PHILIPPINE AGRICULTURE AND FISHERIES EXTENSION STRATEGIC PLAN

2023-2028

Reframing Agriculture and Fisheries Extension and Advisory Services for Philippine Food Systems Transformation

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About the cover:
The transformation of the Philippine food system is a complex and urgent challenge that requires innovative solutions and collaborative action among key extension stakeholders. The cover represents the strategic plan's theme of reframing agricultural extension to support this transformation through the four strategic objectives as depicted by the icons. These are geared towards efficient production, agripreneurship, better nutrition, and governance which support a more sustainable, equitable, and resilient food system. Furthermore, the colors blue, green, and yellow on the cover page symbolize the importance of the agriculture and fisheries sector, representing the elements of water, growth, and abundance.

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CONTENTS

ABBREVIATIONS AND ACRONYMS

ACPC	-	Agricultural Credit Policy Council
AEW	-	Agricultural Extension Worker
AF	-	Agriculture and Fisheries
AFE	-	Agriculture and Fisheries Extension
AFEN	-	Agriculture and Fisheries Extension Network
AFF	-	Agriculture, Fisheries and Forestry
AMAS	-	Agribusiness and Marketing Assistance Service
AMIA	-	Adaptation and Mitigation Initiative in Agriculture
ASF	-	African Swine Fever
ATI	-	Agricultural Training Institute
BAFS	-	Bureau of Agriculture and Fisheries Standards
BAR	-	Bureau of Agricultural Research
BAW	-	Barangay Agricultural Extension Workers
BFAR	-	Bureau of Fisheries and Aquatic Resources
BIG	-	Bio-Intensive Gardening
BIR	-	Bureau of Internal Revenue
CDA	-	Cooperative Development Authority
CFS	-	Climate Field School
CO	-	Central Office
CPD	-	Continuing Professional Development
CRA	-	Climate Resilient Agriculture
CRAO	-	Climate Resilient Agriculture Office
DA	-	Department of Agriculture
DAR	-	Department of Agrarian Reform
DBM	-	Department of Budget and Management
DFP	-	Digital Farmers Program
DOH	-	Department of Health
DOST	-	Department of Science and Technology
DTI	-	Department of Trade and Industry
E.O.	-	Executive Order
ESP	-	Extension Service Provider
FAO	-	Food and Agriculture Organization

FBS	-	Farm Business School
FCA	-	Farmers/Fishers Cooperative and Association
FCC	-	Farmers Contact Center
FFEDIS	-	Farmers and Fisherfolk Enterprise Development Information System
FITS	-	Farmers' Information and Technology Services
FNRI	-	Food and Nutrition Research Institute
GAP	-	Good Agricultural Practices
GDP	-	Gross Domestic Product
GMP	-	Good Manufacturing Practices
GPS	-	Global Positioning System
GVA	-	Gross Value Added
ICT	-	Information and Communications Technology
IDOFS	-	Integrated Diversified Organic Farming Systems
IEC	-	Information, Education and Communication
IoT	-	Internet-of-Things
IRA	-	Internal Revenue Allotment
IRRI	-	International Rice Research Institute
ISO	-	International Organization for Standardization
ITA	-	International Trade Administration
ITCPH	-	International Training Center on Pig Husbandry
LFT	-	Local Farmer Technician
LGU	-	Local Government Unit
LSA	-	Learning Site for Agriculture
M&E	-	Monitoring and Evaluation
MS	-	Magsasakang Siyentista
NAFMIP	-	National Agriculture and Fisheries Modernization and Industrialization Plan
NCIP	-	National Commission on Indigenous Peoples
NEAP	-	National Extension Agenda and Programs
NESAF	-	National Extension System for Agriculture and Fisheries
NFRDI	-	National Fisheries Research and Development Institute
NGA	-	National Government Agency
NDA	-	National Dairy Authority

NNC	-	National Nutrition Council
NSA	-	Nutrition-Sensitive Agriculture
NTA	-	National Tax Allotment
PAA	-	Philippine Association of Agriculturists
PAFES	-	Province-led Agriculture and Fisheries Extension System
PAGASA	-	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PCA	-	Philippine Coconut Authority
PCAARRD	-	Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development
PCAF	-	Philippine Council for Agriculture and Fisheries
PCC	-	Philippine Carabao Center
PCIC	-	Philippine Crop Insurance Corporation
PDP	-	Philippine Development Plan
PIA	-	Philippine Information Agency
PIDS	-	Philippine Institute of Development Studies
PGS	-	Participatory Guarantee System
PhilEASNet	-	Philippine Extension and Advisory Network
PhilHealth	-	Philippine Health Insurance Commission
PHilMech	-	Philippine Center for Postharvest Development and Mechanization
PhilRice	-	Philippine Rice Research Institute
PMO		Program Management Office
PPAN	-	Philippine Plan of Action for Nutrition
PPD		Policy and Planning Division
PSA	-	Philippine Statistics Authority
R&D	-	Research and Development
RA	-	Republic Act
RAFEN	-	Regional Agriculture and Fisheries Extension Network
RBO	-	Rural-Based Organization
RBME	-	Results-Based Monitoring and Evaluation
RCEP	-	Rice Competitiveness Enhancement Program
RCM	-	Rice Crop Manager
RCMAS	-	Rice Crop Manager Advisory Service

RFFA	-	Rice Farmers' Financial Assistance
RFO	-	Regional Field Office
RTC	-	Regional Training Center
SALT	-	Sloping Agricultural Land Technology
SDG	-	Sustainable Development Goals
SEC	-	Securities and Exchange Commission
SOA	-	School-on-the-Air
SPSIC	-	Sanitary and Phytosanitary Import Clearance
SSS	-	Social Security System
SUC	-	State Universities and Colleges
SURE Aid Program	-	Survival and Recovery Assistance Program for Rice Farmers
TESDA	-	Technical Education and Skills Development Authority
UNExSys	-	Unified National Extension System Planning, Monitoring and Evaluation Information System
UNSCN	-	United Nations Standing Committee on Nutrition
USAID	-	United States Agency for International Development
VAFS	-	Vegetable Agro-Forestry System
WFP	-	World Food Programme

MESSAGE

Senior Undersecretary

One of the main drivers of growth and employment in the country is the agriculture and fisheries (AF) sector. However, we need to surmount serious challenges brought by global and domestic movements as well as environmental factors that contribute to low income and productivity.

Agriculture extension and advisory services provide critical support to farmers and fishers to boost their production and livelihood. Boosting the incomes of the sector's primary producers is necessary to address poverty, improve health and living conditions and promote growth and development. Moreover, the improvement of the agriculture and fisheries sector is imperative in attaining food security, as part of the administration's 8-Point Agenda.

We, at the Department of Agriculture (DA), therefore acknowledge the initiative and efforts of the Agricultural Training Institute (ATI) for spearheading the development of the Agriculture and Fisheries Extension (AFE) Strategic Plan for FY 2023-2028.

This Plan shall serve as a blueprint for the agriculture and fisheries extension service providers from the national government agencies (NGAs) including state universities and colleges (SUCs), local government units (LGUs) and the private sector in the next six years. A result of series of consultations with various key stakeholders from the AF sector, the plan deliberately identified the needs and issues to be addressed in order to formulate strategic objectives and key actions in the document. The strategies embodied in the plan once operationalized will aid in achieving our goals as laid out in the National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP) 2021-2030 and the Philippine Development Plan (PDP) 2023-2028.

I urge the ATI, extension partners and other sectors to continue collaborating and complementing resources to create more impact in the lives of our farmers and fisherfolks. A reframing of the agriculture and fisheries extension and advisory services is necessary to harmonize extension services and catalyze food systems transformation. Let us continue to work with dedication and vigor towards a strong and progressive country, for the welfare of the Filipino people.

Masagang Agrikultura, Maunlad na Ekonomiya!

Domingo F. Panganiban
Department of Agriculture

PREFACE

Recent major events such as the COVID-19 pandemic and the Ukraine-Russia conflict seriously stalled the Philippine AF sector's path to sustained and high growth. Furthermore, emerging and innovative technological advancements are present, however, limited access and poor adoption are experienced in the rural areas, most especially in the country's small-scale producers. Despite the shocks and hindrances, extension services' role in this era of recovery and food systems transformation is imperative through continuous human capital development of extension clients (extension workers, farmers, fishers, and youth, among others). Improving the knowledge, skills, and changes in behavior and mindsets towards modernization and agro-industrialization will empower AFE stakeholders to battle lingering sectoral challenges of extreme poverty, hunger, and malnutrition.

The development of the Philippine AFE Strategic Plan 2023-2028 centers on the theme of "Reframing Agriculture and Fisheries Extension and Advisory Services for Philippine Food Systems Transformation". This embodies the country's long-term vision (Ambisyon Natin 2040) and the thrust of the current administration of economic and social transformation for a prosperous, inclusive, and resilient society focusing on accelerating poverty reduction of whom the majority of farmers and fishers are yearning. This document is also anchored on the PDP 2023-2028 Strategy Framework and relevant chapters on agriculture which aims to: (a) enhance food security and proper nutrition (Chapter 3.1), and (b) modernize agri-fishery and agribusiness (Chapter 5).

Moreover, various policies, plans, and assessment reports aided in the crafting of the strategic plan reflective of the needs of the AF sector and extension services. The NAFMIP 2021-2030 served as one of the guiding frameworks which envisions sectoral transformation toward a **food-and-nutrition secure, resilient Philippines with empowered and prosperous farmers and fisherfolk.** On the other hand, the six-year agenda[1] that the ATI developed in 2022 served as a major legal basis and reference in the crafting of the AFE strategic plan. The National Extension Agenda and Programs (NEAP) FY 2022-2028, provided a basis for the identification of priority initiatives to be implemented in support of transforming Philippine agriculture through consolidation, industrialization, modernization, and professionalization.

Apart from the external and internal analyses used in the multi-stakeholder strategic planning workshops at the regional and national levels, this current iteration added an element of empathy to the 'design thinking' process. This helped the planners do a customer or user-centric research and factor the insights (pains and

[1] ATI Administrative Order No. 01 Series of 2022, entitled "The National Extension Agenda and Programs for FY 2022-2028"

gains) into designing more innovative and suitable extension interventions making this strategic plan valuable and relevant to the intended beneficiaries.

The current AFE strategic plan lays the foundation of three main strategic objectives which measure extension services' contribution to efficient production, improving competitiveness through agripreneurship, and ensuring nourishment among Filipino farm/fisher families and consumers. A cross-cutting strategic objective is also identified to strengthen agricultural extension institutions, and to address concerns on partnerships, resource generation, policy, planning, monitoring, and evaluation. As a way forward towards modernization, it also highlights the importance of integrating digital technologies in the provision of agricultural extension services to increase access of AFE clients to relevant AF information and knowledge. Also, the strategic objectives are combined with key initiatives which are priority action points and interventions urgently needed to bounce back, transform, and sustain the high growth path for the AF sector.

REMELYN R. RECOTER, MNSA, CESO III
Director IV
DA-Agricultural Training Institute

INTRODUCTION

RATIONALE

Agriculture and Fisheries (AF) Situation. The AF sector has been expanding over time and remains one of the major contributors to the economic development of the country. In 2021, there were 47.70 million people in the country's labor force, of whom 43.99 million were employed. Around 10.66 million individuals or 24.20% of the national employment are working in the agriculture sector (PSA, 2022a). In 2020, the country's basic wage and salary of agricultural workers engaged in fishing and aquaculture activities was PhP 281.00 per day, in contrast to those involved in agriculture and forestry with PhP 270.07 per day (PSA, 2021).

In terms of its economic performance, the country's gross domestic product (GDP) in 2021 demonstrated a gain of 5.7%, countering the contraction from the year before. Although agriculture, forestry, and fisheries (AFF) shared 9.6% of the GDP, the gross value added (GVA) fell by 0.3% over the same period. The recorded reduction in the value of livestock and poultry meat production were -17.0% and -0.3%, respectively. However, the growth of crops rose at 2.20% and 0.1% for fisheries (PSA, 2022a).

The main agricultural commodities of the country exhibited an increase in production compared to the previous year. In 2021, sugarcane had the highest production with 26.28 million metric tons, followed by palay at 19.96 million metric tons. Coconut and corn were recorded at 14.72 million metric tons and 8.3 million metric tons, respectively. High-value crops, such as banana, pineapple, cassava, and others, appeared to have production growth. In terms of livestock, the production of hog, dairy, and poultry meat was identified to be declining. However, chicken egg production remained unaffected. Milkfish and tilapia also showed development in production (PSA, 2022a). For non-food products, abaca fiber expanded by 21.7% in production, while rubber declined by 0.3% during the third quarter of 2022 (PSA, 2022b).

In 2021, the Philippines was the seventh largest market for United States (US) agricultural exports and the top market in Southeast Asia (ITA, 2022). The country's export earnings were recorded at USD 6.79 billion, surpassing 9.4% of last year's level. Coconut oil, fresh banana, and pineapple products were the leading exports, bringing in revenues of USD 1.43 billion, USD 1.14 billion, and USD 769.94 million, respectively. Meanwhile, the imported agricultural trade amounting to USD 15.71 billion showed 24.90% increase from 2020. Products such as wheat, including spelt, and meslin (USD 1.75 billion) and soybean oil/copra cake (USD 1.25 billion) were imported from the US, and rice (USD 1.14 billion) from Vietnam. Collectively, the total agricultural exports were valued at 49.20% while 26.40% of the total imports (PSA, 2022a).

Poverty and Hunger in the Agriculture and Fisheries Sector. In 2021, the poverty incidence of the total population of the country is at 18.1%, which translates to 19.99 million poor Filipinos (PSA, 2022d). Filipino farmers and fisherfolk are determined to be the basic sectors of the country with most living below the national poverty line. Between 2015 and 2018, the number of poor farmers and fisherfolk dropped from 4.14 million to 2.67 million (35.5%). However, poverty remains high among these sectors. As of 2018, the poverty incidence for farmers and fisherfolk was 31.6% and 26.2%, respectively (PIDS, 2022). Various causes affect the income of farmers and fisherfolk.

On the other hand, rapid urbanization and major shifts in the food systems threaten Filipino consumers' access to healthy and nutritious food. In 2020, 54% of the population had limited access to fresh and nutritious food and had increased risk of consumption of highly processed food and unhealthy lifestyle are witnessed (PSA, 2022). In 2022, the Department of Science and Technology's Food and Nutrition Research Institute (DOST-FNRI) also revealed a declining consumption of fruits among Filipino households over the years. This causes an alarming situation that might lead to malnutrition problems and non-communicable diseases (DOST-FNRI, 2022).

Climate Change, Emergence of Pests and Diseases and other Hazards. The rising temperature caused by global climate change is increasingly posing threats to the country's food security. Frequent flooding and drought, heat stress, and changing weather patterns resulted in the decrease of crop productivity. As agriculture is highly dependent on environmental factors, unpredictable weather conditions disrupt the planting and harvesting season. The Philippines ranks first in the world in natural hazards and exposure risks (WFP, 2022). With its geographical location, the country is prone to climatic disturbances which greatly affect AF production. Devastating typhoons wreak havoc in farmlands and crops, while extreme rainfall causes flooding and poor harvest for farmers and fisherfolk. In 2021, Desiderio (2022) mentioned that according to PSA, agriculture was the second worst hit sector due to natural extreme events and disasters amounting to PhP25.22 billion (41.6% share).

