Erosion Storm surge Saltwater intrusion	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
	Guimaras	**Sibunag**	**Sebaste, Sabang & Bubog**	**Storm surge Sea level rise Drought Erosion Landslide Flood, typhoon**	**Native Pig Production Native Chicken CRFS & its Components (SRI, Organic Vegetable Production, Production, Tilapia Production, CRFS and SA Orientation, Organic Fertilizer and Soil Enhancer Production (Bokashi and KNF) Agro-Ecosystem Analysis (AESA)-Ecological Pest Management (EPM) Use of 10-day weather forecast and Advisory, Biodiversity and Climate Change) Incubation packages (Organic Vegetable Garden, Native Chicken meat & egg production, seed reserve/rice bending, native/organic hog raising, fresh water tilapia)**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		San Lorenzo	M. Chavez, Cabano, Igcawayan	Typhoon Earthquake Landslide	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Negros Occidental	**Pontevedra**	**Gen. Malvar & San Isidro**	**Droughtx Typhoon Flooding**	**Organic Red Rice Production Native Pig Production CPAR on Rice-based farming system (Rice – Rice – Mungbean + Vegetables and Spices), Vegetable Production (Pakbet) Soil Ameliorants Production and Onion Bulb Production Soybean production Enhanced papaya production Muscovado production and processing Quail Egg Production through the use of climate-resilient incubator Solar Power Irrigation System Rainwater Harvester Installation of Automated Weather Station Climate AMIA Training Center Soybean Production and Processing Enhanced Papaya Production Muscovado Processing, Quail Egg Production Solar Power Irrigation System Season-Long Climate Resiliency Field School AMIA Training Center Automated Weather Station Rain Water Harvester Native Pig Production Vegetable Production, Onion Production CPAR Rice-Based Farming Soil Ameliorants**	3
		Cauayan	Masaling			2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Sagay City	Rizal & Lopez Jaena	Typhoon	Targeted Trainings for CRA Practices Babuyang Walang Amoy Production Technology Training, Organic Vegetable Production Training and Organic Fertilizer Production Training Participatory Rural Appraisal (PRA) already conducted and there are on-going implementation for the conduct of trainings.	2
VII (Central Visayas)	Cebu	Daanbantayan	Bagay	Typhoon Drought	Trainings Farm inputs (organic fertilizers such as chicken dung and vermicast, molasses and drum) Climate information Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken Technical assistance	2
			Bitoon	Typhoon Drought some areas are prone to flooding	Trainings upgraded goats Farm inputs (organic fertilizers such as chicken dung and vermicast) Molasses and drum), Climate information Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken, Technical assistance	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Dalaguete	Montalongon	Landslide Erosion Drought	Fertilizers Vegetable Seeds Farm Tools and Materials Swine Goat Native Chicken Trainings Technical assistance	2
	Bohol	Carmen	Buenos Aires	Flooding Drought Landslide	Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
VII	Bohol	Danao	Taming	Drought Flooding	Corn seeds Corn sheller Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
		Mabini	Paraiso	Flooding Drought Landslide Salt water intrusion	Fertilizers Foliar applicator Vegetable seeds Farm Tools Trainings Technical assistance	2
		Ayungon	Carol-an	Landslide Soil Erosion Typhoon	Techno Demo on Corn-Peanut Intercropping (CRA), Climate Information System (CIS)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
(Central Visayas)	Negros Oriental	Zamboanguita	Mayabon	Soil erosion Drought Flood Tropical Cyclone	Balanced Fertilization Strategy technology demonstration (for conduct)	2
	Siquijor	San Juan	Tubod	Flood	Vegetable Seeds HDPE Drums Farm Tools and Materials Trainings and technical assistance	2
	Cebu	Daanbantayan		Landslide Erosion Wind Sea level rise Storm surge		1
		Bantayan	Guiwanan	Wind Erosion	CIS, CRFS	1
