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AgCLIR PHILIPPINES

Agribusiness Commercial Legal and Institutional Reform Assessment

AGENDA FOR ACTION

JANUARY 2017

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Agribusiness Commercial Legal and Institutional Reform Diagnostic

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LIST OF ABBREVIATIONS

A&D	-	Alienable and Disposable
AAGR	-	Annual Average Growth Rate
ACPC	-	Agricultural Credit Policy Council
ADR	-	Alternative Dispute Resolution
AEC	-	ASEAN Economic Community
AFMA	-	Agriculture and Fisheries Modernization Act
AFMIS	-	Agriculture and Fisheries Market Information System
AgCLIR	-	Agribusiness Commercial Legal and Institutional Reform
AGFP	-	Agriculture Guarantee Fund Pool
AGMARIS	-	Integrated Agricultural Marketing Information System
AMNEWS	-	Agricultural Marketing News Service
ALG	-	Alternate Law Groups
AMFPC	-	Agro-Industry Modernization Credit and Financing Program
ANGOC	-	NGO Coalition for Agrarian Reform and Rural Development
AO	-	Administrative Order
AOM	-	Audit Observation Memorandum
AHTN	-	ASEAN Harmonized Tariff Nomenclature
ARB	-	Agrarian Reform Beneficiaries
ARMM	-	Autonomous Region for Muslim Mindanao
ARTA	-	Anti-Red Tape Act
ASEAN	-	Association of Southeast Asian Nations
ATC	-	Alkali Treated Chips
ATIGA	-	ASEAN Trade in Goods Agreement
AVA	-	Agribusiness Venture Agreements
BAFS	-	Bureau of Fisheries and Aquatic Standards
BAEcon	-	Bureau of Agricultural Economics
BAI	-	Bureau of Animal Industry
BAPTC	-	Benguet AgriPinoy Vegetable Trading Center
BAR	-	Bureau of Agricultural Research
BAS	-	Bureau of Agricultural Statistics
BFAR	-	Bureau of Fisheries and Aquatic Resources
BIR	-	Bureau of Internal Revenue
BOC	-	Bureau of Customs
BOT	-	Build-operate-transfer
BOQ	-	Bureau of Quarantine

BPfA	-	Beijing Platform for Action
BPI	-	Bureau of Plant Industry
BPL	-	Business Permits and Licensing Systems
BSP	-	Bangko Sentral ng Pilipinas
BTA	-	Benguet Truckers and Traders Association
CAGR	-	Compound Annual Growth Rate
CAR	-	Cordillera Autonomous Region
CARD	-	Center for Agriculture and Rural Development Bank Inc.
CARP	-	Comprehensive Agrarian Reform Program
CARPER	-	CARP Extension with Reforms
CDA	-	Cooperative Development Authority
CEDAW	-	United Nations Convention on the Elimination of all Forms of Discrimination Against Women
CENRO	-	Community Environment and Natural Resources Office
CEPT	-	Common Effective Preferential Tariff
CFRR	-	Center for Food Regulation and Research
CIC	-	Credit Information Corporation
CLIR	-	Commercial Legal and Institutional Reform Tools
CLSU	-	Central Luzon State University
CNO	-	Crude coconut oil
CPAR	-	Congress for People's Agrarian Reform
CPM	-	Card Pioneer Microinsurance
CTRM	-	Committee on Tariffs and Related Matters
DA	-	Department of Agriculture
DA-ICTS	-	Department of Agriculture Information, Communications and Technology Service
DAR	-	Department of Agrarian Reform
DARAB	-	Department of Agrarian Reform Adjudication Bureau
DENR	-	Department of Environment and Natural Resources
DICT	-	Department of Information and Communications Technology
DoH	-	Department of Health
DoJ	-	Department of Justice
DMMSU	-	Don Mariano Marcos State University
DPWH	-	Department of Public Works and Highways
DTI	-	Department of Trade and Industry
E2M	-	Electronic-to-Mobile
EO	-	Executive Order
ERIA	-	Economic Research Institute for Association of Southeast Asian Nations and East Asia

EU	-	European Union
FAAS	-	Field Appraisal and Assessment Sheets
FAO	-	Food and Agriculture Organization
FDA	-	Food and Drug Administration
FPA	-	Fertilizer and Pesticide Authority
FTA	-	Free Trade Agreement
GAA	-	General Appropriation Act
GAD	-	Gender in Development
GAP	-	Good Agricultural Practices
GATT	-	General Agreement on Tariffs and Trade
GBE	-	Grading and baling establishment
GDP	-	Gross Domestic Product
GIZ	-	German Federal Enterprise for International Cooperation
GMEF	-	Gender Mainstreaming Evaluation Framework
GMO	-	Genetically Modified Organism
GSP+	-	Generalized System of Preferences Plus
HA	-	Hectare
HGDG	-	Harmonized Gender and Development Guidelines
HS	-	Harmonized system
HYV	-	Higher yielding varieties
IFAS	-	Inclusive Finance Advocacy Staff
IFC	-	International Finance Corporation
IRR	-	Implementing Rules and Regulations for the Competition Act
IT	-	Information Technology
JICA	-	Japan International Cooperation Agency
LAMP	-	Land Administration and Management Project
LARA	-	Land Administration Reform Act
LANDBANK	-	Land Bank of the Philippines
LGU	-	Local Government Unit
LMB	-	Land Management Bureau
LMS	-	Land Management Services
LRA	-	Land Registration Authority
LTVTP	-	La Trinidad Valley Trading Post
MAV	-	Minimum Access Volumes
MCC	-	Millennium Challenge Corporation
MDGs	-	Millennium Development Goals
MIMAROPA	-	Mindoro, Marinduque, Romblon and Palawan
MFN	-	Most Favored Nation
M/P LGU	-	Municipal / Provincial Local Government Unit

MOA	-	Memorandum of Agreement
MSME	-	Micro, Small and Medium Enterprise
MSU	-	Mindanao State University
MT	-	Metric Tons
NCC	-	National Competitiveness Council
NCIP	-	National Commission on Indigenous People
NEDA	-	National Economic Development Authority
NFA	-	National Food Authority
NFHFI	-	National Federations of Hog Farmers, Inc.
NGO	-	Nongovernmental Organizations
NMIS	-	National Meat Inspection Service
NPIAP	-	Native Pig Industry Association of the Philippine
NSW	-	National Single Window
ODA	-	Official Development Assistance
ODA-GAD	-	Official Development Assistance - Gender and Development Network
OECD	-	Organization for Economic Co-operation and Development
OFC	-	Office for Competition in the Department of Justice
OPV	-	Open Pollinated Varieties
OSS	-	One-Stop Shops
PAFMI	-	Philippine Association of Feed Millers
PAG-IBIG	-	Home Development Mutual Fund
PAMPI	-	Philippine Association of Meat Processors
PARC	-	Presidential Agrarian Reform Committee
PCA	-	Philippine Coconut Authority
PCAARD	-	Philippine Council for Agricultural and Aquatic Research Development
PCC	-	Philippine Competition Commission
PCCI	-	Philippine Chamber of Commerce and Industry
PCIC	-	Philippine Crop Insurance Corporation
PCIP	-	Philippine Commodity Investment Plan
PCW	-	Philippine Commission on Women
PD	-	Presidential Decree
PDP	-	Philippine Development Plan
PDRC	-	Philippine Dispute Resolution Center
PENRO	-	Provincial Environment and Natural Resources Office (PENRO)
PES	-	Processed Eucheuma Seaweed
PhilCoir	-	Philippine Coco Coir Exporters Association
PhilFIDA	-	Philippine Fiber Industry Development Authority
PhilMaize	-	Philippine Maize Federation
PhilMECH	-	Philippine Mechanization Center

PhilRice	-	Philippine Rice Reseach Institute
PKKK	-	Pambansang Koalisyon ng Kababaihan sa Kanayunan
PLA	-	Public Land Applications
PPA	-	Philippine Port Authority
PPFPI	-	Pork Production Federation of the Philippines Inc.
PPP	-	Public Private Partnership
PMC	-	Philippine Mediation Center
PNG	-	Philippine Natural Grade
PO	-	People's Organizations
PRDP	-	Philippine Rural Development Program
PSA	-	Philippine Statistics Authority
RA	-	Republic Act
RC	-	Refined Carrageenan
RD	-	Registry of Deeds
RD&E	-	Research, Development and Extension Service
Ro-Ro	-	Roll-on, Roll-off
ROI	-	Return of Investment
R&D	-	Research and Development
SBC	-	Small Business Corporation
SEC	-	Securities and Exchange Commission
SIAP	-	Seaweed Industry Association of the Philippines
SME	-	Small and medium sized enterprises
SMPFCI	-	San Miguel Pure Foods Company Inc.
SPS	-	Sanitary and Phytosanitary
SRA	-	Sugar Regulatory Authority
SRC	-	Semi-Refined Carrageenan
SSF	-	Shared Service Facilities
SSS	-	Social Security System
TC	-	Tariff Commission
TSPI	-	Tulay sa Pag-unlad
TWG	-	Technical Working Group
UAP	-	University of Asia and Pacific
UPLB	-	University of the Philippines Los Baños
UV	-	University of Visayas
VASP	-	Value Added Service Provider
VHT	-	Vapor Heat Treatment
VSU	-	Visayas State University
WTO	-	World Trade Organization

EXECUTIVE SUMMARY

In November 2016, the Millennium Challenge Corporation (MCC) sponsored an Agribusiness Commercial Legal and Institutional Reform (AgCLIR) diagnostic as part of its effort to support the Government of the Philippines in development of a second country compact. The diagnostic is an analytical tool that focuses on the systemic limitations that inhibit productivity improvement and limit profitability in the agriculture sector. It is based on the CLIR framework, which was first developed in 1999 and has been used in over 40 countries since its inception. The CLIR framework simplifies the complex array of laws, regulations, and institutions that impact businesses by identifying key constraints and practical recommendations for reform into a four-part method of inquiry: legal framework, implementing institutions, supporting institutions, and social dynamics.