Further, varying and unpredictable weather patterns heightened other crop diseases. It is also expected that by 2050, global temperature will continue to rise resulting in heat stress which is conducive to the spread of plant diseases and results in stunted growth, deficient good-quality meat and by-products and reproductive capacity for livestock. Recent years saw the increased occurrence of pest and diseases such as the African Swine Fever (ASF) which caused collapse in the hog industry (DA, 2022); Avian influenza that resulted in the mortality of 182,968 heads and culling of 1,267,055 poultries (Global Ag Media, 2022); and the infestation of Fall Armyworm which affected the corn farms nationwide.

Agricultural Land Conversion. Rampant land conversion has been the result to meet the demands of the continuing urbanization and industrialization of the country. Based on the data of the Department of Agrarian Reform (DAR) from 1998 to 2016, a total of 97,592.5 hectares of agricultural land were approved for conversion to non-agricultural purposes (Baclig, 2021). Agricultural lands that were converted for industrial, commercial, and residential purposes, have resulted in decline of agricultural productivity. In addition, Habito (2023) reported that the declining average farm size from 3.6 hectares in the 1960 to 1.2 hectares led to a loss of productivity from economies of scale. This decline could only be alleviated through better access to government support by small farmers, and intensive use of productivity-raising inputs such as quality seeds, fertilizers, and farm management.

Agriculture and Fisheries in the New Normal. The COVID-19 pandemic outbreak in 2020 has inflicted massive stress to the farmers and fishers due to limited mobility and restrictions imposed by the government that decreased agricultural labor affecting 10.34 million individuals in the country (Gregorio & Ancog, 2020). In the first quarter of 2020, the COVID-19 pandemic was estimated to reduce the volume of agricultural production by 2.97% (2.972 million tons). Furthermore, the pandemic has resulted in a -2.5%

growth rate in the AFF sector in the fourth quarter of 2020, which translates to -0.2% growth on an annual basis (PSA, 2021a).

Nevertheless, the government of the Philippines acted hastily to mitigate the damage arising from COVID-19 particularly in food security. The DA implemented the "Plant, Plant, Plant, Program" or "Ahon Lahat, Pagkaing Sapat (ALPAS) Laban sa COVID-19" program to benefit the farmers, fishers, and consumers all around the country. DA obtained PhP 31 billion supplemental budget to intensify provision of inputs, and modern technology to increase productivity and ensure food availability, accessibility and affordability (DA, 2020). In 2022, an additional budget of PhP 24 billion was granted to fund "Plant, Plant, Plant Program 2" to fund fertilizer subsidy, urban and peri-urban agriculture, local feed production, aquaculture and mariculture fisheries and food mobilization (DA, 2022b).

The pandemic highlighted the importance of agriculture in providing sufficient, accessible, safe and affordable food. The imposition of lockdowns also tested the transfer of information through face-to-face training and other related activities. Hence, different strategies such as distance learning and blended learning were employed to continuously empower and build capacities of the AF stakeholders for sustainable development.

While the Philippines is slowly recovering from battling the COVID-19 pandemic, the current Ukraine and Russia conflict hit the country with another blow. As these countries are key producers of energy, oil, fertilizer, and wheat products, the ongoing war disrupted the global supply chains. This weakens the trade of these products to the Philippines, affecting the supply and production chains in the country, which leads to food insecurity (DA, 2022a). In addition, the prevailing inflation rate of the Philippines moved up to 7.7% in October 2022 (PSA, 2022c) which affects the purchasing power of the Filipinos. The increasing prices of farm inputs and raw materials, specifically energy, oil, and fertilizers, puts heavy pressure in the production and supply of agricultural commodities.

As the country's AF sector is dealing with the "perfect storm", the DA plans to strengthen its ranks amidst the devastating challenges and impacts, to boost local food production. To substantiate this campaign, the NAFMIP was formulated to steer the AFF sector within 10 years to achieve a resilient and more sustainable agri-food system (DA, 2022a).

Challenges and Opportunities of AF Extension

The Philippine AFE has been faced with several challenges and opportunities over the years. In a world that is rapidly changing, it is important that these changes and its possible influences in the AF sector are properly managed. As the sector continues its battle to thrive for a more resilient and food and nutrition secure nation with empowered and prosperous farmers and fishers, dealing with the threats and taking advantage of the opportunities is critical.

Digitalization of Agriculture. Access of farmers and fishers to accurate and relevant agriculture and fishery information remains a challenge, whereas Philippine AF extension still lags behind compared to developed agricultural countries. This is evident especially in rural areas where internet connectivity is a problem. With the advancement of technology and the internet, the trend is going towards digitalization under the 'new normal' to increase farm productivity and income by taking advantage of data driven initiatives and integrating precision agriculture and digital technology in local farming practices (FAO, 2020). The popularity of mobile phones and the internet paved the way for a more cost effective and improved use of information. According to study by Fabregas et. al (2022), the use of digital extension technologies supports the farmers in various possible ways. It was also emphasized that "in person extension" is more expensive and has limited reach. Thus, developed countries spend large amounts of dollars in developing innovations for agricultural knowledge and extension delivery. According to Fabregas et. al (2022), digital extension is a promising area of innovation due to: 1) Information and Communications Technology (ICT) and other digital technologies allow for two-way communication with farmers, and 2) digital extension can exercise large economies of scale to generate analytical insights and improve customization.

AlphaBeta (2021) has identified four digital technology applications for the agriculture and food sector that would seize the Philippines' economic opportunity from digital transformation: (1) precision farming technologies, (2) Internet-of-Things (IoT) enabled supply chain management, (3) food safety technologies, and (4) real-time market information. Philippine agriculture has been making progress towards this. For instance, the Rice Crop Manager Advisory Service (RCMAS) was launched by the International Rice Research Institute (IRRI) and the DA which is a digital platform that provides information on crop and nutrient management to increase yields and income of rice farmers (IRRI, n.d). Currently, the training, dissemination, and deployment of RCM is being facilitated in collaboration with the DA–Regional Field Offices (DA-RFOs), ATI through its Regional Training Centers (RTCs), and the LGUs. It is vital that AFE efforts must keep pace with this trend.

Limited access and insufficient government support. Programs, projects and initiatives aimed to support local productivity and high income of the Filipino farmers and fishers were in place even before the pandemic happened. These include subsidies, loan, insurance, grants, provision of farm material and inputs, machineries, knowledge and skills training and activities, among others. The DA, in partnership with the Landbank of the Philippines, implemented the Survival and Recovery Assistance Program for Rice Farmers (SURE Aid COVID-19) which provides loan assistance to small farmers and fishers across the country. On July 29, 2022, the Department of Budget and Management (DBM) released PhP 8.05 billion to the DA as part of the Rice Farmers' Financial Assistance (RFFA) program (DBM, 2022). This shall provide

PhP 5,000 in subsidy to 1,563,781 eligible rice farmers during the second semester of 2022, especially those affected by the Rice Tariffication Law. However, dissemination of information at ground level is a challenge due to the limited personnel of implementing agencies as well as the farmers' registration to the Registry System for Basic Sectors in Agriculture (RSBSA). Hence, awareness of such support and access by farmers continue to be a cause of concern.

Moreover, because of limited and relatively fixed budgetary allocations, giving assistance to all of the target clients in the country is a formidable task. There is a need to translate strong desire or will into significant budgetary allocations to do so. The overlapping and duplicate programs with the same beneficiaries add to an inefficient and uneven government support distribution. The Food and Agriculture Organization (FAO) of the United Nations emphasized that 'the neglect of the agriculture sector and the uneven distribution of resources worsened the poverty situation in rural areas' (Baclig, 2021). Thus, there is a need to harmonize existing programs, projects and interventions for effective fund utilization and wider coverage of beneficiaries.

Resource misallocation. Briones (2022) emphasized the role of resource misallocation which hinders the rate of agricultural modernization in the country. The magnitude of misallocation varies on a macro or micro scale depending on the constraint. On a macro or economy-wide level, the constraints are linked with persistence of surplus labor in agriculture, the high cost of intersectoral migration, and the slow pace of capital accumulation in the modern sector. On the other hand, at the micro level, the constraint can be due to the behavior of rural households and the factors affecting their decision making.

Youth and Women in Agriculture. In attaining a self-sufficient and food sovereign nation, boosting the agricultural production workforce is critical. The Philippines has an aging population of farmers as the average age of a Filipino farmer, particularly the rice farmer, is 57 years old (IRIN, 2013; Palis, 2020). Farm succession is also at risk since the majority of young generations refuse to engage into agriculture as their profession. Palis (2020) also noted that around 73% of rice farmer parents do not want their children to be like them mainly because they perceive farming as "physically tiring and not economically rewarding", not to mention the uncertainty in yield and income due to unpredictable climatic conditions and volatile commodity prices.

> *"Ito ang mga kakulangan at kailangan namin para maging matagumpay ang grupo ng mga mangingisda: (1) magdevelop ng next-in-line generation ng kabataang mangingisda - for sustainability of the projects and association in the long run; (2) scholarship program; (3) pagdevelop ng skills sa environment related projects; at (4) entrepreneurship"*
>
> - *Roberto "Ka Dodoy" Ballon during the National Consultation Workshop held last November 8-10, 2022*

Farming is mainly dominated by male farmers as agricultural work mostly involves physical activities that require endurance and a lot of heavy lifting. Ani and Casasola (2022) noted based on PSA's recent data that men still occupy the large portion of the agricultural labor sector at around 77% while women at around 23% in 2018. The importance and significant contributions of women and youth is recognized as they are critical resources for the improvement of the agriculture and rural economies. In a study conducted by the Philippine Council for Agriculture and Fisheries (PCAF), the increasing roles and contribution of women in agriculture is recognized particularly in the rice supply chain. Results showed that women are now more engaged in capital sourcing during pre-production. For the post production activities like palay drying, milling and marketing, these are dominated by women. Despite the increasing contribution of women, they are still being denied opportunities for land ownership and productive assets (Cariasco, 2022).

With the country's current population of about 113,034,562 (World meter, 2022), it is projected to reach 125 million by 2030 (World Population Review, 2022). The growing population presses a very heavy responsibility for Philippine agriculture as this would mean that there are more mouths to feed. Hence, reinforcement in boosting the agricultural sector is imperative. Continuous efforts to attract and engage the youth and the women in agriculture through capacity building initiatives such as training and education needs to escalate. AFE strategies should gear towards the goal of producing skilled agri-entrepreneurs/farm business owners and empowered/highly skilled youth and women.

Extension after Devolution

Several studies have been conducted to evaluate the effects of the Local Government Code (LGC), since its passage in 1991 and devolved agricultural extension to the local level. To enhance the grassroots intervention, the province, city, municipal, and barangay government units were given autonomous power, authority, responsibilities, and funding. Farmers and fishers now have easier and quicker access to the services they need. Nevertheless, difficulties such as administration, manpower, budgetary, linkages, and resources issues continue to exist.

Governance and Political-related problems. The lack of an administrative link between the provincial and municipal/city agricultural and veterinary offices leads to the dispersed and lackluster nature of grassroots extension services. Not to mention the partisan politics that is present in local governments, which cause local agricultural efforts in municipalities and cities with different political parties to discontinue. Additionally, the hiring of employees is greatly influenced by those in positions of authority, which has an impact on extension services delivery.

Implementation of Mandanas-Garcia Ruling. The devolution of agricultural extension necessitates sufficient funding for agricultural and fishery programs and projects implementation. Funding of operational activities depends on the locality's internal revenue allotment (IRA) which vary from one locality to another. In July 2018, the Supreme Court ruled decided to approve this ruling in favor of Batangas Governor Hermilando Mandanas and former Bataan Governor Enrique Garcia Jr. which ruled that the IRA must be computed based on all national taxes and not just based on national internal revenue taxes. The Supreme Court ruling shall substantially increase the level of IRA and necessitates proper planning and delivery of support services at the LGU level.

Increased IRA, now called National Tax Allotment (NTA), amounts are expected to be provided to the LGUs starting on the Year 2023 budget cycle. With more resources, the LGUs can now design appropriate

and responsive AFE operational plans for their constituents especially the farmers and fisherfolk. This does not, however, ensure that the additional funds will be put toward agriculture and fisheries programs since local priorities and biases of the local chief executives prevail. This points out to the need to capacitate the LGUs to plan, develop proposals, implement, monitor, evaluate and sustain their agricultural programs.

Province-led Agriculture and Fisheries Extension System (PAFES). The harmonization and continuity of AF related interventions is one of the goals in establishing the PAFES in the provinces. Regardless of who is in position, the continuity of good AF related efforts will be pushed through. The PAFES, as a key strategy in the consolidation of resources in the province, serves as an extension hub that synchronizes agricultural plans and programs as well as orchestrates the activities of the various stakeholders. This should be considered in the implementation of regional/provincial/municipal AFE plans at the grassroots level. This mechanism ensures that extension services reach the target clients amid the challenges of devolution. It also aims for the transition from government-led to pluralistic institutional partnerships and participation arrangements for research and extension services delivery; and from supply-driven (researcher-driven) to demand-driven (farmer and fisherfolk-driven) research and extension (NAFMIP Preparation Guide). Based on the experiences in the pilot provinces, Dr. Navarro said that there are elements that the PAFES should have in place in order to succeed namely: 1) political will; 2) strategic management; 3) proven success in pilot provinces; 4) partnerships; 5) innovation and national support; and 6) linkage/collaboration of the stakeholders (Gesmundo, 2021).

Manpower related concerns. Data from the PSA (2022) recorded a 15.7% increase in the number of Agricultural Extension Workers (AEWs) that were engaged in agricultural development service as compared in 2018. Despite this, the AEW to farmers/fisher ratio is still high. Based on ATI's report on AEW Profile (2021), the total number of AEWs in the country is 13, 057[2]. In addition, the median estimated number of barangays covered by the AEWs is 10 while the median estimated number of farmers/farmers served by the AEWs is 500.

In preparation for the transition as a result of the Executive Order (E.O.) 138 "Full Devolution of Certain Functions of the Executive Branch to Local Governments", it is important to assess the readiness of the AEWs in the LGUs to take over the devolved extension services. It is crucial that they possess competencies and are equipped with skills necessary in the performance of their functions. This is to ensure that transfer of information and skills to farmers and fisherfolk is efficient and effective.

A recent study entitled, "Competency Assessment of AEW-LGUs" was conducted by the ATI. The functional competencies of extension workers in LGUs are the main subject of the study. Results showed that four out of the twelve functional competencies—Extension Methodologies, Agricultural Extension Program Management, Adult Learning and Behavior Change, and Community Mobilization—were scored highly. On the other hand, Agricultural Entrepreneurship, Role of Extension in Supporting Value Chain and Risk Management and Adaptation in Extension and Advisory Services obtained the lowest scores (ATI, 2021). This requires attention on the competencies stated which is crucial in delivering extension services at

[2] The figure is based on the AEW profile dataset collected by ATI-RTCs. This includes partial data submissions.

the local level. Updating and development of curriculum and modules in partnerships with State Universities and Colleges (SUCs) and subject matter specialists should be given focus.