			Tamiao	Landslide Erosion Wind	CIS, CRFS	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Leyte	**Babatngon**	**Uban**	**Typhoon; Soil Erosion; Saltwater Intrusion; Rise in Temperature ; and Strong Winds**	**Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut, Jackfruit and Calamansi]; and Farm Tools and Equipment) Biological Assets (Native Chicken) Stainless Tank Weather Board Vermibed Construction Materials, Trainings (Climate Resilient Rice Production, Climate Resilient Vegetable Production, Climate Resilient Mushroom Production, Climate Resilient Native Chicken Production, Community Organizing and Leadership, Values Orientation and Formation, Farm Record Keeping, Farm Marketing Strategies Orientation, Meat Processing and Preservation (Value-Adding), Food Processing on Vegetable and Fruit (Value-Adding), Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting, CIS)**	3
		Burauen	Matin-ao	Typhoon, Landslide, Earthquake	Production support (Vegetable Seeds) Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting) CIS	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
VIII (Eastern Visayas)	Samar	San Sebastian	Camanhagay	Flood, Typhoon, Drought, Saltwater Intrusion, and Soil Erosion	Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut, Jackfruit and Calamansi] Farm Tools and Equipment), Biological Assets (Native Chicken, Swine and Ducks), Stainless Tanks Weather Board Piggery and Poultry House construction materials Trainings (Climate Resilient Rice Production; Climate Resilient Vegetable Production; Climate Resilient Mushroom Production; Climate Resilient Native Chicken Production; Community Organizing and Leadership; Values Orientation and Formation) Farm Record Keeping Farm Marketing Strategies Orientation Meat Processing and Preservation (Value-Adding) Food Processing on Vegetable and Fruit (Value-Adding) Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting CIS	discontinueed ; for relocation
		Pinabacdao	Parasanon	Flood, Typhoon, Landslide, Earthquake, Drought	Training Supplies; Vegetable Seeds Weather Board Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting) Climate Information Services	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Biliran	**Caibiran**	**Manlabang**	**Flood, Rise in Temperature , Sea Level Rise, Typhoon, Landslide, Drought, and Strong Winds,**	**Stainless Tank Weather Board Production support (Assorted Vegetable Seeds and Corn Seeds Fertilizers Planting Materials [Ginger, Pineapple, Sweet Potato, Peanut] Farm Tools and Equipment) Discharge PVC pipes/Hoses and Garden Hoses Trainings (Climate Resilient Rice Production, Climate Resilient Vegetable Production, Climate Resilient Mushroom Production, Climate Resilient Native Chicken Production, Community Organizing and Leadership, Values Orientation and Formation, Farm Record Keeping, Farm Marketing Strategies Orientation, Meat Processing and Preservation (Value-Adding), Food Processing on Vegetable and Fruit (Value-Adding)**	3
	Southern Leyte	Libagon	Pangi	Flood Saltwater Intrusion Landslidex Earthquakex Drought	Production support (Vegetable Seeds) Weather Board Trainings (Effective Data Collection, Storage, Simple Analysis and Utilization including AWS Troubleshooting; CIS)	2
VIII (Eastern	Northern Samar	Gamay	Uban	Tropical Cyclones Flood Sea Level Rise	Orientation on Organic Fertilizer Production Orientation on Livestock and Poultry Farm Management Practices Orientation on Values Formation and Community Organizing	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
Visayas)	Eastern Samar	General Mcarthur	Pingan	Landslide Drought Erosion	Orientation on Values Formation and Community Organizing	2
	Samar	Catbalogan	Iguid & Old Mahayag	Flooding Drought Storm surge	CIS, CRFS	1
	Zamboanga Sibugay	Imelda	La Victoria	Flooding Drought Soil erosion	Production Support (Vegetable production, Duck production) Training (Vegetable, cacao and coffee, rubber production) Farm machineries and equipment	2
			Mali Little Baguio	Flooding Drought Soil erosion	Production Support (Vegetable production, Duck production) Training (Vegetable, cacao and coffee, rubber production) Farm machineries and equipment	2