During the two-week field study, the team met with more than 150 officials at national and local levels; small, medium, and large agricultural enterprises; business associations; think tanks and NGOs; educational and research institutions; the banking, lending, and investment community; and many other stakeholders as part of the assessment process. Eight subject areas, known as chapters, were selected for analysis as part of this AgCLIR:

Figure 1: AgCLIR Chapter Descriptions

AgCLIR Chapter	Description
Business Operating Procedures	Examines the processes through which agribusinesses may enter the formal economy by starting a business, deal with licenses, and resolve insolvency.
Getting Credit	Examines both the supply side constraints to access to finance (the price of credit, risk mitigation tools, credit history, etc.), as well as the demand side constraints (productivity, market access, business acumen, willingness to pledge guarantees).
Registering Property	Examines the key constraints to land registration, land tenure, customary land rights, inheritance, and dispute resolution systems.
Competing Fairly	Examines the factors that support or inhibit competition in the agriculture sector, such as competition policy and restrictive licensing.
Enforcing Contracts	Examines the culture of contracts in the country, with a focus on contract farming, expedited seizure and sale of perishable goods, transaction costs, and established grades and standards.
Trading Across Borders	Examines trade in agricultural products, both from a trade policy perspective (i.e. the underlying regional and international trade environment) and from the perspective of trade facilitation (i.e. the system of procedures and documentation for international trade).
Accessing Marketing Infrastructure	Examines transport infrastructure, markets and storage, and marketing information systems and excludes broader public infrastructure such as electricity and water systems.
Social and Gender Dynamics	Examines the distinct legal, regulatory, and institutional constraints influencing women's participation in the agriculture sector.

CROSS-CUTTING THEMES

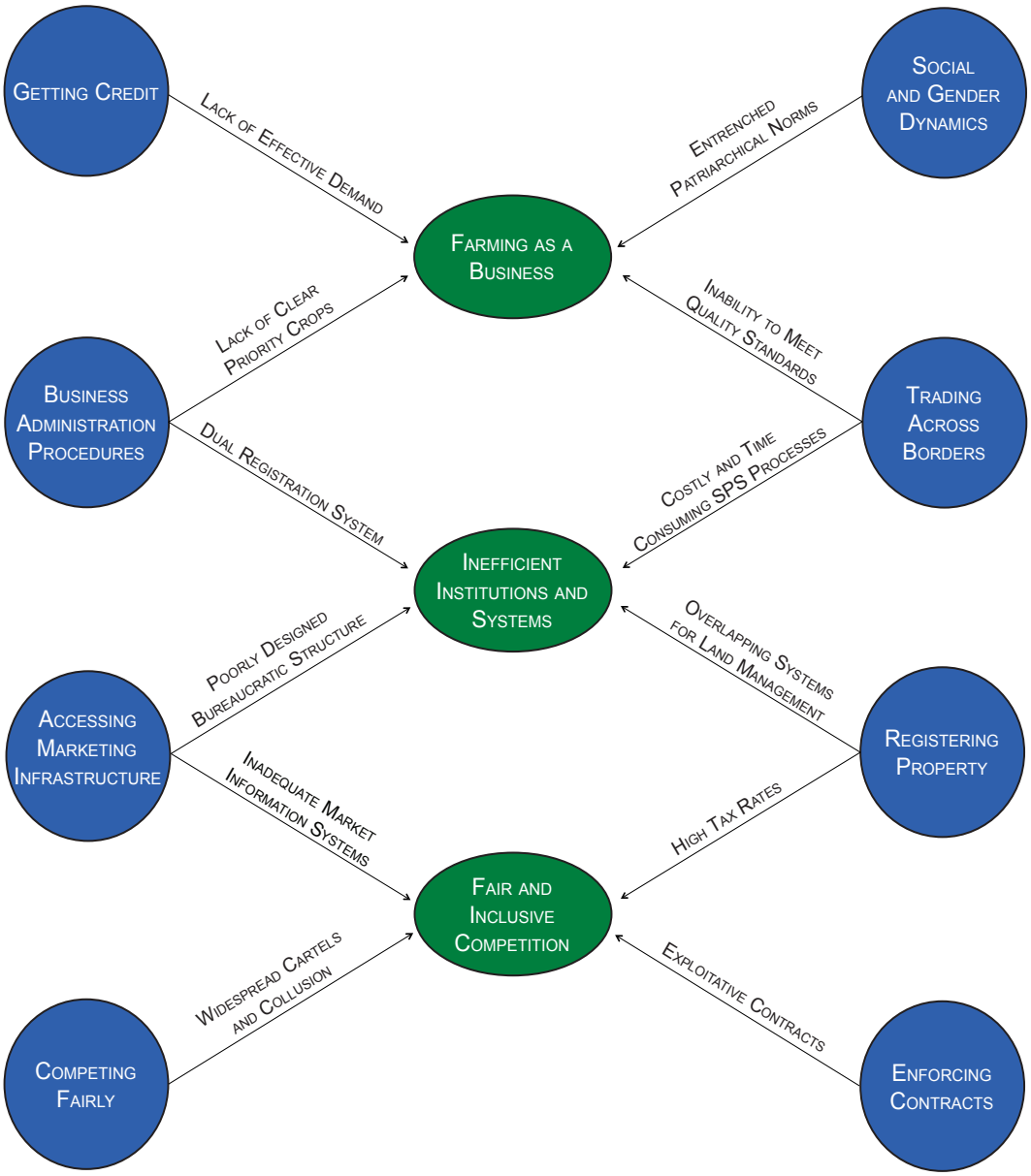
Across the eight AgCLIR chapters examined in this study, three key themes emerged, which form the basis for the recommendations presented in this report. The relationship between the AgCLIR chapters, key constraints and cross-cutting themes is visualized in Figure 2 on the next page, while the three key themes are presented below:

1. Inefficient institutions and systems: The Philippines suffers from several systemic bureaucratic and administrative issues that substantially constrain smallholder farmers and larger agribusinesses alike. First, there is the issue of the number of permits required for business and product registration. The World Bank's *Doing Business* report mentions that 16 steps are required to register a business, but the team found that this is only in the most ideal scenarios and that the system is time consuming and costly to navigate. Aside from the volume of permits and approvals required, potential business owners and operators are faced with a very linear process of registration. The acquisition of permits required in the Philippines is sequential, and not many steps can be started concurrently. This heightens the risk for bottlenecks in registration. Those in rural areas are also more vulnerable to registration issues, as local governments are known to create arbitrary requirements and interpret mandatory registration processes as they see fit.

2. Farming as a business: Smallholder farmers do not attract sufficient private sector interest because their farms are not viable businesses. Farmers lack capacity to identify and analyze opportunities to undertake informed decisions, better understand markets and how to deliver to specifications, and access resources and risk mitigating instruments. Additionally, a high poverty incidence in farmers discourages second and third generation farming, resulting in a lack of continuity and loss of skills between farming generations. These problems echo through the entire agriculture sector. On the government side, the public sector does not focus on building farmers' capacity to run a performing business. On the private side, both farmers and farmers' organizations are not trained in business management; neither do they seek to improve their own capacity to operate successful performing businesses.

3. Fair and inclusive competition: The Philippines suffers from a 'Paper Jungle Problem,' where a complicated legal system disadvantages those who do not have the resources to navigate it. This over-lawyered system creates a very complicated formal environment for the agriculture sector, specifically disadvantaging smallholders and other parties that do not have the resources to tackle all the legalese. Women are even more disadvantaged since they are not perceived as independent decision-making entities and are required to provide their husband's signature when making decisions on land or taking loans. The complexities of the titling system add to the disadvantages that smallholders and women must contend with, forcing them to abandon the formal process and into entering informal agreements. These disadvantaged parties are even more vulnerable to unscrupulous entities who seek to exploit the complicated system, or even to competing heirs to their ancestral land. Disdain and distrust for legal pathways to land and/or loans is so strong that poor cooperatives would rather pay a 60 percent annual interest to informal traders than to take out a loan from the formal banking system.

Figure 2: Visualization of AgCLIR Chapters, Key Cross-Cutting Themes, and Primary Constraints



RECOMMENDATIONS FOR REFORM

Based on the analysis set forth in this report, the AgCLIR team developed a series of recommendations for reform for MCC and the Government of the Philippines (GPH) to support the formation of the Philippines second country compact. These recommendations are drawn from the key findings in each AgCLIR chapter and reflect current reform capacities, opportunities, and evidence of will to reform. Recommendations are presented in detailed recommendations tables in the main report and analyzed based on three criteria: 1) the impact of the reform, 2) the feasibility of the reform, and 3) the resources required for reform. Based on these three criteria, the recommendations are classified as either high, medium or low priority. Out of 22 recommendations across the eight AgCLIR chapters, nine recommendations were deemed high priority. A summary of these high priority recommendations is presented in Figure 3 below.