Limited Mobility. Extension workers are typically in the office due to lack of service vehicles and operational funds for travel. This limits the chance to reach communities and marginalized groups through extension services in remote areas.

Human resources development issues. Extension workers are mostly demoralized or demotivated due to lack of rewards and incentives, not to mention the non-assurance of security of tenure. They are also assigned to several responsibilities, wherein they have to address all general agricultural related issues in their respective localities. With this, LGU extension workers are dubbed as generalists rather than subject matter specialists. In addition, most LGUs lack career development plans for their extension workers, thus, continuous capability building for AEWs shall be strengthened, to produce "New Extensionists".

"We need to innovate and change the style of implementing our usual extension work (e.g. Farmers Field School). This is creating a familiarity among our farmer/fisherfolk clients.

Also, AEWs are too familiar with the problems and only band-aid solutions are provided. There are no new solutions or interventions to farmers' problems".

- *An LGU Extension Worker during the National Consultation Workshop held last November 8-10, 2022*

Weak Research and Extension linkage. The critical roles of research, development and extension (RDE) services in ensuring high agricultural productivity of the country is recognized. While the aim of technological innovations as results of research and development (R&D) initiatives is to address gaps along the value chain, facilitating the effective transfer of these innovations to the right people remains a challenge. The same is true the other way around. The probability of developing inappropriate technologies and solutions would be high without a strong link between research and extension as data and information on farming demands, problems and challenges would be inaccurate and incomplete, in which research would rely (Ani & Correa (2016); Ponce (1989); Bonifacio (1994)).

The weak linkage or disconnect between research and extension is being addressed in the current DA's Research for Development and Extension (R4DE) System in the Philippines, since the functions are being handled by separate government agencies. The Bureau of Agricultural Research (BAR) as the research arm of DA is mandated to ensure that all agricultural research is coordinated and undertaken for maximum utility to agriculture. The ATI, on the other hand, was created to become the capacity builder, knowledge bank, and catalyst for the Philippine extension system which is responsible for training extension workers and other AF clientele. To address the lack of coordination and integration of agriculture RDE, the One for Research for Development and Extension and Agenda Program (One R4DEAP) has been proposed. This initiative aims to achieve the sector's goal to promote the overall resilience, competitiveness, and sustainability of the agriculture and fishery sector with an integrated systems approach to RDE (Lapitan, et. al , 2022).

Weak monitoring and evaluation (M&E) system. The lack or absence of baseline data can result in repetitive, overlapping, duplicate, and ineffective AFE efforts. In addition, the lack of coherent and

effective coordination mechanisms with the national governments contributed to this (Gasmen, 2019). More often than not, the process stops from the planning to the execution of programs/initiatives. M&E of these programs are often neglected. Adarao et. al (2020) found that many LGUs give low priority to the M&E of local programs (38.4%). The LGUs do not have the capacities to establish a good M&E System within their organizations. Not to mention the shortage of dedicated M&E personnel. Due to shortage of manpower, extension personnel do not only perform technical but also administrative functions, becoming 'jack of all trades, master of none' that they (Ani and Correa, 2016).

AFE STRATEGIC FRAMEWORK/ RESULTS CHAIN

AFE Strategic Framework/Results Chain

AFE and advisory services anchor on the vision of a food-and-nutrition secure, resilient Philippines with empowered and prosperous farmers and fisherfolk. As the sector deals with food which is a basic necessity for human survival, food security and nutrition is imperative to nation-building. Empowerment of all actors is also essential for a dynamic, holistic and cohesive set of actions that will propel the sector towards the desired economic and social transformation in the country.

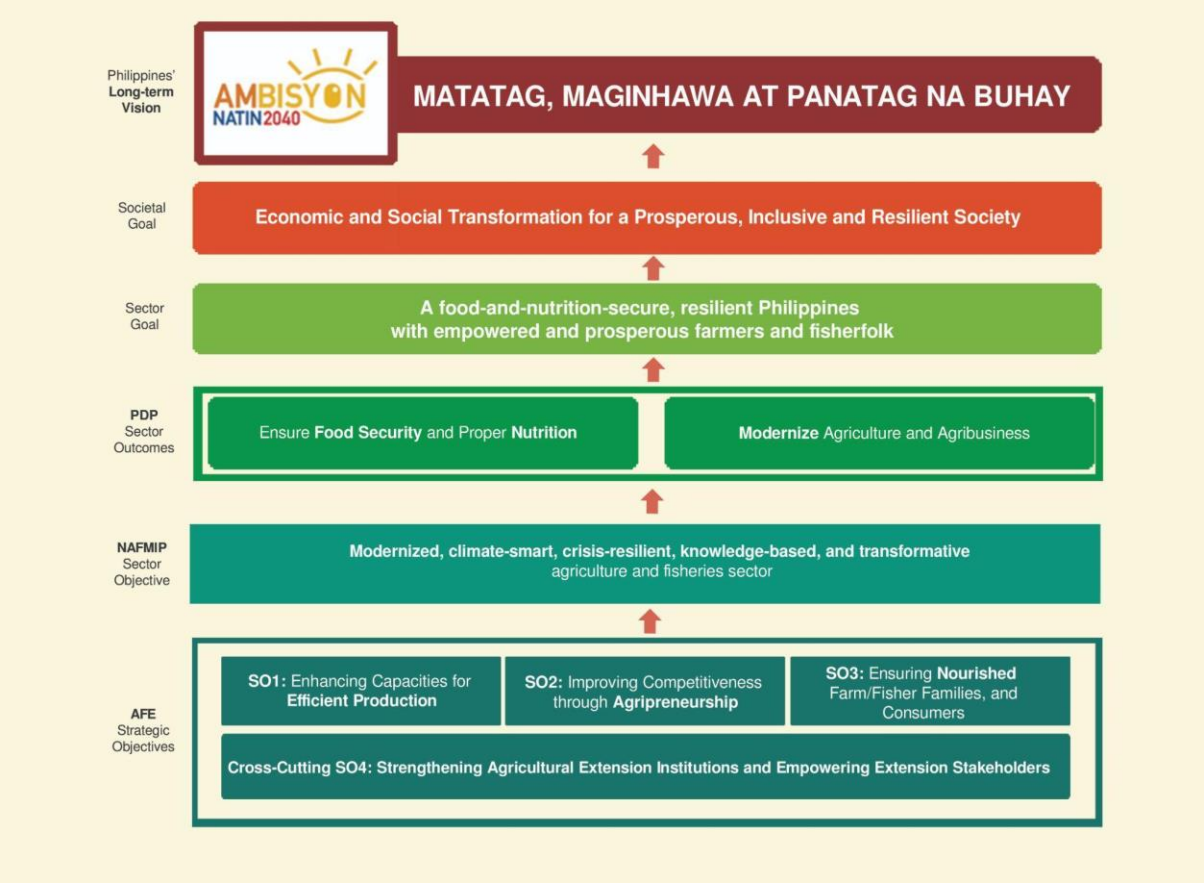

Figure 1. AFE Strategic Framework/Results Chain (2023-2028)

The AFE Strategic Framework 2023-2028 hinges on the national thrusts, policies, and plans and the regional consultation outputs which determine the AFE strategic objectives and focus areas that will direct the National Extension System for Agriculture and Fisheries (NESAF) in contributing to the attainment of the goals and vision for the sector and society. Guided by the NEAP 2022-2028, the strategic framework also shows the vertical relationship of AFE's contribution to the objectives stipulated under the NAFMIP and PDP 2023-2028. It focuses on the transformation necessary for AFE by prioritizing pressing concerns faced by the sector such as extreme poverty and low incomes of the country's primary producers, hunger, malnutrition, and limited diversification through investments in AF human resource capacities and capabilities.

Encompassing the stages of the food system, the new AFE strategic framework capitalizes on three major strategic objectives which leverages the adoption of modern and resilient technologies and practices as well as diversification among AFE clients across key commodities to achieve **efficient production through**

enhanced capacities [SO1]; empowers small farmers and fisherfolk to become entrepreneurs and access markets to improve their **competitiveness through agripreneurship [SO2];** and advocates nutrition-sensitive agriculture to address nutritional challenges in the sector **ensuring nourished farm/fisher families, and consumers [SO3].** A cross-cutting strategic objective to **strengthen agricultural extension institutions and empower extension stakeholders [SO4]** addresses concerns on capacity building of AFE actors that include competency build-up, scholarship management, incentive mechanisms and partnerships that captures research-extension linkages, collaborative public-private/public-public undertakings among others. Apart from the traditional extension services, the plan also harnesses the potential of digital technologies to foster innovations, improve access to relevant AF knowledge and technologies, and strengthen communication.

Through the AFE strategies and action points promoted in this plan and the critical role of different extension partners and providers through the operationalization of the PAFES, it shall accelerate the AF sector into becoming modernized, climate-smart, crisis-resilient, knowledge-based, and transformative (NAFMIP 2021-2030). Furthermore, the achievement of these sector outputs will help in realizing the sector outcomes of an enhanced food security and proper nutrition, and modernized agri-fishery and agribusiness (PDP 2023-2028).

Looking beyond, the AFE Strategic Plan 2023-2028 will serve as a system-wide plan guiding AFE stakeholders, especially policy makers, planners, and implementers, to focus their resources and actions towards the identified strategic objectives. Ultimately, this will contribute in the achievement of the sector's vision of a food-and-nutrition secure, resilient Philippines with empowered and prosperous farmers and fisherfolk.

AFE STRATEGIC OBJECTIVE 1:
Enhancing Capacities for Efficient Production

AFE STRATEGIC OBJECTIVE 1

Enhancing Capacities for Efficient Production

According to FAO (2021), addressing climate change and transforming agri-food systems are key to meeting the Sustainable Development Goals (SDGs). One of the SDGs which were set up by the United Nations in 2015 aims to reach Zero Hunger (SDG2). While there are existing support programs from the government to achieve SDG2, the food production of the country cannot keep up with current challenges. With this, it is important to boost local production to supply the demands of the country. The use of modern and appropriate technologies is imperative in mitigating the challenges influencing agricultural production.

The strategic plan will strengthen commodity production through diversification and improved capacity of agricultural extension workers, extension service providers (ESPs), farmers and fishers on appropriate, innovative and climate-resilient technologies which will leverage the sector's productivity and income. There are four key initiatives to attain this objective.

Key Initiative 1.1

Improve capability exchange[3] of AEWs and ESPs to become competent new extensionists on appropriate and modern AF technologies

As the Fourth Industrial Revolution (4IR) emerges, various innovative technologies in farming and fishing are being developed. With this, AEWs and ESPs should be capacitated with relevant technical skills to cope up with the current trend. It is also vital for them to effectively perform their tasks and demonstrate new knowledge and technologies for their clients. Empowering extension personnel and partner ESPs with opportunity for career development will help accelerate rural and social progress.

1.1.1. Enrich training services through non-formal education curriculum development towards modernization and resiliency. Inventory of training modules should be conducted, and standardization of curriculum development on the ladderization of training courses (basic, and advanced, specialized courses) must be facilitated. Existing curriculum of ESPs should be updated with the inclusion of agricultural research and development outputs which will provide participants with the necessary knowledge, attitude, and abilities particularly on modern AF technologies (e.g. climate-smart agriculture, farm mechanization). The curriculum modules of ESPs and learning sites for agriculture (LSAs) shall also be monitored and updated to be able to match and determine the proper intervention needed by the clients.

1.1.2. Intensify conduct of ladderized training courses and programs on modern AF technologies for AEWs towards skills certification. To become effective trainers, AEWs are recommended to undergo courses and training (e.g. resource person training course, Training-of-Trainers). AEWs shall also

[3] Capability exchange refers to reciprocity of knowledge sharing and capacity development of clients. In the case of AFE, a culture of learning shall be promoted between the end clients (farmers and fishers) and extension service providers.

take the corresponding assessment exams from certifying agencies such as Technical Education and Skills Development Authority (TESDA). With the current setting, AEWs are also encouraged to enroll in online courses during their convenience. Moreover, strengthening collaboration with government agencies, education institutions, and the private sector can also amplify the competency of AEWs and ESPs through introduction and demonstration of new technologies and research.

Key Initiative 1.2

Strengthen capability exchange of farmers/fishers in the adoption of appropriate and modern technologies

The most significant extension service is the dissemination of knowledge and expertise to the clients. The integration of the AEWs, ESPs, local farmer technicians (LFTs), and private sector can influence in enhancing the competency of farmers/fishers in adoption of appropriate innovations. However, lack of resources is one of the challenges of farmers and fishers to embrace these technologies. Thus, provision of assistance is necessary to secure this objective.

1.2.1. Diversify production and incomes through commodity-based system approach. Poor production is one of the major challenges in the agriculture sector which is caused by post-harvest losses and climate disturbances. Through adoption of diversified cropping practices, modern planting technologies, and proper nutrient management, crop productivity will be enhanced. Developing standard models and manuals, as well as enriching training courses for modern and sustainable farming practices can contribute in amplifying interest and involvement of individuals (e.g. standard model for soil-less and vertical planting technologies).

In addition, enhancing diversified farming systems including Sloping Agricultural Land Technology (SALT), Bio-Intensive Gardening (BIG), Integrated Diversified Organic Farming Systems (IDOFS), and Vegetable Agro-Forestry System (VAFS), as well as farm and aquaculture management shall be demonstrated. Integrated farming systems that combine crop production, aquaculture, livestock and poultry farming requires further research and development to simplify and make it more adaptable for communities.

1.2.2. Intensify research and extension in enhancing production of non-food and industrial commodities. The major industrial crops of the country include abaca, coffee, rubber, tobacco and cacao (PSA, 2022b). With the limited innovations available for utilizing these crops in contrast to rice and corn, the production of non-food commodities is affected. The intervention of other concerned agencies can contribute to the development of machineries and technologies. Further, knowledge transfer through training programs shall be intensified particularly on introduction of modern farming practices and use of appropriate technologies for production of non-food commodities.

1.2.3. Undertake benchmarking activities of farmers/fisher leaders for modern innovations. Learning by watching and doing are proven to be effective means in acquiring knowledge. Benchmarking

enables farmers to conduct field visits and tours in other farm research centers and LSAs, so that they can compare their production performance among others. It will also allow them to learn up-to-date farm practices and techniques, varieties of crops, and other non-food production from their peers to achieve high productivity and profitability. Further, demonstrations about the latest technologies in farming will increase their awareness and encourage them to try new options.