	Zamboanga del Sur	Tambulig	Maya Maya	Insufficient waterdrought Soil erosion	Production support (Pineapple sucker, Drums, Complete Fertilizers, Foliar Fertilizer, Plastic crates, Assorted vegetable seeds, Banana plantlets, Garden tools) Trainings (Banana Production, SALT, Vegetable Production, Technology Caravan) CIS	2
		San Pablo	Mabuhay	Insufficient waterdrought Soil erosion	Production support (Banana Plantlets, Foliar Fertilizers, Vegetable Tray, Vegetable Seeds, Complete Fertilizers) Trainings (Banana Production, SALT, Technology Caravan) CIS	1
		Dimataling	Sugbay Uno	Insufficient waterdrought Soil erosion	Production support (Banana Plantlets, Foliar Fertilizers, Vegetable Tray, Vegetable Seeds, Complete Fertilizers) Trainings (Banana Production, SALT, Technology Caravan) CIS	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
IX (Zamboanga Peninsula		Ramon Magsaysay	Bambonduit & Poblacion	Landslide Erosion Drought		1
		Manukan	Don Jose Aguirre	Drought Fooding Landslide	Production support (Concrete post for dragon fruit production) Vegetable seeds and trays, fertilizer, mulching materials Banana Lakatan Plantlets Hybrid Rice Corn seeds Livestock and Poultry) Farm machineries and equipment (Corn sheller, Water pump, Hand tractor, Knapsack Sprayer) CIS Trainings (Vegetable Production, Banana Production, SALT), Technology Demonstration on SALT	2
		Jose Dalman	Labakid	Flooding Drought Soil erosion/landslide	Production support (Banana Plantlets Vegetable Seeds, foliar fertilizer, plastic mulch); Training (CIS, Banana Production, Technology Caravan, SALT), CIS	1
		Labason	Gabu	Flooding Drought Soil erosion/landslide	Production Support (Banana Plantlets, Foliar Fertilizer, Vegetable Seeds, UV Film, Garden Hose, Fertilizers) Trainings (Technology Caravan) CIS Banana Production, SALT)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Zamboanga del Norte	Liloy	San Francisco	Flooding Drought Soil erosion/land slide Storm surge	Production support (Banana plantlets; Vegetable Seeds with fertilizer, plastic mulch, UV film) Nursery facility Hand tractor with rotavator Pump irrigation for open source Trainings (SALT, Banana production, Peanut Production) CIS	2
		Mutia	Alvinda	Droughtx Soil erosion/land slide	Production Support (Banana Plantlets, Vegetable Seeds with foliar fertilizer and plastic mulch) SALT [upland rice + banana]) Trainings (Banana Production, Vegetable Production, SALT) CIS	2
		Piñan	Teresita	Flooding Drought Landslide/soil erosion.	Production Support (Vegetable seeds, Complete Fertilizers, Foliar Fertilizers, UV film, Garden Hose, Banana Plantets), Trainings (SALT, Banana Production, Vegetable production), CIS	1
		Siayan	Litolet	Flooding Drought Soil erosion Insufficient water supply	Trainings (SALT, Banana production, Technology caravan) Production support (Banana plantlets, Foliar Fertilizers) CIS	1
		Siocon	Siay	Flooding Drought Soil erosion Insufficient water supply	Production support (Banana Plantlets, Vegetable Seeds, Biological Control Agents, Foliar Fertilizers, Plastic Mulch) Trainings (CIS, Banana Production, Technology Caravan, SALT) CIS	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Tampilisan	Lawaan	Flooding Drought Soil erosion/land slide	Production support (Banana plantlets, Foliar Fertilizers, Vegetable Seeds, UV Film, Plastic Mulch), Trainings (Banana Production, Technology Caravan, SALT, CIS), CIS	1
		Dapitan	Barcelona	Floodx Insufficient water supplyx Drought Soil Erosion	Production Support (Vegetable seeds with foliar and inorganic fertilizer, UV film, garden hose, Banana Plantlets) Trainings (SALT, Banana Production) CIS	1
		Libona	**Gango, Kinawe, Kiliog**	**Drought Landslide Soil erosion**	**Corn (Biodynamics/Organic Farming, Maize-banana crop diversification) Crop (corn, cassava) Livestock (native swine, cattle, and Itik Pinas) integration**	3
		Baungon	Liboran	Floods Erosion Drought	Tolerant variety/Corn/cassava relay; crop diversification Native swine Native chicken Itik pinas production Cattle production Plastic net dryer Water harvesting various fruit treesClimate information services Financial institutions(ACPC/PCIC/MCCB/LBP/DBP)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