Figure 3: High Priority AgCLIR Recommendations

AgCLIR Chapter	Recommendations
Business Administration Procedures	Support the President's Joint Memorandum to reduce steps in Local Government Unit business registration.
Business Administration Procedures	Work with the Department of Agriculture (DA), Department of Health (DoH), and the Fertilizer and Pesticides Authority (FPA) to ensure a streamlined process for product approval in key value chains.
Registering Property	Establish a single land administration agency, consolidating the functions of land titling, surveying, and adjudication.
Enforcing Contracts	Create clear, simple and uniform contract templates and standards for smallholder farmers and cooperatives to promote usability and ensure fairness.
Getting Credit	Provide technical support to financial and non-financial institutions to develop creative and alternative products, partnerships, and delivery channels to finance "effective demand" of micro, small, and medium enterprises (MSMEs) in value chains.
Accessing Marketing Infrastructure	Invest in Roll-on/Roll-off (RoRo) ports and corridors in new areas based upon selection of priority commodities.
Trading Across Borders	Transform sanitary and phytosanitary (SPS) regulatory systems to become more risk-targeted, subjecting selected burdensome processes like inspection of goods with selectivity rules.
Trading Across Borders	Support legislation that will provide the DA with a cohesive policy framework for the SPS functions undertaken by its agencies.
Gender and Social Dynamics	Provide financial support for the proposal by the PCW to reform its institutional structures and establish five regional clusters.

INTRODUCTION

This report addresses the legal, institutional, and social environments that govern business in the Philippines' agriculture sector. Through close examination of agriculture-related policies, laws, institutions, and social dynamics, this report aims to inform strategies and decisions to be made by MCC and the GPH in the formation of the second Philippines Country Compact. The report has four primary goals:

1. To provide a better understanding of the constraints to doing business in the agriculture and agribusiness sectors in the Philippines;
2. To understand the scale of the impact of the agribusiness enabling environment on select value chains;
3. To recommend and prioritize reform activities that fit within MCC's investment criteria for the second Compact; and
4. To identify the scale of difficulty in implementing reforms.

This report can also be used by other government institutions, donors, nongovernmental organizations (NGOs), the private sector, and others to better understand the influence of the agribusiness enabling environment in driving agricultural growth in the Philippines. The findings and recommendations can serve as a foundation for agricultural policy development, a framework for development interventions, a substantive resource for investors, and a catalyst for public-private dialogue and consensus building.

AGRICULTURE IN THE PHILIPPINES

The Philippines is the second largest country in Association of Southeast Asian Nations (ASEAN), with a relatively young and ethnically diverse population of over 100 million. Of the nearly 300,000 square kilometers of land spread across over 7,100 islands, the Philippines has approximately 100,000 square kilometers of arable land. The Philippines is heavily urbanized, and as of 2014, agriculture and fishing made up 10 percent of the Philippines' Gross Domestic Product (GDP). This share of GDP has fallen from 30 percent over the past six decades, and agriculture sector growth has consistently fallen behind growth in national GDP. Despite this decline, agriculture continues to play an important role in alleviating poverty, especially for the rural poor. Twenty-two percent of the total population lives below the poverty line, with most of these people located in rural areas and engaging in subsistence or tenant farming.[1]

After several years of damaging typhoons, the agriculture sector began a recovery in 2014, driven by both government and private sector attention. The past two administrations of Gloria Macapagal Arroyo and Benigno Aquino III have prioritized agriculture, with the Aquino

[1] USAID. 2012. Philippines Regional Agricultural Trade Environment (RATE) Country Summary and Philippine Statistics Authority (http://www.psa.gov.ph/poverty-press-releases/data).

administration directing substantial resources towards agricultural initiatives, specifically rice self-sufficiency, family and cooperative farm development, as well as towards public-private partnerships focused on improving agriculture. These initiatives are beginning to pay dividends – agriculture production grew 1.7 percent in 2014, up from 1.1 percent the year before, with crops, livestock and poultry showing the largest gains. Crop production, however, grew 0.09 percent in 2013, with an accompanying 2.3 percent increase in farm gate prices. In comparison, the national economy is growing at a much brisker rate of 7.1 percent[2], and the sector continues to suffer from major systemic constraints that limit agricultural productivity and regional competitiveness.

At the farm level, farmers face numerous barriers to accessing productivity-increasing technology and farming practices, which include inadequate research and development, weak extension services, high input costs, limited access to formal credit, and inadequate irrigation systems. Farmers also face substantial challenges in securing land tenure, with land administration in the Philippines mostly characterized as cumbersome, complex, and costly. Further, access to finance also remains a major constraint to agricultural investment, driven by farmers' lack of borrowing records, lack of knowledge on accessing formal or bank financing, and lack of acceptable collateral.[3] However, over the past decade, lending to agriculture has increase dramatically, driven in large part by the government's Agri-Agra reforms. Over the past five years, 19 percent of government and private loans have gone to the agriculture sector. [4]

At the postharvest handling and processing level, constraints include inadequate postharvest facilities, improper postharvest handling practices, and limited laboratory and testing services. Thus, postharvest losses on a yearly basis are often as high as 20 percent for rice, 13 percent for corn, and between 20 to 50 percent for fruits and vegetables.[5] Beyond processing, farmers are also constrained by the lack of open and fair market access, with agricultural supply chains being heavily influenced by entrenched systems and vested interests. At the marketing level, the main government program providing marketing information, the Agriculture and Fisheries Market Information Service (AFMIS), suffers from budget constraints, overlapping functions, an outdated website and technical limitations in receiving data via cell phones.

There are also several structural inefficiencies in moving agricultural produce from farm to market. Beyond inadequate and poorly maintained roads and bridges, the sector is also constrained by lack of appropriate transport vehicles and inconsistent and expensive inter-island shipping. Finally, underpinning all value chain levels of the agriculture sector is the risk posed by climate change. The Philippines is one of the countries most exposed to and impacted by tropical storms, and the long-term cost of climate change is estimated at $2.9 billion dollars per year.[6]

[2] PSA. 2015. Philippine Statistical Yearbook 2015.

[3] USAID. 2012. Philippines Regional Agricultural Trade Environment (RATE) Country Summary.

[4] PSA. 2016. Agricultural Credit Report #2016-2.

[5] Lantican, Flordeliza A. et al. 2013. Challenges and Agenda for Action for the Philippines Agriculture Sector.

[6] International Food Policy Research Institute. 2015. Economic Impacts of Climate Change in the Philippine Agriculture Sector: Scenarios, Policies and Investments.

AGCLIR: A TOOL FOR UNDERSTANDING THE AGRIBUSINESS ENABLING ENVIRONMENT

The **AgCLIR** diagnostic is an analytical tool that focuses on the systemic limitations that inhibit productivity improvement and limit profitability in the agriculture sector. The CLIR framework simplifies the complex array of laws, regulations, and institutions that impact businesses by identifying key constraints and practical recommendations for reform into a four-part method of inquiry: legal framework, implementing institutions, supporting institutions, and social dynamics (see page 17 for a full definition of each lens).

Using the CLIR lens, the AgCLIR examines several key enabling environment topics, referred to throughout this report as chapters The chapters have been designed to align, to the greatest extent possible, with the World Bank's Doing Business initiative[7], which since 2002 has assisted countries in targeting areas where their regulatory environments may favor or interfere with economic growth, and investigates how these same issues, along with other key topics, affect the agriculture sector in each country.

Figure 4: World Bank Doing Business Scores for the Philippines

Topic	2017 Report	2016 Report	Change
Doing Business Overall	99	99	-
Starting a Business	171	164	-7
Dealing with Construction Permits	85	103	+18
Getting Electricity	22	30	+8
Registering Property	112	109	-3
Getting Credit	118	109	-9
Protecting Minority Investors	137	136	-1
Paying Taxes	115	120	+5
Trading Across Borders	95	93	-2
Enforcing Contracts	136	136	-
Resolving Insolvency	56	54	-2

Source: World Bank Doing Business 2017

For each of the topics covered by the *Doing Business* reports, the World Bank considers key indicators of how the regulatory environment is "working," measured by such means as the number of procedures involved in achieving a goal (i.e., getting credit, enforcing a contract); the number of days it takes; and the costs of the procedures in relation to per-capita income. The World Bank gathers data from 189 countries and ranks each, thereby demonstrating how, to this limited degree, their respective environments compare to others throughout the world. In the most recent *Doing Business* report, issued for 2017, the Philippines ranked 99 out of 189 countries surveyed (see Figure 4 above).

AgCLIR supplements Doing Business by examining key components of the regulatory environment for agricultural enterprise in developing countries, including the Philippines, which

[7] www.doingbusiness.org.

have economies and workforces that are significantly impacted by agriculture. For this report, eight chapters have been selected for analysis (see Figure 5 below).

Figure 5: AgCLIR Chapter Descriptions

AgCLIR Chapter	Description
Business Operating Procedures	Examines the processes through which agribusinesses may enter the formal economy by starting a business, deal with licenses, and resolve insolvency.
Getting Credit	Examines both the supply side constraints to access to finance (the price of credit, risk mitigation tools, credit history, etc.), as well as the demand side constraints (productivity, market access, business acumen, willingness to pledge guarantees).
Registering Property	Examines the key constraints to land registration, land tenure, customary land rights, inheritance, and dispute resolution systems.
Competing Fairly	Examines the factors that support or inhibit competition in the agriculture sector, such as competition policy and restrictive licensing.
Enforcing Contracts	Examines the culture of contracts in the country, with a focus on contract farming, expedited seizure and sale of perishable goods, transaction costs between buyers and farmers, and established grades and standards.
Trading Across Borders	Examines trade in agricultural products, both from a trade policy perspective (i.e. the underlying regional and international trade environment) and from the perspective of trade facilitation (i.e. the system of procedures and documentation for international trade), with an emphasis on the work of the Bureau of Customs (BoC) and other border agencies.
Accessing Marketing Infrastructure	Examines both hard and soft marketing infrastructure necessary to effectively trade agricultural products. For the sake of brevity and focus, this analysis centers on transport infrastructure, markets and storage, and marketing information systems and excludes broader public infrastructure such as electricity and water systems.
Social and Gender Dynamics	Examines the distinct legal, regulatory, and institutional constraints influencing women's participation in the agriculture sector.