1.2.4. Facilitate access of farmers and fisher to financial and credit assistance for production support. Provision of financial assistance to farmers and fishers is necessary to allow them to have access to modern farming technologies and farming inputs. The Rice Competitiveness Enhancement Program (RCEP) under R.A. 11203 or the Rice Tariffication Law, embedded the Expanded Rice Credit Assessment (ERCA) which helps in increasing rice production through acquisition of farm inputs and labor support, as well as establishing machineries and processing facilities. The Agricultural Credit Policy Council (ACPC), which implements credit programs for the DA, also offers loan programs, such as the KAYA and ANYO, to finance capital requirements of AF based micro and small enterprises as well as young agripreneurs, respectively. Additional support by AEWs is recommended to intensify access of the AF sector to these services.

1.2.5. Supplement progressive local support and services to farmers and fishers. Institutionalizing and increasing the number of Barangay Agricultural Extension Workers (BAWs) for agriculture, fishery, livestock, as well as LFTs can strengthen and ensure incessant response to farmers/fishers for their production problems and inquiries. It allows direct involvement and support to stakeholder and clients in AFE interventions. Advisory services will also reach a large number of farmers and fisherfolk to improve their farm management decisions and productivity.

Key Initiative 1.3

Upskill farmers/fishers, AEWs and ESPs through distance learning programs and knowledge sharing activities

The limited mobility of far-flung farmers and fishers weakens their access to agricultural extension services, which should not be a hindrance in enhancing their knowledge and skills. Thus, the dissemination of knowledge should be flexible in terms of modality and should also be available in all forms of media. Moreover, maintaining database and information systems on AFE interventions is necessary to keep collection of data that can be used to further improve services.

1.3.1. Intensive development and distribution of Information, Education and Communication (IEC) materials and knowledge products for agriculture and fishery extension services. In order to widen the scope of knowledge propagation of AFE services, distribution of IEC materials shall be conducted through various channels such as established Farmers' Information and Technology Services (FITS) centers, information hubs and kiosks. It is recommended to produce locally translated materials to allow the clients to easily understand the provided information. Also, it is encouraged to use innovative data visualizations such as infographics in presenting documented good agricultural and fisheries practices. These can serve as a model for other stakeholders to recreate such practices for their actual experiences.

1.3.2. Augment extension services and programs through multimedia and digital platforms. Strengthening collaboration with ESPs such as academe, public, and private institutions can establish better sharing of knowledge to AFE clients. With the use of ICT tools, conducting online extension activities which are exhibited through multimedia such as television, radio programs, social media can enhance the learning of participants (e.g. School-on-the-Air, ATI's Agri Asenso radio program[4]). Further, training and demonstrations in use of software applications related to agriculture (e.g. AgriDoc App, LCC App, Binhing Palay, MOET App[5]) can aid in the adoption of farmers in modern technologies. With these platforms, the younger generation will raise their interest and involvement in agriculture.

Key Initiative 1.4

Foster resilience and adaptation to climate change and disaster risks

The agricultural productivity of the AF sector is being affected due to the geographical location of the country. The tropical cyclones that enter the Philippine Area of Responsibility ranges from 19 to 22, with about eight to nine landfalls yearly (PAGASA, 2021). With this, extension services shall be strengthened in contributing to the resilience of communities being able to respond to natural disasters.

[4] Agri-Asenso radio program is accessible via Agricultural Training Institute Facebook page
[5] Applications available on Google Play Store pub:PhilRice

1.4.1. Promote climate-smart technologies. Climate-smart technologies involve the use of Global Positioning System (GPS), drones, and satellite images to control amounts of farm inputs as well as modify the environment setting. These technologies are proven to improve production and also increase productivity of the farmers. One example is precision agriculture, which is a farming management technique that uses modern technologies such as IoT sensors. This method improves water efficiency of crops, preserves the soil health, thus increasing production and reduction of waste. Providing training and demonstrations for this technology can inspire farmers in taking part in agricultural digitalization.

1.4.2. Enhance resource conservation practices to mitigate climate change. The degradation of land and water resources is caused by climate change, which in turn affects agricultural development and production. Farmers and fishers play a significant role, thus, applying effective agricultural practices can contribute to climate change mitigation. Proper management will also result in agriculture and fisheries conservation, which will be needed to respond to challenges of food security. With this, extension services shall be focused on educating farmers and fishers in appropriate and modern conservation methods by strengthening its training programs and advisories.

In addition to resource conversation, recycling and waste management shall also be intensified. Interventions on agricultural waste utilization shall be provided in partnership with the LGUs. Among these training courses are briquette making (charcoal from fruits, seeds, and plants), fiberboard development (wood product made of fibrous plants crops), and biofuel production (fuel derived from plant and animal waste). In this way, reduction of waste will be achieved, and agro-industrial production will be boosted.

1.4.3. Intensify access of farmers and fishers on climate and early warning advisories. Farming and fishing weather advisories shall be strengthened and must be available in all forms of media. Local translation and infographics for better understanding of stakeholders should also be implemented. In addition, extension services and advisories for disaster risk reduction management shall be conducted to enhance resiliency of farmers/fishers.

1.4.4. Facilitate access to crop, fisheries, and livestock insurance and social protection. The Philippine Crop Insurance Corporation (PCIC) allocates insurance services to major agricultural products for primary producers. They also provide insurance for non-crop agricultural assets like agricultural structures, machineries, equipment, and other facilities. The Agricultural Producers Protection Plan (AP^3) is also offered for farmers, fisherfolk and other stakeholders which covers death of insured due to accident, natural causes, murder or assault. On the other hand, the Social Security System launched a flexible payment scheme for farmers and fishermen which allows them to pay their contributions any time (Arcalas, 2022). AEWs should raise awareness and assist the farmers and fishers in application and filing for insurance claims.

1.4.5. Strengthen extension and advisory services for climate resilience and disaster adaptation. In addressing climate change and vulnerability in the country, extension interventions that will equip the AF stakeholders to deal with climate change shall be developed. Existing climate change related programs such as Climate Field School (CFS) and Climate Resilient Agriculture (CRA) communities, and DA's Adaptation and Mitigation Initiative in Agriculture (AMIA) shall be enhanced and replicated to further reach wider clients. Moreover, development of capacity building programs and knowledge for promoting climate-smart industries and services shall also be intensified. Training on climate change adaptation and disaster risk reduction practices and technologies can also build adaptable and resilient communities. AMIA Villages should be established to cater to more farming and fishing communities. This is in collaboration with DA-Climate Resilient Agriculture Office (CRAO), DA-RFOs, and LGUs.

AFE STRATEGIC OBJECTIVE 2:
Improving Competitiveness through Agripreneurship

AFE STRATEGIC OBJECTIVE 2

Improving Competitiveness through Agripreneurship

While the need to strengthen the production side of the value chain is imperative, attention to other segments shall also be given priority, particularly on the marketing and consumption side to ensure stability of the whole chain. Each segment of the agri-fishery value chain is equally important. One weak segment could cause the collapse of others.

Maximizing profitability of farmers and fishers remains one of the dilemmas being faced in the sector. High productivity does not always equate to high profitability. There are still various factors to consider. Productivity is a measure of efficiency while profitability is the measure of income over expenses. However, productivity is an important factor for long term profitability.

As interventions are highly focused on increasing farm productivity, farmers lack the necessary entrepreneurial skills to make their livelihood more sustainable and competitive. In addition, agripreneurship has very promising potential to generate growth, diversifying income, providing widespread employment, and entrepreneurial opportunities especially in rural areas. Thus, the need to intensify extension interventions to enhance farmers/fishers competitiveness through agripreneurship is extremely important. Transforming farmers/fishers into entrepreneurs is not an overnight job— it takes time. The following initiatives should help in achieving this.

Key Initiative 2.1

Improve capability exchange of AEWs and ESPs to become competent new extensionists on agripreneurship

Built on trust and companionship, AEWs and ESPs play a very significant role and have certain influence in persuading clients towards the desired outcome. In order to capacitate farmers/fishers, we need to capacitate AEWs and ESPs first as they are the ones directly engaging and communicating with them.

2.1.1. Enrich training services through non-formal education curriculum development towards agripreneurship. Results of agriculture and fisheries research and development on enterprise development and management shall be integrated into training curricula to capacitate AEWs and ESPs with appropriate knowledge, skills and attitudes. In order to do so, there is a need to conduct an inventory of training modules and facilitate curriculum development on the ladderization of training courses (basic, advanced and specialized) such as introduction to business management and entrepreneurship, marketing and financial management , product ideation and creation and business laws among others. It is necessary to review and understand existing training courses in order to determine what needs to be developed or improved.

Furthermore, agri-entrepreneurial concepts will be incorporated into the K to 12 basic education curricula for the youth in coordination with DepEd. For non-formal education, the concepts shall be integrated into training modules in partnership with LSAs and farm schools. In

addition, collaboration with TESDA should be strengthened in developing training regulations and provision of training and scholarship to ensure job-skill matching.

2.1.2. Intensify conduct of ladderized training courses for specialists and trainers (ladderized program for AEWs) towards skills certification. Ladderized training curricula shall ensure that extension professionals are competent enough to the job. Identifying basic, advanced, and specialized training will assist extension workers in matching clients' intervention needs. Collaboration with NGAs, research institutions, SUCs and the private sector shall be done to come up with a more holistic and effective extension delivery approach.

Once training curriculum and modules have been established, the need to intensify the conduct of ladderized training for specialists and trainers towards skill certification, particularly on agri-entrepreneurship, must be intensified. National certification of AF training for AEWs and ESPS should be strengthened in partnership with TESDA.

2.1.3. Intensify certification of ESPs. As AEWs in the LGUs are limited in number, the need for a reinforcement to deliver extension services to the clients is critical. Private ESPs shall serve as partners of NGAs and LGUs to address the needs of the farmers, fisherfolk, indigenous people (IP), agrarian reform beneficiaries, and other AFE stakeholders in their communities. There may be a need for additional benefits and/or incentives to encourage private farms to apply for accreditation. Likewise, they shall be provided with training and other support to enhance their capacities to transfer knowledge and skills to the client, particularly on agripreneurship.

Key Initiative 2.2

Enhance capacities of Farmers' Cooperative and Associations (FCAs) and Rural Based Organizations (RBOs) in Agri-fishery enterprise development

Agribusiness is viewed as one of the industries with a very promising potential for the growth of not only the AF sector but also to the country's economy. Agri-fishery[6] enterprises as defined refers to enterprises or businesses engaged in the production, processing, trading, marketing, distribution of agricultural and/or fisheries products (DA, 2020). As the global and domestic demand for agri-fishery products is increasing, extension services shall help in facilitating small farmers/fishers in turning their farms into sustainable and competitive businesses and take advantage of the local and international opportunities. To achieve this, there is a need to capacitate our farmers and fishers on enterprise/ business development.

2.2.1. Improve the existing module of Farm Business School (FBS). The FBS as a 'forum' or 'venue' that brings farmers together to carry out collective and collaborative enquiry to address business and marketing problems and opportunities to increase farm productivity, should be enhanced. The curriculum of the training program shall be revisited and updated to incorporate new technologies and approaches in farm business (i.e. digital agriculture). The use of ICT-based information and agri-fishery digital technologies in an innovative and effective way should be explored (i.e marketing platforms). Attracting the young generation into agriculture in response to the aging population of Filipino farmers should be a priority. Studies have shown that younger generations are keener and more enthusiastic to work with technology (Romulo, 2020).

2.2.2. Intensify implementation of effective FBS. The conduct of FBS shall be intensified to capacitate a substantial number of farmers and fisher or communities in farming/fishing business through strengthened collaboration with the LGUs, and private institutions. The Sanguniang Kabataan of the LGUs shall be tapped for the institutionalization of internship/OJT programs for young farmers in Philippine farms. Intensive classroom training complemented by industry exposure will prepare them for actual business setting. Capability building activities on business planning and management, financial and digital literacy, farm business record keeping and the like should also be magnified.

2.2.3 Provide scholarships and grants to deserving youth. Harnessing the potential of the youth to take lead roles in the development of the agriculture and fisheries sector is vital. Data consistently presents that fewer youth are interested to engage in the agriculture and fisheries profession, more so in the production aspect of the sector. Provision of scholarships would attract deserving youth to the sector as this will provide access to formal education and employment opportunities. Grants for non-formal education towards engagement in agriculture and fisheries production must also be upscaled to encourage more youth participation in the sector. The 4-H and other youth organizations can be tapped in developing youth-oriented AF programs and projects that must be proposed by the youth scholars.

[6] DA Memorandum Circular No. 25 series of 2020

2.2.4. Upscale Learning Sites for Agriculture towards agripreneurship. Accreditation of farms to become LSA needs to be intensified to showcase value adding activities in processing and/or manufacturing of agri-fishery products such as; crops (rice, corn, sugarcane, banana, coconut, cacao, cassava , pineapple , coffee , vegetables); livestock (hog, cattle, goat and dairy); poultry (chicken, duck, quail including meat and eggs) and fisheries (milkfish, tilapia, tuna, shrimp, prawns round scad, sardines, anchovy, slip mouth, seaweed), among others. This is to encourage more farmers/fishers to engage in farming businesses, adopt value-adding technologies and practices, and link their products efficiently and effectively to markets. Moreover, upscaling of existing LSAs include but are not limited to farm diversification, upgrading farm facilities/equipment, and farm tourism shall be done to generate additional farm income and create employment opportunities.

2.2.5. Organize Farm/Fishers into associations and/or cooperatives. The sector is dominated mostly by small farmers and fishers which makes it difficult for them to increase their capacities (human and financial capital) to make farming sustainable and competitive. Extension efforts should focus on facilitating organization of small farmers/ fishers to cooperatives, associations or corporations to increase their access to inputs, facilities, machineries and equipment, financial and technical assistance, and better prices through collective marketing (Garud et. al, 2020). “Farmers' organization refers to farmers' cooperatives, associations, or corporations duly registered with appropriate government agencies and which are composed primarily of small agricultural producers, farmers, farmworkers, and other agrarian reform beneficiaries who voluntarily join together to form business

enterprises which they themselves own, control and patronize"[7]. The role of NGAs (DA-PHilMech, Philippine Coconut Authority (PCA), Cooperative Development Authority (CDA), etc.) in facilitating adoption through farm clustering/organization of FCAs should be emphasized.

Strengthening of RBOs such as Rural Improvement Clubs (RICs), 4H-Club, Pambansang Mannalon-Maguuma-Magbabaul-Magsasaka ng Pilipinas (P4MP), Magsasaka Siyentista (MS) shall also be encouraged. They shall likewise be given capability building interventions and support to enhance their skills and knowledge in agri-fishery related businesses.

2.2.6. Facilitate in Agri-Fishery Enterprise Registration through Advisory Service. Trained farmers/fishers shall be assisted in registering their enterprises to create legal business identity which is a basic requirement for them to compete in local and international markets. They shall be advised and assisted on the processes and requirements needed in registering their business and shall be linked to institutions such as Department of Trade and Industry (DTI), SEC, CDA, Bureau of Internal Revenue (BIR), PhilHealth, SSS, LGUs, among others. AF enterprises shall also be facilitated to be registered to the Farmers and Fisherfolk Enterprise Development Information System (FFEDIS) to provide access to different programs and projects of the DA (e.g. market linkage, credit, grants, training, subsidies, among others).