X (Northern Mindanao)	Bukidnon	**Manolo Fortich**	**Lingi-on**	**Erosion**	**Tolerant variety/Corn/cassava relay** **Cop diversification** **Native swine** **Native chicken** **litik pinas production** **Cattle production** **Plastic net dryer** **Water harvesting** **various fruit treesClimate information services** **Financial institutions(ACPC/PCIC/MCCB/LBP/DBP)** **Corn Hybrid Seeds** **Fertilizers** **RTL 8 modules** **Goat production** **Corn hammer mill** **Forage chopper**	3
	Camiguin	Sagay	Bonbon	Tropical cyclone Flood Landslide Storm surge Sea level rise Drought Erosion	Soil conservation; Tolerant corn cultivars; vegetables; fruit trees; CIS; Financial Institutions (ACPC/MCCB/LBP/DBP)	2
		Cagayan de Oro City	Pagalungan	Soil Erosion Landslide Drought	Soil conservation Tolerant corn cultivars Vegetables Fruit trees CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Misamis Oriental	Opol	Bagocboc	Soil Erosion Landslide Drought	Soil conservation Tolerant corn variety Cassava Coffee production in the contour Native chicken Water harvesting CIS Institutions (ACPC/MCCB/LBP/DBP)	2
		Magsaysay	Gumabon, Mindulao, Tama & San Isidro	Drought Srosion Floods	Trainings (CIS, CRA & CrFFS) Goat Production RTL Swine Production Poultry Production Hybrid corn seeds Inorganic Fertilizers Vegetables seed 5 in1 Fruit trees Certified Seeds (Peanut, Soybean) Farm tools (Empty drum, Knapsack sprayers, bolos, seedling tray, garden hose with nozzles, garden wreck, shovels)	2
		Balingasag	Dumarait	Drought Landslide Erosion Flooding	Organic matter application, crop and poultry and fishery integration(ACPC/MCCB/LBP/DBP)	1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Misamis Occidental	Baliangao	Sinian	Flood Soil erosion Drought	Soil conservation tolerant corn variety Cassava Coffee production in the contour Native chicken Water harvesting CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	1
	Lanao del Norte	Sultan Naga Dimaporo	Mamagum, Bansarvil II & Campo Islam	Soil Erosion Drought Landslide	Soil conservation tolerant corn variety Cassava Coffee production in the contour native chicken water harvesting CIS Financial Institutions (ACPC/MCCB/LBP/DBP)	1
	Davao del Sur	Davao City	**Suawan, Marilog Dist.**	**Landslide Soil Erosion Flash Floods**	**Adlay production Provision of seeds and fertilizers Fertilizers Farm Tools & Supplies**	3
			Tamugan & Marilog Dist.	Flooding Flash Floods (near from the river sides).	Technology on production of adlay Provision of seeds and fertilizers Farm Tools & Supplies	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
XI (Davao)			Magsaysay	Soil erosion Landslide Flash floods (near from the river sides)	Fertilizers Farm Tools & Supplies	2
		Sta. Cruz	**Jose Rizal**	**Long drought Soil erosion**	**Coffee Rehabilitation/Rejuvenation Integrated Farming System (Coffee + Cacao + Abaca + Banana)**	3
	Davao Oriental	Governor Generoso,	Surop	Long drought High tide Storm Surge during Habagat	Cacao rehabilitation and integrated farming system (e.g., formative pruning; pest & disease detection and control; pod sleeving) Soil sampling collection & analysis Provision of fertilizers, ameliorants and pesticides Pod borer detection	2
		Lupon,	Marayag	Land slide Flood prone	Cacao rehabilitation and integrated farming system (e.g. formative pruning; pest & disease detection and control; pod sleeving) Soil sampling collection & analysis Provision of fertilizers, ameliorants and pesticides Pod borer detection	2
			Calapagan	Land slide Flood prone	Diversified farming- Coconut based farming system (Coconut+Cacao+Banana), Coffee and vegetable farmings	2
			Mariano Marcos	**Land slide Flood prone**	**Diversified farming- Coconut based farming system (Coconut+Cacao+Banana), Coffee and vegetable farming**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
		Manay	Del Pilar	Long drought High tide Storm Surge during Habagat	Fertilizers Trainings Corn Sheller Corn Seeds Cacao Grinder	2