THE AGCLIR ASSESSMENT PROCESS

In October and November 2016, Integra assembled a team of cross-disciplinary experts to conduct interviews across the agriculture sector. The team met with more than 150 national and local officials; small, medium, and large agricultural enterprises; business associations; think tanks and other NGOs; educational and research institutions; the banking, lending, and investment community; donor representatives; and many other stakeholders across the eight priority chapters identified for this analysis. The team conducted personal interviews in and around Manila, as well as in Davao City, Cebu City, Baguio, and Benguet. The AgCLIR diagnostic culminated in a roundtable presentation in Manila on November 11, 2016, which was attended by more than 50 stakeholders. At the roundtable, team members introduced their preliminary observations, which were then subjected to feedback and elaboration from the participants. This input helped shape the final conclusions and recommendations of the team, which are included in this report.

AgCLIR Assessment Team

Mr. David Quinn, Team Lead

Dr. Roehlano M. Briones, Deputy Team Lead / Subject Matter Expert in Registering Property

Mr. Paul Dodds, Subject Matter Expert in Competing Fairly and Enforcing Contracts

Mr. Patrick Henry, Subject Matter Expert in Business Administration Procedures

Ms. Lorna Grace, Subject Matter Expert in Finance and Access to Agricultural Credit

Dr. Nerlita Manalili, Subject Matter Expert in International Trade and Accessing Markets for Crop and Livestock Products

Ms. Catalina Jensen, Subject Matter Expert in Social and Gender Dynamics

Mr. Cecilio Costales, Value Chain Expert

Ms. Ching De La Pena, Subject Matter Expert in Trading Across Borders / Value Chain Expert

Ms. Jane Capacio, Local Facilitator

Mr. Miguel Menez, Project Coordinator

HOW THIS REPORT IS STRUCTURED

Each chapter of this report is structured in a uniform format that utilizes the CLIR methodological approach. Following an introduction, each chapter using the four-part lens to examine: 1) the legal framework, 2) implementing institutions, 3) supporting institutions, and 4) social dynamics. Each chapter concludes with a set of detailed and actionable recommendations for reform.

LEGAL FRAMEWORK

The first lens examines how laws, regulations, and policies serve as the structural basis for a country's ability to achieve and sustain market-based development in the agriculture sector. It covers the following questions: How clear are the laws, and how closely do existing laws reflect emerging global standards for agriculture? How well do the laws respond to the commercial realities that agribusinesses face? What inconsistencies or gaps are present in the legal framework? Examples of common legal framework issues include restrictive laws, missing laws, unforeseen consequences, and ad hoc rules.

IMPLEMENTING INSTITUTIONS

The second lens examines the institutions that hold primary responsibility for implementing and enforcing the legal framework, as well as related regulations and policies. These institutions include government ministries or authorities, or in certain cases, private institutions such as banks and credit bureaus. In addition, courts are examined with respect to their effectiveness in addressing disputes that arise in the agriculture sector. It covers the following questions: How well do government agencies carry out their duties in terms of efficiency, transparency, accountability, and predictability? Do government agencies suffer from any human resource, financial, or other institutional constraints to implementation? Do institutional behaviors such as corruption create barriers to participation and predictability? Examples of common implementing institutional issues include bureaucratic inefficiency, burdensome processes, weak administrative systems, a lack of resources, centralized offices, and poor coordination.

SUPPORTING INSTITUTIONS

The third lens examines the organizations, individuals, or activities that indirectly support the sector. Examples of supporting institutions include farmer associations, food industry unions, lobbying groups, universities and research institutes, the media, and development partners. It covers the following questions: How deeply rooted in civil society are the laws and institutions that govern small, medium and large scale commercial pursuits in the agriculture sector? What is the relative awareness of the laws in the supporting institutions and how do these laws improve economic performance of the agriculture sector? This lens often uncovers key champions of reform. Examples of common supporting institution issues include: lack of capacity within business associations, funding gaps in national research organizations, and poor coordination between development partners and governments.

SOCIAL DYNAMICS

The final lens assesses the less tangible, but often enormously important social issues that impact the environment for growth in the agriculture sector. Agriculture is deeply socially embedded with formal and informal systems and norms that govern factors such as labor, gender, identity, and beliefs. As developed throughout this report, such factors create often-unseen opportunities and risks for farmers that shape their agricultural decisions, but are often traditionally overlooked. Questions in this section include: How do issues such as gender, human capacity, and public health influence the ways agribusiness environments function? What factors are driving different stakeholders' decisions? Examples of common constraints include barriers to women's access to land and credit, traditions and cultural norms, a culture of informality, and corruption.

RECOMMENDATIONS

Based on the extensive knowledge and analysis set forth in this report, a series of recommendations are included at the end. These are drawn from the key findings in each chapter and reflect current reform capacities, opportunities, and evidence of the will to reform. Some of the recommendations within the chapters may overlap and be consolidated into a single reform initiative covering two or more topics.

SUMMARY OF FINDINGS

This section provides a summary of the main findings from each of the selected AgCLIR chapters, as well as an exploration of key crosscutting themes to emerge from the analysis.

BUSINESS ADMINISTRATION PROCEDURES

For any kind of agribusiness, business registration and licensing process in the Philippines are lengthy and inefficient. Discrepancies between local and national level documentation and registration, unclear local government responsibilities, and the lack of clarity around a linear pathway for necessary documents contribute to a difficult and costly process of registering or closing a business. While many in the Philippines still engage in the procedures and workarounds that allow them to maintain businesses, processes must be simplified to improve Philippine business competitiveness and growth. The current Duterte administration's efforts to cut down on bureaucracy, specifically through the Joint Memorandum Circular (JMC) that was signed between key government agencies involved in business administration processes should be supported. Work also needs to be done to streamline licensing processes in value chains with high market potential.

REGISTERING PROPERTY

Formal property rights over agricultural land and coastal waters in the Philippines are administered under a complex, confusing, cumbersome, and expensive system, which negatively impacts both buyers and sellers. The system is prone to difficulties in creating and transferring formal titles, having overlapping claims that prolong dispute resolution, and a residual gender bias. In rural areas, an informal system of access and use rights prevails, which is often in conflict with the formal system. This informal system is largely opaque to outsiders, is mostly undocumented, and far below the standards expected of modern economic transactions. These conditions serve to limit investment by agribusinesses and rural agricultural entrepreneurs. To address these constraints, this chapter recommends establishing a single land administration agency to consolidate the functions of land titling, surveying, and adjudication; supporting Local Government Units (LGUs) in adopting systematic titling programs, and reducing taxes on the transfer of property.

ENFORCING CONTRACTS

The Philippines' formal and informal framework for contract enforcement has developed a breadth and complexity that mirrors the country's diverse agricultural economy. Farms range in size from tiny subsistence family parcels, to mid-sized cooperatives owned by Agrarian Reform Beneficiaries (ARBs), to professionally managed plots of several thousand hectares connected vertically into global supply chains. Almost all farmers have relationships defined by contracts, whether written or informal, covering the land they till, the inputs they purchase, the credit they take, the labor they hire, the goods they sell and other aspects of the various value chains. The Philippines has a well-developed formal legal system that provides a solid basis for creating agribusiness contracts, and enforcing them both in court and through arbitration. However, other

than in Small Claims Court, using the Filipino formal legal system is an expensive, slow and difficult way to settle contract disputes. Commercial arbitration, while simpler, is still complicated and expensive. Both systems use English as the primary working language, which is not accessible to native speakers. The “barangay” or village-level justice system is well-regarded and seems to work well for settling smaller disputes, but since its’ jurisdiction is limited to residents of the same village, it cannot cover disputes between a villager and a non-resident, even one from a nearby market town.

GETTING CREDIT

A lack of credit can be one of the greatest barriers hindering the growth of the agriculture sector in developing countries. Even with a strong enabling framework for agribusiness finance, the Philippines still experiences low rates of formal borrowing. Instead of going to banks a combination of mistrust of financial institutions, large amounts of paperwork for formal loans and the convenience and familiarity of informal borrowing arrangements drive farmers to go to their long-trusted “sukis”, or traders, to borrow money at up to 60 percent interest rates. This chapter recommends the importance of financial literacy to help farmers understand the benefits of formal loans. Additionally, the creation of innovative and useful financial products will entice farmers to use formal lending institutions, as well as to minimize lending risk for banks.

ACCESSING MARKETING INFRASTRUCTURE

While the transport infrastructure has seen modest improvement in quality over the years, much is still left to be desired given the poor road network and weak intermodal integration. Public sector underfunding has meant that private sector businesses have often built independent infrastructure solutions, such as ports, for their own purposes. This approach has led to disconnected infrastructure networks that fail to adequately connect various islands or promote specific commodities. Instead, this fragmented approach drives up costs and entrenches various inefficiencies within the system. This chapter points to the need to legislate a new role for the Philippine Ports Authority (PPA) to function either as a regulator or a funder of port infrastructure, but not both. In addition, it advocates for the introduction of an independent market information system, as well as targeted investment in RoRo ports and transport corridors.

TRADING ACROSS BORDERS

The Philippines has made good progress in liberalizing foreign trade. There are no export taxes, restrictions are limited to a few strategic commodities, and free trade agreements (FTAs) with ASEAN and other trading partners allow the country to enjoy preferential access to markets. ASEAN countries tariffs have been set to zero for all goods except rice and sugar. Some trade facilitation initiatives have been pursued, most involving the use of information technology applications for trade-related permits and documents. Despite a positive enabling environment, trade performance in the Philippines has been limited. Agriculture exports from the Philippines pale in comparison to its ASEAN neighbors, attributed to an uncoordinated process and conflicts between regulating agencies’ electronic systems. To remedy the coordination problems plaguing exports, efforts to implement the inter-operability of regulating agencies and BoC

systems are recommended, improving response time and limiting the risk of corruption. A more streamlined SPS regulatory system is also needed.