2.2.7. Facilitate access to financing opportunities and credit assistance for agribusiness development. One of the benefits of becoming an enterprise and legalizing the business includes increased access to available financial and credit assistance offered. However, farmers and fishers lack the knowledge, information and access to these opportunities necessary to fund and start their agri-fishery related business operations. Extension efforts should focus on increasing the knowledge and awareness of the clients on the programs they can avail through massive information campaigns (trainings, seminars, conferences, caravans, social media platforms, IEC materials, etc.). AFE initiatives shall likewise facilitate the linkage of individual farmers/fishers and/or communities to institutions like DA, ACPC, DTI, PCIC, PCA, DAR, DOST, Landbank of the Philippines, Development Bank of the Philippine and other banks or lending firms.

Key Initiative 2.3

Facilitate market linkage among industry players

All value chain actors heavily rely on information in making decisions. Information flows in both directions: markets inform producers of price, quantity, and quality requirements, as well as product handling and technology options, while producers inform processors and markets of production quantities, locations, timing, and production issues. Processors and marketing agents in a value chain may provide producers with financing, inputs, and training in production technologies (Norton, 2014). However, access to accurate and reliable information remains a challenge especially for farmers and fishers residing in the rural areas.

[7] Republic Act No. 7607. An Act Providing A Magna Carta of Small Farmers. https://www.chanrobles.com/republicactno7607.htm

2.3.1. Expand accessibility to market information through optimization of existing and emerging AFE channels. The existence, availability and continuously evolving ICT based technologies should be maximized to expand the reach of information and facilitate linkage of actors across all chain segments. Extension efforts should expedite the effective and optimum use of digital market information systems or digital agricultural platforms (e-kadiwa, e-trading, Kadiwa agribiz portal, FFEDIS, online price monitoring system, etc.,) aside from the conventional means of information dissemination. A directory of agri-fishery buyers, sellers and producers (farmers/fishers) should be made available, maintained and updated to aid in making business transactions as well as serve as a basis for AFE support/assistance. This facilitates the matching of farmers/fishers to buyers/traders. Conduct of training programs to increase digital literacy of farmers/fishers such as Digital Farmers Program (DFP), which empower farmers through basic digital tools such as smartphone use, social media, agriculture applications and more complex services like e-commerce, should be increased. The Farmers contact centers (FCCs) should be utilized to cater not only to farm and production related inquiries but also provide agricultural marketing assistance services and linkage of clients to agribusiness support.

Market information asymmetry on agri-fishery products, which may lead to price manipulation, production/supply surplus and/or shortage, inefficient and ineffective AFE interventions among others, will eventually result in low profitability of farmers/fishers should be addressed. Establishing a strong link among key industry players and ensuring information transparency across the chain should be strengthened.

2.3.2. Disseminate Massive Information on Agri-fishery Investment Opportunities. Several value adding opportunities are already available in the agriculture and fishery sector because of emerging markets which need to be explored. However, these opportunities are not properly channeled to right actors in the chain — potential investors. Dissemination and promotion of existing investment opportunities locally and internationally needs to be intensified. The use of digital marketing platforms, particularly social media, is a very effective and efficient way to do so as it covers a wide array of potential investors. The implementation of the Techno Gabay Program which is composed of the FITS Center, MS, ICT and IEC, shall be intensified. FITS Centers can be utilized as information hubs for potential investors. Training and other related activities such as trade fairs, conventions, seminars, information campaigns, technology demonstration and School on Air (SOA) shall be escalated.

Key Initiative 2.4

Augment Value Creation of Agri-fishery commodities

Consumer preferences change over time and the sector through value addition of agri-fishery products and services should be able to keep up with these changes in order to survive. Value addition is critical because it helps businesses attract more customers, expand their markets and boost revenue and profits.

2.4.1. Enhance capability exchange on Agri-fishery value adding activities. Individual farmers/fishers, cooperatives and associations lack the necessary skills, training and capital investment to expand their product lines. Thus, the need to capacitate them. Horizontal value chain integration (forward/backward) shall likewise be promoted to enhance income. These include but are not

limited to training and other extension support on product development, agricultural crops, fish, livestock, poultry processing and preservation including non-food production from by-products (biofuel, fibres, starch, oils, solvents, dyes, resins, proteins, specialty chemicals and pharmaceuticals) and provision of shared facility for processing and packaging among others. Showcasing of value adding activities may be done through accredited LSAs and ESPs. Marketing and value addition courses shall be made available online using distance learning platforms (i.e. e-learning) for easy access of other clients as well including youth and women. Involvement of youth and women in value adding activities is necessary to increase and enhance productivity. Increasing capabilities of farmers/fishers/ cooperatives/ associations by educating and creating value through development of packaging, branding, labelling and exposing the farm output directly to the consumer market or commercial establishments shall be strengthened in partnership with DA- Agribusiness and Marketing Assistance Service (AMAS), BAR, DTI and DOST among others.

2.4.2. Intensify Product Development. There are numerous available technologies, especially for agri-fishery products processing and packaging, to extend the products' shelf life through further processing and good packaging. Product development through value addition diversifies the income of farmers and fishers. A strong partnership with R&D institutions such as PhilRice, PHilMech, Bureau of Fisheries and Aquatic Resources - National Fisheries Research and Development Institute (BFAR-NFRDI), DOST-PCAARRD, SUCs and other organizations must be aided through extension and advisory services. This is to increase awareness of these innovations and effectively transfer information and skills to the intended clients.

2.4.3. Strengthen advisory service towards product certification and standard for agriculture and fisheries. It is important to strengthen and ensure FCA's business/product certifications and compliance to existing local and international standards such good agricultural practices (GAP), good manufacturing practices (GMP), and organic certification and the like. Initiatives for International Organization for Standardization (ISO) certification in AF should also be taken into consideration. The ISO for agriculture encompass every facet of farming, from GPS and irrigation to farm equipment, animal welfare, and sustainable farm management, to ensure that all processes and products/services are safe and of the highest quality. Moreover, intensifying agri-fishery enterprise awareness and compliance to various local and international clearances and permits such as Sanitary and Phytosanitary Import Clearance (SPSIC) and the likes through advisory service and provision of technical assistance should be strengthened. Compliance to these standards and certification attracts and ensures selling of product/services to targeted markets making it globally competitive.

AFE STRATEGIC OBJECTIVE 3:
Ensuring Nourished Farm/Fisher Families and Consumers

AFE STRATEGIC OBJECTIVE 3

Ensuring Nourished Farm/Fisher Families and Consumers

With food as a common entry point of agriculture and nutrition, making extension and advisory services nutrition-sensitive is vital to overcome nutritional challenges in the country. This strategic objective focuses on three strategies in order to put a limelight on ensuring the nutritional well-being of farm/fisher families and consumers through intensification of nutrition-sensitive agriculture (NSA) extension programs to increase availability and access to nutritious and healthy food, enhancing education of Filipino consumers to healthy diets, and strengthening the capacities of ESPs towards nutrition.

Key Initiative 3.1

Intensify provision of nutrition-sensitive agriculture extension programs to increase availability and access to nutritious and healthy food

NSA is a food-based approach to agricultural development that puts nutritionally rich foods, dietary diversity, and food fortification at the center of defeating malnutrition and all its forms (FAO, 2014).

3.1.1. Scale up/intensify urban and peri-urban agriculture, quality backyard, school, and community gardens. Several NSA initiatives have been done at the height of the COVID-19 pandemic aiding in food supply chain disruptions. For instance, urban and peri-urban agriculture, as well as backyard, school, and community gardens rose to popularity which increased the availability and access to fresh and nutritious foods in households and markets. Such interventions must be intensified through improved and diversified AF technologies (e.g. vertical gardening, hydroponics, aquaponics, and poultry production), and food preparation and processing techniques suitable to support the prevention of various nutritional deficiencies and provide households with food, reduced expenditures, and additional income (FAO, 2017).

Targeting regions and provinces is one of the critical nutrition-sensitive strategies to prioritize nutritionally vulnerable groups in the country. Further, RBOs, youth leaders (e.g. *Sangguniang Kabataan*), and educators (teachers) shall be tapped in the establishment of community and school gardens serving as an important channel to mainstream NSA and concepts.

3.1.2. Certify urban and peri-urban farms, and community gardens as LSAs/farm tourism sites. Model urban and peri-urban farms will also be promoted or certified as LSAs where clients can visit. When scaled up, surplus production of these urban and peri-urban farms, and community gardens shall be consolidated and linked to KADIWA stores where urban dwellers can access and purchase safe and affordable food. Produce of these farms can also be used for social government programs (e.g. school feeding program). Applying the farm-to-kitchen/farm-to-table concept, learning sites shall also be supported and encouraged to become food hubs promoting/serving nutritious and healthy food menus for visitors and clients.

3.1.3. Promote food safety and standards to reduce health risks brought by agricultural production, ex. safe handling of agrochemicals and food. Apart from producing healthy foods, ensuring that farmers and fisherfolk will have reduced health risks and environmental degradation from agrochemicals and unsafe practices brought by agricultural production is necessary through the

promotion of food safety and standards. Training advisory, and information support services through multimedia on good agricultural/aquaculture/animal husbandry practices as well as organic agriculture shall be intensified through relevant government agencies under the DA (Bureau of Agriculture and Fisheries Standards (BAFS), RFOs, ATI, BFAR, etc.). This will encourage farmers and fisherfolk to adopt food safety practices, produce quality and safe food, and reap benefits such as increased competitive advantage and market opportunities *(See Strategic Objective 2)*. Further, AFE clients shall be assisted in the certification of their farms and/or products through third-party certifying bodies, and/or participatory guarantee system (PGS) for organic producers.

Key Initiative 3.2

Enhance the education of Filipino consumers to healthy diets

In 2018-2019, the DOST-FNRI also reported that the pattern of food intake of Filipino households remained to be a rice-vegetable-fish combination (DOST-FNRI, 2022). As the country develops and incomes rise, traditional diets rich in coarse grains, high fiber rapidly give way to diets high in sugar, salt, fat, refined grains, and processed food. Healthy food access initiatives are often paired with food and nutrition education to help address barriers to healthy eating and promote sustained adoption of healthy eating behaviors.

3.2.1. Integrate nutrition sensitive agriculture topics in existing curriculum, training modules and courses. Agricultural production is often the topic of training courses being offered by agencies and institutions. However, the fundamentals and advantages of basic nutrition and diversified diet to the overall family's health must be emphasized ensuring that these food products be integrated to the household kitchen and menu. Existing agri fishery training modules shall also be tweaked and enhanced to become nutrition-sensitive, incorporating topics on healthy eating habits and nutrition. Furthermore, healthy and nutritious food can only be attained by raising them to healthy and fertile soil.

3.2.2. Raise awareness through information campaigns, dissemination of knowledge products. Information campaigns and dissemination of knowledge products using various media to increase awareness, as well as seminars and workshops shall be done in order to reinforce knowledge and develop skills about the principles of good nutrition and healthy recipes and diets. Apart from being affordable, promoting the consumption of locally grown fruits and vegetables leads to improved overall nutrition necessary for fighting diseases and metabolizing food.

Moreover, although diets of Filipino consumers are often dictated by local traditions and tastes, interventions towards introducing alternative horticultural crops, products, and recipes into the kitchen should also be implemented. In particular, the DOST-FNRI promotes the concept of "Pinggang Pinoy" (Healthy Filipino Plate for Filipinos) which helps Filipinos adopt healthy eating habits at meal times by delivering effective dietary and healthy lifestyle messages.

In areas where access to health services are limited, especially in rural communities, use of local medicinal plants and processing of herbal medicines (e.g. essential oils) shall also be promoted. Local knowledge about the utilization of these plants, especially by the Indigenous Peoples, shall be documented in collaboration with the Department of Health (DOH), and National Commission on Indigenous Peoples (NCIP) aiding in cultural heritage preservation.

3.2.3. Harness digital technologies to encourage good nutrition and consumption of healthy foods and diets. One of the pressing challenges of keeping consumers healthy nowadays is the rampant digital marketing which widely promotes highly processed food and beverage products. Capitalizing innovations through the use of digital technologies are vital to promote sustainable healthy diets and enhance nutritional status at a wider scale (UNSCN, 2020). For instance, various nutrition and agriculture government agencies and private sector groups can develop an interactive e-learning course, and mobile or web applications which can be used by LGU AEWs and nutrition workers to target women and children in nutritionally challenged barangays. Advisory services and counselling towards nutrition can also be provided through mobile phones to reach farmers and fisherfolk who are not easily reached by traditional methods (e.g. farm visits/face-to-face).

3.2.4. Optimize/empower rural women for nutrition education and behavior change communication. Furthermore, women must be optimized and empowered as they are primarily responsible in household food production, preparation, and processing, making them a key actor for food and nutrition security of farm/fisher families and communities. Women are often the vessel for nutrition. Thus, extension services must also prioritize them to change nutrition, diets, and food preferences of families.

Key Initiative 3.3

Strengthen organizational and individual capacity of ESPs towards NSA

With the broad number of AEWs, actors and stakeholders in AFE, extension can play a pivotal role in promoting nutrition and NSA. However, ESPs often lack capacity in terms of providing NSA programs as their major focus is providing the technical aspects of AF production. Hence, actions towards improving the systems, enabling environment, and human resource capital are necessary to produce better nutritional outcomes.

3.3.1. Enrich training services through non-formal education curriculum development towards nutrition. With AEWs being the closest source of knowledge and information of farmers and fisherfolk, their role to play in solving nutritional problems through agriculture are essential. Hence, the curriculum, training modules, and facilitator's guide for AEWs and ESPs must be developed or enhanced by introducing NSA topics along the food systems. Existing modules developed by nutrition agencies and institutions in the country (DOH- National Nutrition Council (NNC), DOST-FNRI, etc.) can be a vital source of knowledge which can be integrated into AF training courses.

3.3.2. Intensify conduct of ladderized training courses for specialists and trainers (ladderized program for AEWs and ESPs) towards nutrition and NSA. FAO (2017) mapped out the list of interventions and areas to make agriculture nutrition-sensitive at all stages of the food chain (production, processing, retail, and consumption). AFE agencies in collaboration with nutrition institutions providing training services can align or localize their respective ladderized training courses on NSA on this aspect to further leverage the role of agriculture in nutrition and food systems. Thereafter, LGU AEW and ESP specialists and trainers shall be capacitated through the NSA ladderized training course (basic, advanced, specialized) in collaboration with nutrition and agri-fishery technology experts.

3.3.3. Review existing and/or develop AFE policies, programs, projects and plans addressing nutrition. Creating a strong enabling environment is necessary to ensure that nutrition concepts are not only mainstreamed in AFE policies, programs, plans but also it must address nutritional challenges and outcomes through agriculture. With the crafted Philippine Plan of Action for Nutrition (PPAN) 2023-2028, AFE institutions must also anchor their policies, programs, and plans through the various strategic directions and actions stipulated under the plan. With usual AF objectives focused on productivity, nutrition-related objectives can also be incorporated into AFE thrusts and operational plans. Raising awareness and appreciation of nutrition especially to AFE stakeholders, institutions, most especially policy makers are needed to highlight their vital role in

supporting/advocating nutrition in agriculture.