	Davao del Norte	Tagum City	Pagsabangan, Nueva Fuerza, Cuambogan, La Filipina, New Balamban,& San Agustin	Flooding	Adlay production Provision of seeds and fertilizers Farm Tools & Supplies Trainings	1
	North Cotabato	Pigcawayan	Bulocaon	Drought Flood Landslide	Adoption of high yielding/stress/drought Tolerant varieties of crops and seeds Backyard gardening Integrated Farming Agro forestry Mallard ducks Native Swine and Goat Production; Low cost rain water harvesting facility; Intercropping; Crop Rotation	2
			New Igbaras			2
			Malu-ao			2
		Tulunan	Culasi	Drought Flood Landslide	Adoption of high yielding/stress/drought tolerant varieties of crops and seeds Swine Production Organic Farming Vermicomposting Issuance of climate weather forecast Integrated farming; Provision of hauling truck and horses	2
			Bacong			1
			New Panay			1
			Nabundasan			1

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
XII (SOCCSKSARGEN)		President Roxas	Datu Sundungan	Landslide Drought Wind	Goat Production Vegetable Production Upland Rice Production Corn Production Coconut Production Rubber Production Backyard Gardening Organic Farming Issuance of climate weather forecast	2
			Bato			1
			Lama Lama			1
	South Cotabato	Lake Sebu	Lake Lahit	Drought Landslide Erosion	Corn Production Organic Vegetable Production Organic Farming Integrated Farming Food Processing Issuance of climate weather forecast	2
			Seleton			2
			Malipayon			2
			Lamlahak			2
	Sultan Kudarat	Columbio	Sucob	Tropical Cyclone Erosion Landslide.	Adoption of high yielding/stress/drought tolerant varieties of crops and seeds; Goat Production; Free Range Chicken Production; Vegetable Production; Mallard Duck Production; White Corn Production; Issuance of climate weather forecast; Low cost rain water harvesting	1
			Sinapulan	Tropical Cyclone Erosion Landslide.		2
			Mayo	Tropical Cyclone Erosion Landslide.		2
	Saragani	Malapatan		Drought Flash flood Landslide	Issuance of climate weather forecast;	2

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	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
CARAGA	Agusan del Norte	Jabonga,	Magsaysay	Flood Typhoon	Swine Production, Free-Range Native Chicken, Goat Production, Vegetable Production (assorted vegetables)	2
			Cuyago	Flood Typhoon	Swine Production, Free Range Native Chicken, Organic Production (Vermi production and vermicomposting)	2
			Libas	Flood Typhoon		1
	Surigao Del Norte	San Francisco,	Jubgan	Landslide Flood Earthquake Typhoon	Vegetable Production Cassava Production Multi-purpose shed Greenhouse	2
			Banbanon	Landslide Flood Earthquake Typhoon	Poultry Production Vegetable Production Cassava production Rice Production Greenhouse	2
			Diaz	Flood Earthquake Typhoon Salt water intrusion	Mallard Duck Production Vegetable Production Rice Production Greenhouse	2
			P-1 Navarro	**Tropical Cyclone Landslide Drought Soil Erosion**	**Vegetable seeds Corn seeds Cassava planting materials Plastic drums Greenhouse Multi-purpose shed Swine production**	3

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Dinagat Island	Tubajon	**P-6 Sitio Bagong Silang, Santa Cruz**	**Tropical Cyclone Landslide Drought Soil Erosion**	**Vegetable seeds Cassava seed pieces Plastic drums Greenhouse Native chicken production Corn seeds**	3
			P-2 Diaz	Tropical Cyclone Landslide Drought Soil Erosion	Vegetable seed Cassava planting materials Corn Rice seeds Greenhouse Mallard ducks	2
	Surigao del Sur	Lanuza	Agsam	Flood Drought Typhoon	Rice Corn Vegetable Livestock Poultry	2
			Sibahay	Flood Strong wind Landslide Typhoon	Rice Corn Coconut	2
			Bunga	Flood Drought		2
			Labnig	Flood Landslide Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2

REGION	AMIA VILLAGE SITES			CLIMATE-RELATED RISKS	CRA PRACTICES / INTERVENTIONS	AMIA CREATE PHASE
	PROVINCE	CITY/ MUNICIPALITY	Bgys.			Sep-23
	Agusan del Sur	Talacogon	Buena Gracia	Flood Strong winds Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2
			Zillovia	Flood Strong winds Typhoon	Rice production Vegetable production Corn production Cassava production Tilapia production	2
BARMM	Maguindanao	Upi	Nangi	Landslide	CIS, CRFS	1
			Rempes	Landslide Erosion	CIS, CRFS	1