COMPETING FAIRLY

The Philippines has a new Competition Act and a new Competition Commission (the PCC), which offers the possibility of encouraging a "whole of government" approach to competing fairly for the first time in the country's history. The economy is very highly concentrated, and dominated by old and powerful family-run networks. Regulatory capture, cartels and collusive behavior are found to be widespread and deeply entrenched. Government action in the agriculture sector can be seriously market distortive. Very strong political will and public support will be needed to encourage a culture of competing fairly. The new administration's understanding of and support for technocratic, free market solutions cannot be assumed and will need to be built gradually. The PCC must pick its battles carefully, building its strength as an institution. Smallholder farmers may be helped by some interventions to increase fair competition, but the what and the how will need careful thought.

SOCIAL AND GENDER DYNAMICS

Gender equality in the Philippines remains a paradox. The country has progressive enabling laws and policies that allow and facilitate participation of women in government and the private sector in management. This means that the Philippines ranks 7th on the global gender gap index. Despite this, there are entrenched disparities in economic opportunities and access to productive resources between men and women in the rural areas. These disparities are partly the result of a social structure where patriarchal ideology is still firmly embedded in the culture. To help promote gender equality in the Philippines, government agencies need staff that have the skills and competencies to develop and implement gender mainstreaming into their policies, strategies, programs and projects. The existing assigned focal points for gender may not have the necessary formal gender-related knowledge, skills or training. Examples of some basic training that should be offered on a continual basis and not just as one-time activity, are: gender sensitivity training (for all agency staff), gender analysis tools and their application, development of gender policy framework, and gender disaggregated database development.

To be sustainable, reporting of gender statistics and projects needs to be made more practical and attainable by the agencies that collect and implement them. Lastly, pilot programs and credit products need to be developed and extended specifically to women, giving them access to fair business opportunities.

CROSSCUTTING THEMES

The AgCLIR diagnostic is organized so that various components of a healthy and prosperous environment for agricultural enterprise are considered discretely and, where appropriate, in relation to each other. During the analysis, the AgCLIR team identified certain issues and dynamics as especially prevalent across this analytical framework. Three crosscutting themes emerged and are presented below:

1. Inefficient institutions and systems: The Philippines suffers from several systemic bureaucratic and administrative issues that substantially constrain smallholder farmers and larger agribusinesses alike. First, there is the issue of the number of permits required for

business and product registration. The World Bank's *Doing Business* report mentions that 16 steps are required to register a business, but the team found that this is only in the most ideal scenarios. In addition, the requirements for continuous operation of the business (yearly registrations, certifications, sanitary and phytosanitary standards, etc.) contribute to a very onerous operating environment for businesses in the Philippines.

Aside from the volume of permits and approvals required, potential business owners and operators are faced with a very linear process of registration. The acquisition of permits required in the Philippines is sequential, and not many steps can be started concurrently. This heightens the risk for bottlenecks in registration. Those in rural areas are also more vulnerable to registration issues, as local governments are known to create arbitrary requirements and interpret mandatory registration processes as they see fit. This speaks to the lack of capacity at the provincial, national, and especially at local levels of government. On the positive side, there is currently a strong political will behind the reform process, with President Duterte pushing sector reform through a multi-agency JMC.

2. Farming as a business: The AgCLIR team identified a need to create an enabling environment for farmers, specifically smallholder farmers, which goes beyond the subsistence mindset and creates viable small businesses. Smallholder farmers do not attract sufficient private sector interest because they are not viable businesses. Farmers lack capacity to identify and analyze opportunities to undertake informed decisions, better understand markets and how to deliver to specifications, and access resources and risk mitigating instruments. Additionally, a high poverty incidence in farmers discourages second and third generation farming, resulting in a lack of continuity and loss of skills between farming generations. As the entire agriculture economy is largely based on small farmer production, too much urban migration will leave the economy highly vulnerable.

These economic barriers to farming as a business are exacerbated by social dynamics, including the lack of gender-focused approaches to farming. While gender promotion laws in the Philippines appear sufficient on paper, the reality is that there is a lack of gender based programming, often stemming from inadequate resources and local capacity to create appropriate programs. Another factor to consider is the public sector's social, rather than economic approach. The government often touts the importance of the agriculture sector, such as in the most recent Philippine Development Plan (PDP). The national narrative is focused on providing farmers food security and a livelihood, not long-term economic success and improving their business skills.

These problems echo through the entire agriculture sector. On the government side, the public sector does not focus on building farmers' capacity to run a performing business. On the private side, both farmers and farmers' organizations are not trained in business management; neither do they seek to improve their own capacity to operate successful performing businesses.

3. Fair and inclusive competition: The Philippines suffers from a 'Paper Jungle Problem,' where a complicated legal system disadvantages those who do not have the resources to navigate it, as well as the problem of restricted markets. An over-lawyered system creates a very complicated formal environment for the agriculture sector, specifically disadvantaging smallholders and other parties that do not have the resources to tackle all the legalese. Women are even more disadvantaged since they are not independent decision-making entities and are required to provide their husband's signature when making decisions on land or taking loans. The complexities of the titling system add to disadvantages that smallholders and women must contend with, forcing them to abandon the formal process and into entering informal agreements. The informal sector runs parallel to the formal sector because current laws do not allow for the two to merge. The land reform process, for example, bars the sale of land for a ten-year period. Likewise, court rulings have barred land being used as collateral. Informally both activities occur at the village level, but the law doesn't recognize these activities and thus there is no path to formalization.

These disadvantaged parties are even more vulnerable to unscrupulous entities who seek to exploit the complicated system, or even to competing heirs to their ancestral land. Disdain and distrust for legal pathways to land and/or loans is so strong that poor cooperatives would rather pay a 60 percent annual interest to informal traders than to take out a formal loan from the formal banking system such as LANDBANK at a nine percent interest rate.

BUSINESS ADMINSTRATION PROCEDURES

Sound business administrative procedures to register businesses and acquire necessary licenses, enable agribusinesses to move beyond informality. By formalizing their businesses, agribusinesses can expand their access to market opportunities, are better equipped to plan and manage their businesses, and can more readily obtain finance and credit. This chapter on Business Administrative Procedures covers the administrative procedures for starting a business, dealing with licenses, and closing a business, as they relate to three types of businesses: sole proprietorships, cooperatives, and corporations.

Agriculture in the Philippines constitutes a little over ten percent of the GDP but employs over 29 percent of the total population. In 2012, there were over 219,000 registered businesses of all types in the Philippines. Of this total, 1,147 had over 20 employees and were engaged in all types of agriculture related industries from production to processing. This is less than one percent of the total number of businesses nationally. There were also over 25,000 registered cooperatives, roughly 4,000 of which were related to agriculture. Most of these agricultural cooperatives are micro or small, but in total have 1.5 million members.

Given the diversity of agribusinesses in the Philippines, the process of starting a business, obtaining licenses and resolving insolvency must be understood within the context of the size of the business. Large multinational companies operating in the Philippines are registered businesses that work within the existing framework of laws and regulations of the country. The process of business registration becomes cloudier when considering agricultural cooperatives. While the clear majority of agriculture cooperatives might be registered with the right authorities, they do not necessarily follow yearly reporting requirements. This is more due to a lack of management capacity than a preference to skirt the law. Sole proprietorships are generally formally registered and fulfill most of the requirements to serve the domestic market. Finally, smallholder farmers are the least likely to be registered or to want to register as a business. Onerous and comparatively expensive processes keep this segment of the population sidelined from the formal economy, often depriving them of key benefits of the formal economy, including social safety nets and access to credit. The pressures on smallholders to formally register are increasing, as multinational corporations are increasingly relying on smallholder land due to land reform policies (see the Registering Property chapter), and the evolving international market demands of full product traceability.

LEGAL FRAMEWORK

The legal framework for owning and operating an agribusiness in the Philippines is well established from a statutory perspective. The Philippines does not need to pass any new major piece of legislation to make owning or operating a business easier. The constraint is that the Philippines suffers from poorly aligned legislation that creates conflicting and overlapping processes which make business registration and operation difficult. Multiple pieces of legislation have created different steps of the business registration process, but no piece of legislation cancels the requirements of other, potentially outdated legislation. This phenomenon is not unique to the Philippines and is seen in other Asian countries that emerged from an authoritarian period, such as South Korea, as well as other transitioning economies like Vietnam. In the 1980s and 1990s, new legislation was added to meet the requirements of the Philippines entering the global economy but instead of replacing the old legislation, it merely added another layer of complexity.

Key Laws and Regulations:

Act No. 3883 – Business Transactions (1931)

Act No. 6657 – Comprehensive Agrarian Reform Law (1987)

Act No. 6715 – Labor Code of the Philippines (1989)

Act No. 7160 – Local Government Code (1991)

Act No. 7875 – National Health Insurance Act (1995)

Act No. 8282 – Social Security Law (1997)

Act No. 8424 – Tax Reform Act (1997)

Act No. 8799 – The Securities Regulation Code (2000)

Act No. 9520 – Philippine Cooperative Code (2009)

Act No. 9679 – Home Development Mutual Fund Law (2009)

Act No. 9711 – Food and Drug Administration Act (2009)

Act No. 10068 – the Organic Agriculture Act

Act No. 10142 – Financial Rehabilitation and Insolvency Act (2010)

Act No. 10611 – Food Safety Act (2013)

STARTING A BUSINESS

The ability to start a business in the Philippines can best be understood through a multi-step registration process. This process differs whether one registers as a sole proprietorship, corporation or cooperative.