3.3.4. Strengthen partnerships with public and private sectors to improve and promote the availability and accessibility of healthy food, and proper nutrition. Strong collaboration and partnership are important factors to the success and sustainability of a NSA program and promoting healthy food and nutrition using various forms of media and extension interventions. With the advent of social media, various actors and stakeholders can partner and conduct webinars and vlogs serving as an avenue to widely disseminate nutrition information relating to consumer demand, food preparation and preferences, food wastage, quality and safety. Apart from this, the DA can strengthen its partnership with the DOH-NNC through its network of Nutriskwela community radio stations operating nationwide to integrate agri fishery topics through its nutrition radio broadcasts.

Communities, schools, national and local governments, and private institutions must also be mobilized through sustained partnerships and support in order to promote the growth of safe, diversified, and nutritious food. In addition, extension services and starter kits shall be provided to various interested clients. These would encourage them to maximize the use of idle or vacant land and spaces to promote sustainable ways to increase and diversify production (cultivation of nutritious crops, animal husbandry practices, fast-growing or cash crops, locally available and indigenous vegetables[8] and crop varieties which are nutrient-dense, among others). Meanwhile, research on indigenous crops and vegetables must be conducted (DA-BAR, DOST-FNRI, SUCs) to communicate results for improved food and nutrition-security.

[8] Indigenous vegetables refer to Alugbati, Alukon, Katuray, Kulitis, Kadyos, Kalabasa, Labanos, Malunggay, Mustasa, Pako, Patola, Pipino, Saluyot, Sayote, Sigarilyas, Sitaw, Talinum, Talong, Upo

AFE STRATEGIC OBJECTIVE 4:

Strengthening Agriculture and Fisheries Extension Institutions and Empowering Extension Stakeholders

CROSS-CUTTING AFE STRATEGIC OBJECTIVE 4

Strengthening Agriculture and Fisheries Extension Institutions and Empowering Extension Stakeholders

Institutions drive change and development in any society. In the Philippines, the role of government in the establishment of systems and procedures, provision of goods and services and maintenance of law and order is key towards achieving its vision and aspirations. For the agriculture and fisheries sector, the DA leads in the development of the sector with various offices, bureaus, attached agencies and corporations implementing its production support, regulatory, research and development and extension services. With the sluggish growth of the sector and the high poverty incidence rate amongst the main actors, the farmers and fisherfolk, it is imperative that institutional strengthening should remain a priority for good governance, inclusive growth and sustainable development.

Extension services provide knowledge and support to farmers and fisherfolk in enhancing production, farm management, increasing profitability and marketing, thus, innovations and improving delivery of AFE services is necessary. Establishing good governance, responsiveness and accountability will put in place an enabling environment that ensures a high level of efficiency, effectiveness and sustainability of extension interventions to spur productivity and increase in incomes.

Increasing risks and challenges faced by the sector calls for multi-sector collaboration, enabling policies, relevant programs and projects, sufficient resources as well as efficient systems and mechanisms to mobilize priority actions. The priority strategies and key actions for the next six years will encompass the following:

Key Initiative 4.1

Establish robust AFE networks through multi-sector collaboration

The plurality of AFE actors in the country necessitates the strengthening of collaboration and cooperation amongst the various actors involved in AFE. The national government with its steering functions should strengthen capacity building initiatives to complement the rowing functions of the LGUs since decentralization or the devolution of extension services to the LGUs resulted in political, human resource, mobility and budget-related challenges that weakened the AFE delivery in the rural areas. Particular attention should also be paid to the linkages with research institutions as sources of matured technologies and knowledge that could hasten development in the sector. Partnerships with the private sector are also crucial for resource mobilization, access to innovative solutions, technology, markets and infrastructure.

4.1.1. Strengthen research-extension linkages (DOST-PCARRD, DA Research Agencies, SUCs and other research institutions and networks). The flow of information from research to extension personnel and the farmers and vice-versa must be facilitated through strong linkages amongst the primary research institutions in the country like the DOST - Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCARRD), BAR and all DA research agencies, the SUCs, as well as various research consortia. Technology generation must be driven by clients' needs in order to be relevant and matured technologies can only be utilized with

effective communication channels between research and extension. Standards, processes and mechanisms for technology transfer have to be agreed upon during collaborative undertakings between research and extension.

4.1.2 Institutionalize the Regional Research for Development and Extension Network (RR4DEN). Since 2002, the DA-ATI has initiated the establishment of horizontal and vertical linkages with institutions directly or indirectly providing AF extension programs and services through the Major Final Output (MFO) on Extension Support, Education and Training Services (ESETS) which is now known as the Agriculture and Fisheries Extension Network (AFEN). The AFEN, which is present at the national and regional levels, serves as a holistic partnership mechanism for quality extension interventions to be well-coordinated, complemented, and effectively carried out. Current initiatives by the DA are now geared towards unifying and integrating the AF R4DE system to ensure the proper generation, dissemination, and scaling of AF technologies and address the needs of farmers and fisherfolk in the country. With this, initiatives are underway to unify the DA-BAR's RRDEN, and DA-ATI's RAFEN into the RR4DEN. The RR4DEN shall serve as an avenue for R4DE stakeholders to discuss issues and concerns relative to the R4DE system including the current and emerging innovations for policy development. Unifying the existing networks will also reduce duplication of interventions and complement resources for R4DE.

4.1.3 Institutionalize the Province-led Agriculture and Fisheries Extension System. PAFES shall strengthen the collaboration between the national government, local government, academe, and the private sectors. Pursuant to the Department's agricultural modernization and agroindustrialization thrusts, the PAFES shall be mainstreamed as the modality in the implementation of DA's banner programs in the provinces. The objective of PAFES is province-led agricultural development, which shall enable the DA to harness the leadership, human capacity, and resources available in the provinces. It will also help the DA focus, converge, and integrate the efforts to support the provinces' priority agriculture and fisheries development programs.

Aside from the DA, other NGAs and the private sector can collaborate with the LGUs through the PAFES. The priorities of the local governments for agriculture and fisheries development in synergy with the support of all sectors have more chances of realizing intended impacts to the rural communities with stronger mechanisms and cohesive action.

4.1.4 Social mobilization of ESPs, RBOs and other civil society organizations (CSOs) to address community preparedness and response to disasters and other hazards. Due to its geographic characteristics, the country is one of the most vulnerable worldwide to climate change effects and various disasters that regularly affect the sector. Pest and disease infestation in crops, poultry and livestock as well as fierce storms and prolonged drought bring about heavy losses that must be addressed collectively for recovery and growth. Further, the looming food crisis brought about by global events is a serious concern that must be acted urgently.

Social mobilization at the community level that can be led by public and private ESPs together with organized client groups like the RBOs and CSOs can tackle more efficiently and effectively appropriate responses and mechanisms to the challenges and risks. Various fora can be organized to raise awareness, discuss and determine the community response to the problems affecting the sector.

Key Initiative 4.2

Develop organizational capacities of ESPs and clientele

Building the capacities of ESPs to deliver efficient, effective, and relevant products and services are integral to sustain operations and create value towards achievement of outputs and outcomes and create impact in the community. Capability building of AFE actors in the areas of organizational development, enhancing performance and digital literacy should be given attention and priority in human resource development.

4.2.1 Strengthen the capability exchange of LGUs on planning, program/project development, monitoring and evaluation. E.O. 138 significantly increased the share of LGUs in the IRA to fund services that are fully devolved including AFE. To ensure that AFE services are efficiently and effectively managed, LGU extension personnel will be trained on planning, design thinking, resource generation, and M&E.

4.2.2 Professionalize the AFE workforce. Learning opportunities for continuous improvement of technical, cognitive and interpersonal skills must be available to extension professionals. AFE stakeholders must enroll additional capability building programs and activities under the Continuing Professional Development (CPD) Act implemented by the Professional Regulation Commission (PRC). Taking of skills certifications in agriculture and fisheries as regulated by TESDA can be packaged in skills intensive training programs implemented by ESPs. Lead AFE agencies can work with the Philippine Extension and Advisory Services Network (PhilEASNet) and Philippine Association of Agriculturists (PAA) on the Ladderized Diplomate Program Course in speeding up the enhancement of competencies of LGU AEWs.

4.2.3 Rationalize and standardize the incentive and awards system for AFE. Giving incentives and awards to outstanding performers in AFE enhances productivity and boosts the morale of extension workers, as well as the primary producers. However, there is a need to standardize and rationalize the system across commodities and functions to establish equality in access and amount of incentives. Best practices, innovations and outstanding performance in AFE can also be benchmarked through the institutionalization of the system.

Key Initiative 4.3

Develop, enhance and implement AFE policies, standards, plans, programs and projects and monitor and evaluate AFE performance

AFE policies and plans provide the proper operational framework for ESPs for efficiency and accountability. This guides the implementation of programs, projects and activities and establishes consistency in procedures for better management of AFE services. Participatory approaches to policy and plan development must be institutionalized to ensure farmers and fisherfolk involvement in decision-making processes.

4.3.1 Advocate the passage of policies that will strengthen the delivery of extension services as a catalyst of rural development. Proposed legislations like the Magna Carta for AEWs must be lobbied vigorously to address long-standing issues brought about by the devolution. With the President at the helm of the agriculture and fisheries sector, support for the passage of bills that will uplift and strengthen the AFE services can be solicited and secured. It is an opportune time to lobby with the legislative branch and influence the bills that will work to the NESAF's advantage (e.g. policy bills on improving entrepreneurship by Senator Angara and agricultural education by Senator Revilla). Policy research/design must also be strengthened and results must be feedbacked to stakeholders.

4.3.2 Review existing guidelines on the engagement of the private sector in AFE service delivery. Recognizing the pivotal role of the ESPs from the private sector, the ATI has developed an accreditation system to harness their services towards the attainment of AFE goals. However, issues on access and the value of being accredited as ESP needs to be settled. Review and enhancement of

the guidelines to encourage participation of more ESPs should be done in consultation with the AFE stakeholders.

Regarding the certification of LSAs, more farmer cooperators and institutions should be enjoined to be certified to broaden the reach of AFE services and address accessibility issues especially in marginalized areas. Operations of certified sites must be upscaled to be able to deliver training and advisory services.

4.3.3 Establish and develop standards in the conduct of AFE services. Initiatives of the ATI in developing and establishing standards in the conduct of AFE services must be cascaded to other ESPs. Cost standards, standards in the conduct of training, knowledge products development and measurement of performance were already developed by ATI. These can be enhanced in consultation with other ESPs noting changes in the internal and external environment of AFE.

Further, additional training programs can be subjected to the development of training regulations with TESDA to facilitate the preparation of various curricula and assessment tools, registration and delivery of the training programs and the establishment of competency assessment and certification arrangements.

4.3.4 Operationalize and Update the AFE Strategic Plan. Succeeding planning activities of ESPs must be done in reference to the AFE Strategic Plan 2023-2028 to determine the programs, projects and activities that must be implemented to contribute to the outcomes and goals outlined in the strategic plan. Planners must integrate climate adaptation/disaster and risk management measures, gender and development, and other cross-cutting concerns in the annual plans, programs and projects that will be implemented for the next six years. The strategies and indicators in the plan can be updated as needed considering that planning is an iterative process.

4.3.5 Institutionalize results-based monitoring and evaluation (RBME) among ESPs. Monitoring and evaluation of AFE programs, projects and activities will enable a feedback mechanism for ESPs, stakeholders and clientele to determine their level of performance in terms of use of resources and attainment of targets. Moreover, the emphasis on the attainment of results and outcomes, not just outputs, from AFE interventions calls for the institutionalization of a results-based M&E system. This will prod the ESPs to meticulously design programs and projects that are customer-centric and aligned to sectoral and national goals to be able to exhibit the desired results and change in living conditions. The practice of RBME will establish accountability, transparency and boost learning from AFE services implementation. Participation of the beneficiaries of AFE interventions in the process will guide decision-making and increase effectiveness of interventions as it will identify key issues on the design and implementation of programs and projects. Sector outcomes cannot be achieved without the collective action of all actors hence engagement especially of beneficiaries is paramount to the success of interventions.

Key Initiative 4.4

Develop and maintain AFE information systems that will manage AFE data and information of ESPs

4.4.1 Pilot the implementation of the Unified Extension Information System. Moreover, there is a need for a Unified National Extension System (UNExSys) for Planning, Monitoring and Evaluation Information System that may assist in the collection of real-time data/information on the progress of implementation which is critical in decision-making. This is to ensure that key stakeholders involved in the delivery of extension services can map out their resources effectively and efficiently and plan, monitor, and evaluate their programs, initiatives, and activities.

4.4.2 Establish functional databases in aid of planning, monitoring and evaluating extension programs and projects. LGUs have to develop their AFE databases with online and offline functionality. Private ESPs accredited by ATI must also establish their databases to manage information regarding AFE activities. The databases will be linked to the UNExSys to establish an efficient monitoring of AFE accomplishments and harmonize data needed for evaluations.

Key Initiative 4.5

Administer resources needed for AFE services

4.5.1 Maintain and upgrade AFE property, plant and equipment. Facilities that are used for AFE activities must be continuously maintained and upgraded to support a conducive environment for learning and innovations. Learning centers including the FITS centers can offer excellent services with a good layout, display area, furnishings, equipment and proper storage of knowledge products.

To contribute to the efforts to combat rising global temperatures the concept of green buildings for AFE must be promoted and showcased. Acquisition of new vehicles and meticulous maintenance of the existing fleet is necessary for safety and comfort of users.

4.5.2 Enhance the AFE grant system. The Agriculture and Fisheries Extension Grant System appropriates funds that can be accessed by ESPs to implement extension activities. Conduct of training and other complementary activities, establishment of LSAs, production of knowledge products, extension innovations, and extension research and policy studies can be funded under the system. To encourage ESPs to take a more active role in their respective geographic areas of coverage, the amount of funds that can be accessed under the system must be reviewed to support upscaling or expansion of AFE projects and activities.

Key Initiative 4.6

Intensify strategic communications to strengthen awareness and feedback among AFE stakeholders

Varied approaches, channels and communication tools have to be utilized to strengthen communication amongst the various ESPs and AFE stakeholders. Agriculture and fisheries extension agenda and plans crafted in a participatory manner have to be cascaded effectively. Issues and concerns, current developments in the practice of extension services, technology updates, innovations and other subject matter needs to be discussed and disseminated, wherein collective action can be enjoined to address or adapt to changing conditions and rapid advancements as societies are transformed by the digital revolution. Feedback from monitoring and evaluation must also be disseminated to establish the culture of learning from the implementation of programs, projects and activities.

PROPOSED BUDGETARY REQUIREMENTS

Proposed Budgetary Requirements

Public and private investments are strongly needed to implement the various strategies and actions stipulated in this AFE strategic plan. This will also aid in the achievement of the strategic objectives as well as sector outputs and outcomes. Therefore, the AFMA mandated that the budget for AFE services shall be at least one percent (1%) of the nominal value of GVA in agriculture and fisheries. This shall be collectively proposed by various NGAs performing AFE services to the Annual National Appropriations Act. Meanwhile, with the perceived increase in the financial resources of LGUs due to the Mandanas-Garcia ruling, local governments are encouraged to allocate substantial funding for AFE to increase AFE investments and spur development of AF human resources in their locality. Given the limited resources, various ESPs shall also tap various funding sources (local and international) to support the operationalization of this plan and its strategies. Thus, the amount shall be equitably distributed along the four strategic objectives and focus areas for AFE, as follows:

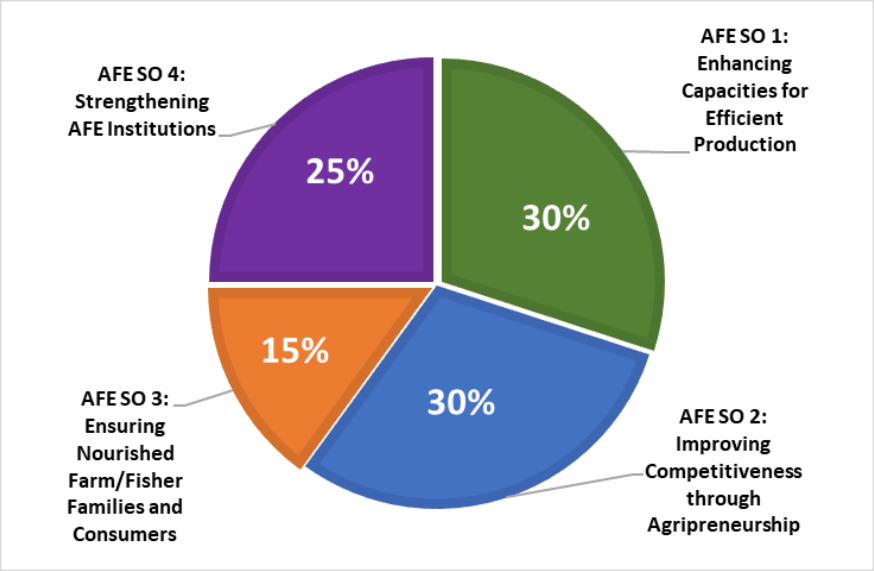

Figure 2. Proportion of the Proposed Budget per AFE Strategic Objective

The total budget allocation or investment requirements for the six-year period (2023-2028) is projected to be PhP 160.53 billion (Table 1). This was based on analyzing the historical data and indicative budgets proposed by AFE stakeholders during the regional consultations. At the start of the plan implementation year (2023), the total investment requirement is estimated at PhP 19.92 billion. Annually, the total investment requirement is forecasted to increase at a rate of 12%; PhP 22.26 billion for 2024, PhP 24.87 billion for 2025, PhP 27.78 billion for 2026, PhP 31.03 billion for 2027, and PhP 34.67 billion for its last year (2028). Furthermore, priority investments and allocation of resources shall be provided to AFE interventions which will create the most outcomes and results. These are the recommended considerations for the prioritization of AFE investments and programs:

- Innovation and maximizing the use of modern and digital technologies in AF production and extension service delivery;
- Promoting resilient and sustainable AF technologies;
- Diversification of farms through commodity-system/farming system approach;
- Agribusiness and market oriented;

- Integrating NSA concepts;
- Targeting the most critical and vulnerable sectors;
    - Low income class LGUs
    - Communities with high rate of poverty and hunger
    - Nutritionally-vulnerable areas and groups
    - Climate vulnerable and disaster-prone areas
    - Marginalized groups (e.g. rural women, out-of-school youth, indigenous peoples)

Table 1. Indicative Projected Budget per Strategic Budget, 2023-2028

AFE Strategic Objective	**% Share**	**Budget (PhP in Billion Pesos)**						
		2023	**2024**	**2025**	**2026**	**2027**	**2028**	**Total**
SO1: Enhancing Capacities for Efficient Production	30%	5.98	6.68	7.46	8.33	9.31	10.40	48.16
SO2: Improving Competitiveness through Agripreneurship	30%	5.98	6.68	7.46	8.33	9.31	10.40	48.16
SO3: Ensuring Nourished Farm/Fisher Families and Consumers	15%	2.99	3.34	3.73	4.17	4.66	5.20	24.08
SO4: Strengthening AFE Institutions	25%	4.98	5.56	6.22	6.94	7.76	8.67	40.13
	Total	**19.92**	**22.26**	**24.87**	**27.78**	**31.03**	**34.67**	**160.53**

MONITORING AND EVALUATION

Monitoring and Evaluation

The operationalization of the AFE Strategic Plan shall be monitored throughout its implementation period. Outputs at the national and regional level will be tracked through the established monitoring and evaluation systems of ESPs. Further, outcomes of AFE interventions must be evaluated to determine success or failure of the AFE interventions. M&E will aid key AFE actors in the decision-making process and improvement of extension service provision. It allows identification of program weaknesses, determination of solutions and prevents duplication of programs/projects.

Monitoring and evaluation of extension interventions that will be planned by ESPs based on the strategies in the AFE Strategic Plan 2013-2028 shall be anchored on the RBME of the AFE. Evaluation will be based on the results matrix of the plan which spells out the key performance indicators that will determine the achievement of expected outcomes.

The ATI-RTCs shall collect the required AFE data, information, and reports through their respective Regional/Provincial PAFES Program Management Office (PMO) and submit them to the National PAFES PMO. For regions without an established PAFES yet, ATI shall collect reports from their respective Regional AFENs, or when the RR4DEN has been institutionalized. Data gathered from various AFE stakeholders will be consolidated, evaluated, and analyzed by the ATI, the lead organization in the provision of the agriculture and fishery extension service, through the Policy and Planning Division (PPD). The outcomes will then be communicated to members to address findings.

Meanwhile, outcome and impact evaluation studies shall be conducted 2-3 years and not less than 5 years after the implementation of the extension intervention or project or program, respectively. Outcome and impact evaluation studies shall be conducted to determine the immediate and long-term effects of extension services on clients but may not be solely attributable to the extension intervention or project.

COMMUNICATION PLAN

Communication Plan

In pursuance of effective implementation of the strategies and plans specified by the AFE Strategic Plan for the next six years (2023-2028), the ATI must enact a communication plan with the support of its network of training centers at the national and regional levels. This document shall serve as a salient reference for crafting strategies and priority actions of respective agencies to focus on the augmentation of the AFE sector, thus awareness and understanding among extension stakeholders shall be achieved. Hence, the following activities shall be conducted to successfully communicate the plan.

Reproduction and circulation of AFE Strategic Plan to Stakeholders. The ATI-Central Office (CO) shall be in charge of facilitating the registration, reproduction and publication of the AFE Strategic Plan. The initial copies of the plan will be distributed after its launching on the ATI Annual Review and Anniversary. The ATI-CO shall disseminate the copies to various NGA's at the central level, including the attached agencies, bureaus and corporations under DA. For the regional stakeholders, the ATI Training Centers shall be responsible in circulating the copies to regional NGAs, SUCs, LGUs, private sectors, professional extension organizations, and other ESPs. Additional copies shall be distributed during planning workshops, consultations, including performance reviews and evaluations.

Publication of AFE Strategic Plan in all forms of media. An electronic copy of the AFE Strategic Plan shall be uploaded at the official website of ATI where it can be accessed by the public. It shall also be disseminated through electronic mail to AFE stakeholders, agencies and institutions. In order to reach a wider clientele in the country, the ATI also intends to adapt the enhanced strategy into Filipino language.

Articles will be published in newspapers, official periodicals, and on the websites of national agencies to raise awareness of the AFE Strategic Plan among stakeholders. Development of IEC materials in the form of posters, brochures, and leaflets shall be intensified and distributed showing relevant information of the AFE Strategic Plan. Moreover, social media will be utilized in dissemination of infographics and video materials to boost the interest of the youth in the AF Sector.

Presentation of the AFE Strategic Plan. To foster partnerships that will aid in the implementation of strategies and priority actions under the Plan, it shall be promoted and presented in meetings, conventions, forums, planning and budget workshops participated by key AFE stakeholders.

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REFERENCES

References

ADRC. (n.d.). Asian disaster reduction Center（ADRC）. Asian Disaster Reduction Center（ADRC）. https://www.adrc.asia/nationinformation.php?NationCode

Adaro, C. E., Diokno-Sicat, C. J., Gastillo, A. G., & Mariano, M. A. (2020, March). *Baseline Study on Policy and Governance Gaps for the Local Government Support Fund Assistance to Municipalities (LGSF-AM) Program*. PIDS - Login.https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2003

AED & FAO. (2010). Deepening the Dialogue: Agriculture and Nutrition Collaboration to Enhance Global Food Security Summary Report. Retrieved December 4, 2022 from https://www.unscn.org/web/archives_resources/files/agriculture_and_nutrition_collabora_866.pdf

AlphaBeta. (2021, October). THE GROWING DIGITAL ECONOMY IN THE PHILIPPINES:OPPORTUNITIES, CHALLENGES, AND GOOGLE'S CONTRIBUTIONS. AlphaBeta Advisors – Strategy and Economics. https://accesspartnership.com/wp-content/uploads/2023/01/philippines-economic-impact-report.pdf

Ani, P. B., & Casasola, H. C. (2020, August 25). *Transcending barriers in agriculture through gender and development*. FFTC Agricultural Policy Platform (FFTC-AP). https://ap.fftc.org.tw/article/1872

Ani, A. B and Correa, A.D (2016). Agricultural Extension Policies in the Philippines: Towards Enhancing the Delivery of Technological Services. Retrieved from https://ap.fftc.org.tw/article/1092

Arcalas, J.Y. (2022, September 14). SSS offers pay plan to farmers, fishermen from https://businessmirror.com.ph/2022/09/14/sss-offers-pay-plan-to-farmers-fishermen/

ATI. (2019). Philippine Agriculture and Fisheries Extension Strategic Plan 2020-2022. Quezon City: Agricultural Training Institute

Baclig, C. E. (2021, 29). Agriculture in PH: Barely surviving migration, conversion, poverty. INQUIRER.net.https://newsinfo.inquirer.net/1452923/agriculture-in-ph-barely-surviving-migration-conversion-poverty

Briones, R.M. (2022). Modernizing Agriculture and Fisheries: Overview of Issues, Trends, and Policies. Philippine Institute for Development Studies. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2205.pdf

Briones, R.M. (2022). How Modern is Philippine Agriculture and Fisheries? Synthesis Report. Philippine Institute for Development Studies. Retrieved November 21, 2022 from https://pidswebs.pids.gov.ph/CDN/document/pidsdps2225.pdf

Cariaso, B. (2022, November 6). *Farmers' group: High inflation will kill us*. The Manila Times. https://www.manilatimes.net/2022/11/06/news/farmers-group-high-inflation-will-kill-us/1865183

Cariaso, B. (2022, September 15). *Women play increasing roles in rice farming – study*. The Manila Times. https://www.manilatimes.net/2022/09/16/news/national/women-play-increasing-roles-in-rice-farming-study/1858639

DA. (2020). DA's "Plant, Plant, Plant Program" to benefit all farmers, fishers, consumers nationwide. Retrieved November 24, 2022 from https://www.da.gov.ph/das-plant-plant-plant-program-to-benefit-all-farmers-fishers-consumers-nationwide/

DA. (2022a). Facing the big challenges in Philippine Agriculture. Retrieved November 24, 2022 from https://www.da.gov.ph/facing-the-big-challenges-in-philippine-agriculture/

DA. (2022). FROM THE MANILA TIMES: 'Make urban agriculture a weapon vs Covid-19'. Retrieved November 21, 2022 from https://www.da.gov.ph/from-the-manila-times-make-urban-agriculture-a-weapon-vs-covid-19/#:~:text=Gregorio%20said%20the%20Covid%2D19,affecting%20about%20100.77%20million%20 people

DA. (2022b). Plant, Plant, Plant Program Part 2 launched. Retrieved November 22, 2022 from https://www.da.gov.ph/plant-plant-plant-program-part-2-launched/

DA. (n.d.). Agricultural Credit and Financing Programs. Retrieved December 2, 2022 from https://www.da.gov.ph/services/agricultural-credit-and-financing-programs/

DA Communications Group. (2022, June 13). *From the Manila Times: 'Make urban agriculture a weapon vs COVID-19'*. Official Portal of the Department of Agriculture. https://www.da.gov.ph/from-the-manila-times-make-urban-agriculture-a-weapon-vs-covid-19

DA-RCEF. (n.d.). Credit. Retrieved December 2, 2022 from https://rcef.da.gov.ph/credit/

DA-SWCCO. (n.d.). AMIA Villages. Retrieved December 4, 2022 from https://amia.da.gov.ph/index.php/amia-villages/

DBM. (2022, October 8). DBM releases billions of pesos to aid rice farmers, vulnerable households, calamity victims, commuters, healthcare workers in the first 100 days of marcos Jr administration. Home.https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/2406-dbm-releases-billions-of-pesos-to-aid-rice-farmers-vulnerable-households-calamity-victims-commuters-healthcare-workers-in-the-first-100-days-of-marcos-jr-administration

Desiderio, L. (2021). Natural disasters cost P61 billion damage last year. Retrieved May 25, 2023 from https://www.philstar.com/business/2022/10/29/2219998/natural-disasters-cost-p61-billion-damage-last-year

European Commission. (2021, November 16). Philippine climate change and food security analysis. Knowledge for policy. https://knowledge4policy.ec.europa.eu/publication/philippine-climate-change-food-security-analysis_en

FAO. (2014). Nutrition-Sensitive Agriculture. Retrieved November 28, 2022 from https://www.fao.org/3/as601e/as601e.pdf

FAO. (2017). Nutrition-sensitive agriculture and food systems in practice: options for interventions. Retrieved December 4, 2022 from https://www.fao.org/3/i7848e/i7848e.pdf

FAO. (2020, November 9). *Philippines highlights rising role of digital agriculture at FAO regional conference | FAO in the Philippines*. Retrieved from https://www.fao.org/philippines/news/detail/ar/c/1307351/

FAO. (2021). Making extension and advisory services nutrition-sensitive: the link between agriculture and human nutrition. Retrieved November 24, 2022 from https://www.fao.org/3/cb3841en/cb3841en.pdf

FAO. (2021). Climate-smart Agriculture Case Studies 2021 Projects from around the world. Retrieved November 25, 2022 from https://www.fao.org/3/cb5359en/cb5359en.pdf

Febregas, R., Harigaya, T., Kremer, M., & Ramrattan, R. (2022, September 9). *Digital agricultural extension for development*. SpringerLink. https://link.springer.com/chapter/10.1007/978-3-030-86065-3_8

Fore, M., Frank, K., Norton, T., et al., (2018). Precision fish farming: A new framework to improve production in aquaculture. DOI: 10.1016/j.biosystemseng.2017.10.014

Garrod, G., Othman, M.S., & Oughton, E. (2020). Significance of farming groups for resource access and livelihood improvement of rural smallholder women farmers, Development in Practice, 30:5, 586-598, DOI: 10.1080/09614524.2020.1764502