Sole Proprietorship: A sole proprietorship for an agriculture enterprise is the most used type of business registration. The overwhelming majority of farmers fall into the category. The benefits to the Philippine economy in making this an easy process includes the collection of taxes, bringing people into the formal social safety net, and ensuring easy access to credit. Under the **Business Transactions Act (1931)**, the Department of Trade and Industry (DTI) is legally charged with issuing business names for a sole proprietorship. After receiving permission to use a business name, a registration must occur for the business to operate in the city or municipality where it is located. Under the **Local Government Code (1991)**. LGUs are granted the right to register and tax business activities within their boundaries. Within each LGU, the Act grants various departments the right to regulate specific business activities. Specific to agribusiness are departments that deal with health, fire safety as well as food and drug issues.

Under the **Tax Reform Act (1997)**, the Bureau of Internal Revenue (BIR) has authority to levy taxes on business activities. Registration through BIR registration results in an active Tax Identification Number (TIN). Where appropriate, companies are required to register under the

Social Security Law (1997), the **Home Development Mutual Fund Law (2009)**, the **National Health Insurance Act (1995)**, and the **Labor Code of the Philippines (1989)**.

Cooperatives: Historically, cooperatives have been utilized in the agriculture sector in the Philippines for three reasons. First, during the **1987 Comprehensive Agrarian Reform Act (CARP)** land reform process, cooperatives were formed out of the plantations of large landholders or multinational agribusinesses as land was redistributed. Cooperatives were formed of the workers who were existing residents of these areas under either a common title or individual titles to the land. Second, cooperatives have been formed as a tool by the government to distribute money and technical assistance to groups of farmers. In this instance, cooperatives were formed to access financial, technical or marketing assistance. Finally, multipurpose cooperatives evolved out of more successfully and professionally managed cooperatives. A few multipurpose cooperatives ventured into agribusiness as a revenue diversification stream.

The legal definitions of a cooperative are stated in **the Philippine Cooperative Code (2008)**. Cooperatives have specific legal requirements, such as the establishment of a Board of Directors, as well as having a minimum requirement of 15 members. A cooperative is required to be registered with the Cooperative Development Authority (CDA) to get a cooperative name and ensure proper structures are established. It also must file yearly reports with the CDA and is subject to fines when this does not occur. Physically this must occur in a CDA provincial office or LGU office that houses a CDA affiliate. All other processes for starting a business, such as registering with LGUs and BIR, are the same for cooperatives as sole proprietorships.

Cooperatives are defined by their total assets engaged in economic activity. Micro cooperatives have less than $60,000 in assets, small cooperatives have between $60,000 and $300,000, medium cooperatives have between $300,000 and $2 million, while large cooperatives have anything over $2 million. The size breakdown of cooperatives in the Philippines is as follows: 57.6 percent micro, 25.7 percent small, 13.1 percent medium, and 3.7 percent large. There is no breakdown of cooperative sizes for the agriculture sector, although anecdotal evidence from interviews suggests that the majority are micro and small.[8]

Corporations: Agriculture corporations are generally medium to large-scale agribusinesses that are engaged in vertically integrated production operations or processing for the domestic or international markets. These enterprises are formed as corporations to better access required capital and to take advantage of scale in production and processing. Streamlining corporate registration processes encourages profitable export industries to flourish, allows greater numbers of smallholders and cooperatives to be brought into the value chain, and expands the formal tax base. The legal definitions and registration procedures for a corporation is set forth under the **Securities Regulation Code (2000)**. The Security and Exchange Commission (SEC) is responsible for formally approving a corporation based on a review of the Board of Directors and capital structure for the business. All other processes for starting a business, such as registering with LGUs and BIR, are the same for corporations as sole proprietorships.

[8] http://www.cda.gov.ph/resources/updates/statistics/527-statistics-as-of-december-31-2014.

LICENSING

The **Food Safety Act (2013)** established a regulatory regime of licensing and inspection for all production related activities inclusive of planting materials, animal specimens and research. These regulations are carried out through the various agencies of the DA and DoH. In each case, licensing only occurs after a sole proprietorship, cooperative or corporation has been registered. This means that the economic functioning of the business is contingent upon a series of licenses often outside the formal process of starting a business. For example, the DA is responsible for promoting and licensing organic agriculture through the **Organic Agriculture Act (2010).** Under **Executive Orders No. 165** and **No. 116**, the approval and licensing of fertilizers and pesticides was moved to the Fertilizer and Pesticide Authority (FPA) under the responsibility of the Office of the President.

Under the **Food and Drug Administration Act (2009)**, the DoH, through the Food and Drug Administration (FDA), regulates all food processing for both the domestic market and the international market. This regulatory regime includes the approval of specific new products into the market, as well as certification of production facilities. The FDA's regulatory authority often operates in parallel with other regulatory authorities. The National Food Authority (NFA), for example, is tasked with regulating rice and corn sellers and the Philippine Coconut Authority (PCA) with the coconut industry. In both cases, the FDA is still responsible for regulating the processing of the product into its final form. The Food and Drug Administration Act does not differentiate between processing for domestic and export markets. Businesses interviewed expressed that small processing plants should not face the same scrutiny as large-scale export focused industries. Businesses did not argue for lower domestic versus export standards but instead for a more localized inspection and enforcement of domestic industries. Additionally, under the **Food and Agriculture Advisory No. 2013-014**, the FDA declared genetically modified food safe.[9]

Beyond production, if the sole proprietorship, cooperative or corporation attempts to construct a building or develop new productive lands into a farm then an application must be made with the Department of Environment and Natural Resources (DENR) under **Executive Order 192**. Environmental Compliance Certificates are issued to ensure the project has the potential to mitigate any environmental risk, although agriculture projects not deemed environmentally sensitive can be exempted by obtaining a certificate of non-coverage.

RESOLVING INSOLVENCY

The Philippines passed new bankruptcy legislation in 2009 under **the Financial Rehabilitation and Insolvency Act**, replacing an old 1909 insolvency law. The Act took 10 years to complete, and is focused on making a more orderly rehabilitation or liquidation of financially distressed companies and individuals. The Act is regarded as an up-to-date bankruptcy framework, in line with global best practices. However, in practice, the Act is rarely applied. The application of these laws or the ability of businesses to skirt the laws is the paramount weakness of the system. The inability to close a business due to the physical constraints or the lack of

[9] The use of genetically modified crops (GMO) is widespread in the Philippines versus other ASEAN countries.

government agencies to properly monitor business closure creates an entire set of problems in settling debts. This is discussed in more detail in the next section on Implementing Institutions.

IMPLEMENTING INSTITUTIONS

The actual process of registering a sole proprietorship, cooperative or corporation is a linear, step-by-step process that is slow and unwieldy. A key to understanding the business registration system in the Philippines is that national level registration documents are required at the local level and local level registration documents are required at the national level. In all cases, electronic systems overlap or in many cases run concurrently with paper systems. At the national level, lack of appropriate LGU documents, commonly called a "mayor's permit", stops the registration process. For example, if a corporation has a SEC registration but their mayor's permit has expired then they cannot register employees with the Social Security System (SSS). Likewise, all LGUs do not have the same levels of capacity from a staffing and information technology perspective so the length of time to register at various places differs wildly. Previous reform efforts have resulted in the dual nature of the system, which essentially requires that staff and monetary resources must flow to a dual compliance structure to meet the myriad demands on a business to get licensed and stay in business on a yearly basis. This effectively acts as a double tax on businesses.

Key Implementing Institutions

- Bureau of Internal Revenue (BIR)
- Bureau of Fisheries and Aquatic Standards (BFAS)
- Bureau of Plant Industry (BPI)
- Bureau of Quarantine (BOQ)
- Center for Food Regulation and Research (CFRR)
- Cooperative Development Authority (CDA)
- Department of Agriculture (DA)
- Department of Environment and Natural Resources (DENR)
- Department of Health (DoH)
- Department of Trade and Industry (DTI)
- Fertilizer and Pesticide Authority (FPA)
- Food and Drug Administration (DFA)
- Local Government Units (LGU)
- National Food Authority (NFA)
- National Meat Inspection Service (NMIS)
- Philippine Coconut Authority (PCA)
- Security and Exchange Commission (SEC)
- Sugar Regulatory Authority (SRA)

STARTING A BUSINESS

As mentioned above, the implementing institutions responsible for initially registering an agribusiness varies depending on whether it is sole proprietorship, a cooperative, or a corporation:

Department of Trade and Industry[10]: DTI is legally charged with issuing business names for a sole proprietorship. Physically this must occur in a DTI provincial office or a LGU office that houses a DTI affiliate. DTI has over 100 offices throughout the country. The DTI process includes filling in one form and providing a copy of an identity document. The cost is $4 – $40 and the entire process should take one day. This is a straightforward process that does not include multiple documents or involve the LGU.

[10] DTI, under Project Repeal, has been tasked with reviewing over 17,388 regulations across 8 Government Agencies and Departments to cut red tape. In similar programs in South Korea and Vietnam, business and government collectively saved millions of dollars once the regulatory environment was properly aligned.

Cooperative Development Agency (CDA): Cooperatives are required to register with the CDA. Registration with the CDA must physically occur in a CDA provincial office or LGU office that houses a CDA affiliate. CDA has 17 plus offices throughout the country. The CDA process includes one form, plus copies of seven to nine other documents (some of which must be notarized) and attending a pre-membership education seminar on cooperative management. The cost to register is $10 - $20, plus 0.1 percent of the paid share capital. This is a convoluted process because an economic survey is needed for registration, which is burdensome considering that most cooperatives are small and service the lower end of the economic spectrum. Also, the CDA has the authority to determine if the members and the board need to attend additional training before formal registration. Finally, a cooperative might need a favorable endorsement from a relevant government agency, but this requirement is often unclear.