Gasmen, A. (2019, April). Agriculture and Fisheries Extension: Establishing Partnerships to Harmonize the Pluralitsic Extension and Advisory Service in the Philippines. https://ati.da.gov.ph/archives/ati-car/sites/default/files/AFEN_Establishing_Partnerships_to_Harmonize_the_Pluralistic_Extension_and_Advisory_Services_in_the_Philippines.pdf

Gesmundo, I. (2021) APT Season 6 finale episode highlights grit and passion in extension service. https://cafs.uplb.edu.ph/news-and-update/research-and-extension-news/apt-season-6-finale-episode-highlights-grit-and-passion-in-extension-service/

Global Ag Media. (2022, Aug. 16). Philippines intensifies measures against avian influenza. The Poultry Site. https://www.thepoultrysite.com/news/2022/08/philippines-intensifies-measures-against-avian-influenza

Golez, R. (2012). Climate Field School: An Innovative Approach to Agricultural Adaptation. Retrieved December 2, 2022 from https://www.searca.org/pubs/briefs-notes?pid=122

Gregorio, G. B., & Ancog, R.C. (2020). "Assessing the Impact of the COVID-19 Pandemic on Agricultural Production in Southeast Asia: Toward Transformative Change in Agricultural Food Systems." Asian Journal of Agriculture and Development 17(1): 1-13. https://doi.org/10.37801/ajad2020.17.1.1

Habito. (2023). No Free Lunch: Easing Land Conversion. Retrieved May 25, 2023 from https://opinion.inquirer.net/163004/easing-land-conversion

IFPRI. (2019). Urban Food Systems for Better Diets, Nutrition, and Health. Retrieved November 28, 2022 from https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/132925/filename/133137.pdf

ITA. (2022). Philippines - Country Commercial Guide. Retrieved November 24, 2022 from https://www.trade.gov/country-commercial-guides/philippines-agricultural-sectors

Lagare, J. B. (2022, October 4). Karding agriculture damage hits P3.12 billion. INQUIRER.net. https://newsinfo.inquirer.net/1674566/karding-agriculture-damage-hits-p3-12b

Mapa, N. (2022, November 4). *Philippines: Inflation surges to 7.7% as storm damage forces up food prices*. ING Think. https://think.ing.com/snaps/philippines-inflation-surges-as-storm-damage-forces-up-food-prices

Norton, R. (2014, July 28). *Agricultural value chains: A game changer for small holders*. devex.com.Retrieved from https://www.devex.com/news/agricultural-value-chains-a-game-changer-for-small-holders-83981

PAGASA. (2021). Annual Report 2021. Retrieved December 2, 2022 from https://pubfiles.pagasa.dost.gov.ph/pagasaweb/files/transparency/Annual_Report_2021.pdf

Palis, F. (2020). Aging Filipino rice farmers and their aspirations for their children. *Philippine Journal of Science*, *149*(2). https://doi.org/10.56899/149.02.10

PCIC. (n.d.). Insurance Products. Retrieved from December 2, 2022 from https://pcic.gov.ph/insurance-products-2/

PHilMech. (2022). Why today's farmers need to mechanize. Retrieved December 4, 2022 from https://www.philmech.gov.ph/?page=story_full_view&action=story_fullview&recordID=202282484053AMa6f3cd&recordCategory=RCEF

PSA. (2022, May). *Agricultural Indicator System: Government Support in the Agricultural Sector*. https://psa.gov.ph/sites/default/files/%28ons-cleared%29_1.%20FO%201_AIS%20Government%20Support.pdf

PSA. (2020). Urban Population of the Philippines (2020 Census of Population and Housing). Retrieved November 28, 2022 from https://psa.gov.ph/population-and-housing/node/167692

PSA. (2021). Agricultural Indicator System: Employment and Wages in the Agricultural Sector (2016-2020). Retrieved November 25, 2022 from https://psa.gov.ph/sites/default/files/%28ons-cleared%29_FO%207_Employment%20and%20Wages%20ao%20ONS-21122021_ONSF-signed.pdf

PSA. (2021a). *Philippine GDP posts -8.3 percent in the fourth Quarter 2020; -9. percent for full-year 2020*. Retrieved from https://psa.gov.ph/system/files/Press%20Release_Q4_2020-NAP.pdf

PSA. (2022a). Selected Statistics on Agriculture and Fisheries (August 2022). Retrieved November 21, 2022 from https://psa.gov.ph/sites/default/files/%28ons-cleared%29_SSAF%202022%20as%20of%2030082022_ONS-signed.pdf

PSA. (2022b). Major Non-Food and Industrial Crops Quarterly Bulletin (July-September 2022). Retrieved December 4, 2022 from https://psa.gov.ph/sites/default/files/Major%20Non-Food%20and%20Industrial%20Crops%20Quarterly%20Bulletin%2C%20July-September%202022_0.pdf

PSA. (2022c). Summary Inflation Report Consumer Price Index for the Bottom 30% Income Households (2012=100): October 2022. Retrieved November 21, 2022 from https://psa.gov.ph/price-indices/bottom-30/title/Summary-Inflation-Report-Consumer-Price-Index-for-the-Bottom-30%25-Income-Households-%282012%3D100%29%3A-October-2022

PSA. (2022d). Official Poverty Statistics of the Philippines Preliminary 2021 Full Year. Retrieved from https://psa.gov.ph/sites/default/files/Preliminary%202021%20Full%20Year%20Poverty%20Statistics%20Publication_25Aug2022_1.pdf

Romulo, R. (2020). Digital Agriculture. Retrieved from https://www.philstar.com/business/2020/02/14/1992880/digital-agriculture

UNSCN. (2020). Nutrition in a Digital World. Retrieved December 4, 2022 from https://www.unscn.org/uploads/web/news/UNSCN-Nutrition-45-WEB.pdf

USAID. (2022, August 10). *Producing opportunity: USAID Upskills the next generation of Filipino farmers*. U.S. Agency for International Development. https://www.usaid.gov/philippines/our-stories/jul-2022-producing-opportunity-usaid-upskills-next-generation-filipino-farmers#

World Food Programme. (2022). The Philippines. Retrieved November 25, 2022 from https://www.wfp.org/countries/philippines

World Population Review. (2022). *Philippines population 2022 (Demographics, maps, graphs)*. 2022 World Population by Country. https://worldpopulationreview.com/countries/philippines-population

APPENDIX

Appendix A. AFE Strategic Objectives and Key Initiatives in Brief

AFE Strategic Objective 1: Enhancing Capacities for Efficient Production

This strategic objective is focused on the provision of extension services and support to leverage capacities, production and resiliency of the agriculture and fishery sector. This aims to enable AEWs, ESPs, primary producers and other stakeholders to adopt appropriate and innovative farming technologies and practices (e.g. mechanization and digital agriculture) to maximize productivity and profitability. The key initiatives shall encourage improved approaches and modalities in delivering AFE interventions through the enrichment of training curriculum, capacitation of agents and clients of extension, diversification of products and income, and fostering resiliency in climate change.

Key Initiatives

1.1. Improve capability exchange[9] of AEWs and ESPs to become competent new extensionists on appropriate and modern AF technologies
   - 1.1.1. Enrich training services through non-formal education curriculum development towards modernization and resiliency
   - 1.1.2. Intensify conduct of ladderized training courses and programs on modern AF technologies for AEWs towards skills certification

1.2. Strengthen capability exchange of farmers/fishers in the adoption of appropriate and modern technologies
   - 1.2.1. Diversify production and incomes through commodity-based system approach
   - 1.2.2. Intensify research and extension in enhancing non-food and industrial commodities
   - 1.2.3. Undertake benchmarking activities of farmers/fisher leaders for modern innovations
   - 1.2.4. Facilitate access of farmers and fisher to financial and credit assistance for production support
   - 1.2.5. Supplement progressive local support and services to farmers and fishers

1.3. Upskill farmers/fishers, AEWs and ESPs through distance learning programs and knowledge sharing activities
   - 1.3.1. Intensive development and distribution of IEC materials and knowledge products for agriculture and fishery extension services
   - 1.3.2. Augment extension services and programs through multimedia and digital platforms

1.4. Foster resilience and adaptation to climate change and disaster risks
   - 1.4.1. Promote climate-smart technologies
   - 1.4.2. Enhance resource conservation practices to mitigate climate change
   - 1.4.3. Intensify access of farmers and fishers on climate and early warning advisories
   - 1.4.4. Facilitate access to crop, fisheries and livestock insurance and social protection
   - 1.4.5. Strengthen extension and advisory services for climate resilience and disaster adaptation

[9] Capability exchange refers to reciprocity of knowledge sharing and capacity development of clients. In the case of AFE, a culture of learning shall be promoted between the end clients (farmers and fishers) and extension service providers.

AFE Strategic Objective 2: Improving Competitiveness through Agripreneurship

This strategic objective is focused on awakening the entrepreneurial spirit of farmers and fishers as well as other key actors along the agri-fishery value chain. Competitiveness can be achieved by empowering AFE stakeholders—especially farmers and fishermen—with the knowledge, abilities, and attitudes required for effective business planning, management and marketing. The key initiatives under this objective are focused on the promotion of agri-fishery enterprises development by bolstering existing and emerging AFE modalities. Moreover, innovation through value addition is encouraged for a more sustainable, competitive and profitable livelihood. The crucial role of digital technology in achieving the desired competitiveness is also highlighted.

Key Initiatives

2.1. Improve capability exchange of AEWs and ESPs to become competent new extensionists on agripreneurship
  - 2.1.1. Enrich training services through non-formal education curriculum development towards agripreneurship
  - 2.1.2. Intensify conduct of ladderized training course for specialists and trainers (ladderized program for AEWs) towards skills certification
  - 2.1.3. Intensify certification of ESPs

2.2. Enhance capacities of FCAs and RBOs in agri-fishery enterprise development
  - 2.2.1. Improve the existing module of FBS
  - 2.2.2. Intensify implementation of Effective FBS
  - 2.2.3. Provide scholarships and grants to deserving youth
  - 2.2.4. Upscale of LSA towards agripreneurship
  - 2.2.5. Organize farmers/fishers into associations and/or cooperatives
  - 2.2.6. Facilitate agri-fishery enterprise registration through advisory services
  - 2.2.7. Facilitate access to financing opportunities and credit assistance for business development

2.3. Facilitate market linkage among industry players
  - 2.3.1. Expand accessibility to market information through optimization of existing and emerging AFE channels
  - 2.3.2. Disseminate massive information on agri-fishery investment opportunities

2.4. Augment value creation of agri-fishery commodities
  - 2.4.1. Enhance capability exchange on agri-fishery value adding activities
  - 2.4.2. Intensify product development
  - 2.4.3. Strengthen advisory service towards product certification and standards for agriculture and fisheries

AFE Strategic Objective 3: Ensuring Nourished Farm/Fisher Families and Consumers

This strategic objective deals with setting nutrition-sensitive agriculture as one of the priorities of AFE services. With the objective of ensuring nutrition and food security, farm/fisher families and consumers shall be capacitated with AF technologies to increase availability and accessibility of nutritious and healthy food in every household. Key Initiatives geared towards educating consumers to diverse and healthy diets shall also be scaled up through various innovative extension modalities and strong collaboration between nutrition and agriculture agencies/institutions.

Key Initiatives

3.1. Intensify provision of nutrition-sensitive agriculture extension programs to increase availability and access to nutritious and healthy food
- 3.1.1. Scale up/intensify urban and peri-urban agriculture, quality backyard, school, and community gardens by maximizing use of vacant lands and spaces
- 3.1.2. Certify urban and peri-urban farms, and community gardens as LSAs/farm tourism sites
- 3.1.3. Promote food safety and standards to reduce health risks brought by agricultural production, ex. safe handling of agrochemicals and food

3.2. Enhancing the education of Filipino consumers to healthy diets
- 3.2.1. Integrate nutrition sensitive agriculture topics in existing curriculum, training modules and courses
- 3.2.2. Raise awareness through information campaigns, dissemination of knowledge products
- 3.2.3. Harness digital technologies to encourage good nutrition and consumption of healthy foods and diets
- 3.2.4. Optimize/empower rural women for nutrition education and behavior change communication

3.3. Strengthen organizational and individual capacity of ESPs towards NSA
- 3.3.1. Enrich training services through non-formal education curriculum development towards nutrition
- 3.3.2. Intensify conduct of ladderized training courses for specialists and trainers (ladderized program for AEWs and ESPs) towards nutrition and NSA
- 3.3.3. Review existing and/or develop AFE policies, programs, projects and plans addressing nutrition
- 3.3.4. Strengthen partnerships with public and private sectors to improve and promote the availability and accessibility of healthy food, and proper nutrition

Cross-cutting AFE Strategic Objective 4: Strengthening Agriculture and Fisheries Extension (AFE) Institutions and Empowering Extension Stakeholders

This strategic objective deals with the need of AFE agencies for a strong enabling environment built on partnerships, policy and standards, planning, monitoring and evaluation, resource optimization and management, infrastructure, logistics, and facilities.

Key Initiatives

4.1. Establish robust AFE networks through multi-sector collaboration
- 4.1.1. Strengthen research-extension linkages (DOST-PCARRD, DA Research Agencies, SUCs and other research institutions and networks)
- 4.1.2 Institutionalize the Regional Research for Development and Extension Network (RR4DEN)
- 4.1.3. Institutionalize the Province-led Agriculture and Fisheries Extension Systems (PAFES)
- 4.1.4. Social mobilization of ESPs, rural-based organizations and other civil society organizations (CSOs) to address community preparedness and response to disasters and other hazards

4.2. Develop organizational capacities of ESPs and clientele
- 4.2.1. Strengthen the capability exchange of LGUs on planning, program/project development, monitoring and evaluation
- 4.2.2. Professionalize the AFE workforce
- 4.2.3. Rationalize and standardize the incentive and awards system for AFE

4.3 Develop, enhance and implement AFE policies, standards, plans, programs and projects and monitor and evaluate AFE performance
- 4.3.1. Advocate the passage of policies that will strengthen the delivery of extension services as a catalyst of rural development
- 4.3.2. Review existing guidelines on the engagement of the private sector in AFE service delivery.
- 4.3.3. Establish and develop standards in the conduct of AFE services
- 4.3.4. Operationalize and update the AFE Strategic Plan
- 4.3.5. Institutionalize results-based monitoring and evaluation among ESPs

4.4. Develop and maintain AFE information systems that will manage AFE data and information of ESPs
- 4.4.1. Pilot the implementation of the Unified Extension Information System.
- 4.4.2. Establish functional databases in aid of planning, monitoring and evaluating extension programs and projects

4.5. Administer resources needed for AFE services
- 4.5.1. Maintain and upgrade AFE property, plant and equipment.
- 4.5.2. Enhance the AFE grant system

4.6. Intensify strategic communications to strengthen awareness and feedback among AFE stakeholders

Appendix B. Photos of the National and Regional Consultations


Looking Beyond: Training-Workshop on
Strategic Planning for Agriculture and
Fisheries Extension (AFE) Stakeholders


RURAL DEVELOPMENT


Looking Beyond: Training-Workshop on
Strategic Planning for Agriculture and
Fisheries Extension (AFE) Stakeholders