Security and Exchange Commission (SEC): A corporation must have a proper corporate structure inclusive of directors and shareholders for the SEC to grant registration. This must physically occur in an SEC provincial or LGU office that houses a SEC affiliate. The SEC has over 17 offices throughout the country. The SEC process requires one form, plus four to eight other documents that might be needed depending on the type of corporation. The registration fee is $7. This is also a convoluted process in practice because of the need for several paper documents, which may or may not be clearly listed. For example, the SEC needs a notarized bank certificate to ensure that the initial capital is paid up in an operating bank. Likewise, the SEC needs clearance from other government agencies, the details of which are not included in the general cost or structure of the overall registration. In case of agribusiness, this might include the equivalent of a full environmental impact assessment. After the initial registration step is completed, the following implementing institutions responsible for starting a business are common across sole proprietorships, cooperatives, and corporations:

Local Government Units (LGUs): Currently, there is no overall business registration process for LGUs at the national level dictated through legislation or regulation. Each LGU is granted the authority to establish and tax businesses. No national mandate exists that states clearly what the steps to register a new business are or how each LGU should organize the process. Therefore, the process varies greatly for different LGUs. For example, the Davao City registration process takes one to two days, with a staff of over 40 people dedicated to the registering and renewing business registrations divisions alone. It is one of the fastest in the country. In a smaller LGU, the total staff will not add up to 40 in the entire LGU for all functions combined. In this case, one or two people might be handling all the registrations. It is not possible to establish a common standard beyond broad generalities, which hide true costs. A standard set of documents includes DTI, SEC or CDA registration certificates, a community tax certificate, a barangay clearance, a location clearance, a certificate of occupancy, a building permit, a fire safety or inspection permit, an electrical inspection certificate, a contract or leases, picture or sketch of the site and SSS registration. Each of these steps and the required documentation can be different for each municipality. The total cost of registration is roughly $80 to $120, plus 0.1 percent of total share capital or total revenue of the business. The LGU registration process is a massive constraint to doing business because it is too arbitrary to be completed in a timely manner. Likewise, there is no coordination across LGUs regarding

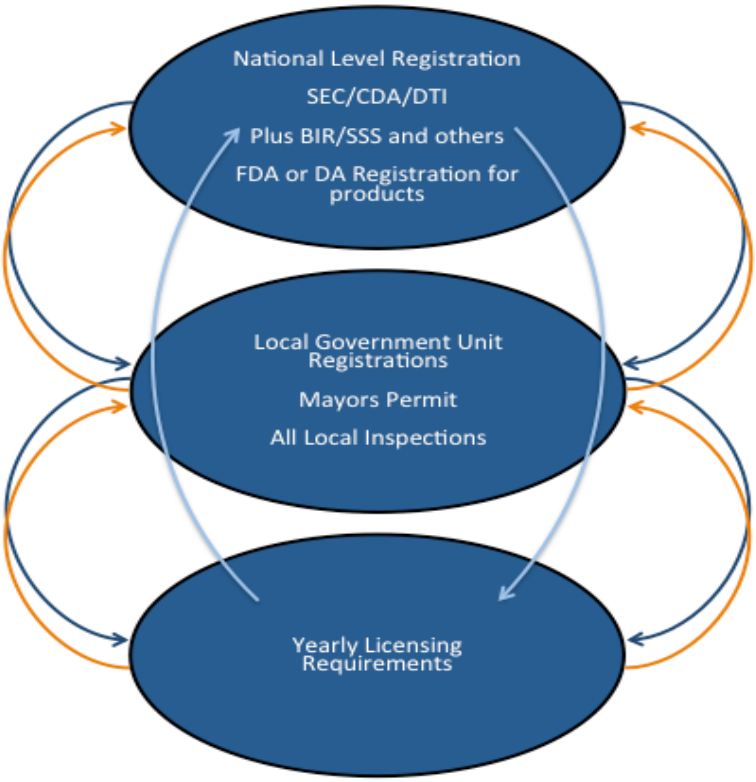
registration. In each physical location where a business has an office, it must separately register with the respective LGU. Thus, the process of registering a multi-locational business at the local level overlaps and occurs multiple times depending on the expansiveness of the business.

Bureau of Internal Revenue (BIR): All companies must register with BIR and activate their TIN. In addition, BIR approves the Book of Accounts and Invoices. Both steps involve BIR approving a physical set of documents. These steps can be done electronically but physical documents must accompany the registration. BIR has more than 115 district offices throughout the country. In practice, a business owner must travel to a BIR office to register. There are two forms needed, one for the TIN and one for the invoices and accounts, plus another three sets of documents inclusive of the mayor's permit. The fee to register is around $10 if everything is submitted on time. The problem with the BIR registration is that at this point, the national and local registration processes collide. A sole proprietorship, cooperative or corporation cannot register with BIR without both sets of registration documents. The BIR registration means the right to invoice people for services. Without this approval, the agribusinesses are not allowed to operate. As mentioned above, businesses must also register with the Social Security, the Home Development Mutual Fund (PAG-IBIG), the Philippine Health Insurance Corporation, and the Department of Labor and Employment. All these entities require more forms to be filled, more supporting documentation, more time and additional expenses.

A key constraint in this system is the dual national and local level approval process; national level registration requires local level registrations and local level registration requires national level registration. At the national level, multiple government agencies are involved in legally registering a business. Any specific government agency's ability to register a business is dependent on the availability of competing resources of paper and electronic systems. Computerization of the registration process at the national level is incomplete and therefore, paper copies of many documents are required along with applications. Finally, at the national level, regional officers in the provinces are not uniformly located or stationed. So, businesses must incur additional cost and time in travel to visit a central location to fulfill these requirements. At the LGU level, the ability to register quickly or efficiently largely depends on the actual physical location of the business. More progressive LGUs like the one in Davao, place great importance on rapid registration and renewal of businesses.

Business license renewals are a yearly process. The dual nature of the systems means that national level registration requires local level registration documents. Stakeholders noted that opening a business was deemed frustrating and took longer than officially stated, but was ultimately doable. The major complaint of agribusiness owners was the yearly business license renewal process and national level registrations. The interviewees agreed that the laws existed to make renewal easy but identified that the major problem was the arbitrary application of the law by the bureaucracy both at the national and local levels. The idea of a bureaucracy that was largely rent seeking as opposed to service oriented was a notion expressed widely and uniformly by all interviewees.

Figure 6: Visualization of overlapping national and regional business registration and licensing requirements



LICENSING

The licensing requirements for operating an agribusiness revolve around inputs licenses for items such as feed, fertilizer, seed stock, animal genetic improvements and chemicals. For businesses that process or export products, additional licenses are required to ensure product safety to package or ship items.[11] The FPA, under of the Office of the President, DA and DoH are the key agencies in licensing agriculture and food processing for domestic and export activities. In each case, registration of products occurs after a sole proprietorship, cooperative or corporation has been registered. This means that the economic functioning of the business is contingent upon a series of licenses that often lie outside the formal process of starting a business, and generally takes anywhere from six to 24 months. The inability to start these registrations until a formal business license is acquired represents a delay in the overall business registration process. This is a noted frustration of agribusinesses, which feel that the process of obtaining licenses is far more critical to the functioning of their business that business registration processes, as these are required for accessing inputs, processing, and exporting products out of the country. Non-compliance with SEC, DTI, LGU, or BIR regulations can result in fines and potential legal consequences, but the opaque nature and uneven

[11] The discussion on sanitary and phytosanitary requirements for export is contained in the Trading Across Borders chapter

application of these processes mean that businesses often find creative solutions to the paperwork requirements or rent seeking by officials. In contrast, the lack of the correct permit from the FPA or DA will stop a shipment of planting materials or chemicals and threaten the economic viability of the business, with no prospect of utilizing workarounds.

The **DA and FPA together** regulate the entire sphere of the agriculture inputs and exports in the production supply chain for foreign or domestic consumption. If a corporation is either selling or attempting to purchase its own inputs, then it must receive an input license. In addition, it might require a **DENR** license. The accreditation of cold storage and warehouses is both a domestic food production issue and an export food production activity for crops like bananas. The DA through the **Bureau of Agriculture and Fisheries Standards (BAFS)** certifies organic production and good agriculture practices (GAP). In this case, organic certifications and GAP are done through an approved set of service providers.

The **Bureau of Plant Industry (BPI)** approves seeds, planting material, plant quarantine and issues sanitary and phytosanitary clearance certificates. It serves both domestic and international constituencies since the issues are uniform to standards and import requirements, veterinary quarantine and stock development. The **National Meat Inspection Service (NMIS)** accredits and registers all meat products. It focuses on both import and export functions and plant operations. **BFAS** covers both aquaculture and fisheries. It is the regulatory body for all imports and exports of aquatic resources. The **FPA** licenses all dealers, products, assemblers, imports and exports of products. Included in this function are emergency use provisions. Several key commodities have their own implementing institutions (i.e. the **PCA** regulates coconut products, the **Sugar Regulatory Administration (SRA)** regulates sugar, etc.). Finally, the **NFA** provides scientific and testing support to the DA in rice and corn.

The **DoH** through the **FDA,** the **Center for Food Regulation and Research (CFRR)** and the **Bureau of Quarantine (BoQ)** regulates all food processing throughout the country. The FDA is the primary institution tasked with approving new products and ensuring processors adhere to these standards. The BoQ issues certificates that food meets certain standards for export. The CFRR is more of a research arm of the DA to ensure that new techniques and methodologies are safe.

The FDA has been granted the statutory authority to regulate all food-processing activities including licensing of products and the certification of processing operations. With roles previously undertaken by the DA, the FDA is a national level authority and FDA staffs operate throughout the country. The FDA issues licenses to operate a processing business and registers individual products produced by a processor (for example, if a processor produces 15 different coconut oils then each product is individually registered with the FDA). A blanket product registration is not issued for an item like coconut oil. In areas like coconut processing where the Philippines dominates the international market, the Philippine standard then serves as the international standard. However, this level of specificity in the registration process means that overall product registration takes a long period and is an added business constraint when trying to export. The FDA also inspects and certifies manufacturing facilities on a yearly basis. This physical inspection and certification occurs at a primary processing level for the entire spectrum of agribusinesses whether it is the small women's cooperative making candy for the local market or a huge agribusiness processing for the US market.

In all cases, the level of details that the FDA undertakes does not make a distinction between products destined for domestic or international consumption. One interviewee said that it can take the FDA 24 months to approve a new product. The general timeframe of 12 to 24 months to approve products was a standard finding across interviews. The overall production facility inspection seemed to occur on a more regular basis and did not seem to be as lengthy. In other countries, the approval of new products by a company generally does not take as long if it is an established product either for domestic or international consumption. To take one example, coconut water is commonly produced in the Philippines. Any new entrant into the market should simply be able to provide certified test results from a lab and get the approval to sell the product - an entirely new certification process should not generally be the norm. However, comparable FDA registration processes in other countries are often nontariff barriers to competition for new or foreign entrants into the market. Additional time would be required to assess if this was the case in the Philippines but the team's assumption is that these processes are not barriers to competition based upon interviews with stakeholders. In interviews, the FDA was viewed as understaffed, as opposed to actively trying to protect any entrenched firm's market share.

Agribusinesses point to the licensing process, both from DA and DoH, as a constraint to doing business. First, the permitting agencies lack adequate staff to fulfill their mandate in a timely manner. While the overall competency of staff is generally believed to be high, the overall workload is viewed as too high, particularly with new international requirements demanded by importing countries including the United States, the European Union (EU), and China. One interviewee said on a lighter note that the FDA could not be bribed to register a product faster, which was a problem for export-focused businesses. Second, agribusinesses in the input sector felt that a more uniform approval process should be established that considers approved products throughout other ASEAN countries. If a chemical is approved for use in one ASEAN member state, then its approval in other member states can be made quicker using a common standard.

There are significant challenges in ensuring the ability of the Philippines to meet new market requirements, develop new products and protect crops against diseases that might attack the agriculture sector. The speed of the agencies to meet these problems will greatly affect the Philippines' ability to defend and expand markets both for existing and new products.

Differences in Business Administration Procedures across Agro-Industries in the Philippines

The national level reporting requirements for businesses appear standard once done. The FDA or DA's oversight of businesses from a processing level was reported as uniform. The major complaint of interviewees was the oversight of the LGUs. The arbitrariness on the local level meant a great deal of added expense and duplicate systems. For example, multiple interviewees spoke of LGUs demanding lease documents for the businesses years after the businesses had been operating in the same location. The lease document had to be accompanied by the owner of the building. In all cases, the interviewees simply did not understand why a new lease was demanded and why the owner of the building had to appear. In all cases, the business owners had to comply with this request, creating an additional cost to the business. The consensus among interviewees was that from a bureaucratic perspective, starting a business was the easy part. Compliance on a yearly basis for smaller businesses was very difficult especially with LGUs. It was typical for the compliance cost for large agribusinesses to be built into their cost of production.

Estimating the Real Time and Cost of Doing Business in the Agriculture Sector

In the Philippines, starting a business takes longer than other ASEAN countries, requiring more time and more government procedures to complete business registration. In the 2017 World Bank Doing Business report, the Philippines was ranked 171 out of 180 countries for starting a business, with an average of 28 days and 16 procedures. However, this assessment found that, despite the low ranking, the World Bank might be underestimating both the time and cost.

The reason for this, and what was not captured in the Doing Business Report, is a duality of systems in the Philippines. The actual cost in time and money to register a new business is far greater because the national and local registration must occur simultaneously and do not follow the same set of standards. Here is an example to register a corporation. First, a corporation needs to register with the SEC, which will issue a TIN and business name. Concurrently with this process, the corporation needs to register with the LGU, which is often a lengthy process without a time-bound period to complete the issuance of the permit. Concurrently again with this process, the corporation needs to register with the BIR. Once, the corporation registers with the SEC, it has 30 days to register with the BIR. If registration time goes beyond 30 days, the BIR has the authority to issue fines. Even if the delay is caused by the LGU, the corporation can still be fined. Since the SEC, the LGU, and BIR systems are not electronically inter-linked, there is no way for the corporation to prove that they are not responsible for the delay.

A business can start generating fines even before the business starts operating if an LGU does not grant a permit on time. The LGU renewal process is a yearly occurrence, is arbitrary and often includes physical inspections of the business — steps that are not time-bound or clearly defined. This lack of process means that time and money cannot be calculated by a business. The process is dependent upon the working styles followed by officials in each individual office that provides the approval. If the LGU staff change, then the process can change as well. In estimating the actual time and costs of doing agribusiness, the anecdotal information from interviews indicates that starting an agribusiness takes roughly three to six months. One interviewee commented that the actual costs were double than what had been estimated in their business plan.

RESOLVING INSOLVENCY

While closing a business, two factors must be weighed: is the business closing because its economic life has come to an end, or is the business closing due to distressing economic circumstances? The answer to the above question is critical to understand how insolvency is dealt with both professionally and legally by each type of agribusiness.

A sole proprietorship in the agriculture sector is usually a small business run by a family. The closure of this business can come from economic conditions or if the owner simply cannot keep the business functioning beyond his/her lifetime. Sole proprietorships rarely engage in insolvency, largely due to three reasons. First, the ability of a sole proprietorship to access the legal system through a formal bankruptcy process is rare in the Philippines, mainly, due to the lack of necessary funds. Secondly, the lack of full national geographic presence of the institutions that are required to be notified, such as DTI and BIR, means added time and cost for the business to travel to such offices. Finally, from a social perspective, there is a general lack of concern about the importance of formally closing a business.

A cooperative is a larger legal entity with more requirements for closing, but insolvency is rare in this case too. Of the 25,000 plus registered cooperatives in the Philippines, only 16,000 officially reported to the CPA in 2015. While the unofficial closure is unreported, it can be assumed that most of these 9,000 remaining cooperatives are not in operation. Again, the legal and administrative costs for closure seem to be either too high or of little concern for the cooperatives to officially close.

A corporation has a harder set of standards to follow in its final closure due to its ability to issue stock and operate as a public company. As with sole proprietorships and cooperatives, interviews reported that specific cases of corporate bankruptcy were not common. Instead, corporations seemed to follow the similar path of officially not closing their operations. A corporation closing due to economic hardship appeared to simply disappear from market life but stayed on government records. The owner(s) can dissolve the business by selling assets and ceasing to conduct economic activity. However, if the proper paperwork is not filed then the business will still exist in the eyes of the government. In this case, failure to file quarterly reports or to pay taxes or social security will trigger fines. At no point is the cooperation stricken from the books. It was also noted in interviews that corporations often used this grey area of closing but not officially shutting down to not pay their workers the correct due benefits. One anecdote that surfaced during interviews was that a corporation informed government agencies that it was formally shutting down, starting the formal closure process with these agencies, when the business was still operational and profitable. The corporation was only closing to avoid paying taxes and workers on all due wages. The same business owners then re-registered an entirely new business entity, which was the same operating company. The government departments interviewed said that such exploitative behavior listed above is a major factor why government keeps non-reporting corporations on the books for years after they fail to report on a quarterly and yearly basis.

The insolvency process suffers from the same problems that the actual registration process does. Beyond the case highlighted above, the insolvency process requires multiple steps to

notify all the key agencies of actual physical closure and ending of economic activities. This entails multiple forms and processes that are ill defined. The agencies are not necessarily programmed to believe a business is closing so the process is onerous at each level. Even while a business is shutting down multiple sign-offs are needed to formally dissolve. Thus, many failed businesses simply seem to skip these last steps of formal closure. After the sale of assets, the business simply disappears unless creditors or shareholders have formally taken it to court.

SUPPORTING INSTITUTIONS

Key Supporting Institutions

- Accountants and accounting firms
- Association of Philippine Coconut Desiccators
- Coconut Oil Refiners Association
- Fixers
- Food and Drug Administration (FDA)
- Lawyers and law firms
- National Competitiveness Council (NCC)
- Philippines Chamber of Commerce and Industry (PCCI)
- United Coconut Millers Association
- Virgin Coconut Producers and Traders Association (VCPTA)

The complex nature of business registration in the Philippines means that supporting institutions play an active role in helping guide agribusinesses through the process. The **National Competitiveness Council (NCC)** was set up as an initiative of the previous administration to push the Philippine economy towards being internationally competitive. The NCC is a new public-private body that has been tasked by President Duterte to assist in decreasing the number of steps to register a business, and is set up to be quasi-independent. Likewise, the **Philippine Chamber of Commerce and Industry (PCCI)** supports the Presidents efforts in simplifying the business registration process. The PCCI is a large umbrella organization and business registration falls firmly under its crosscutting mandate to support business growth.

The business community in the Philippines is well organized and represented through product specific associations, as well as umbrella organizations. One example is the coconut industry. The coconut value chain is so large and diverse, that there are 11 major associations or agencies that represent it, including the **Association of Philippine Coconut Desiccators**, the **Coconut Oil Refiners Association** and the **Virgin Coconut Producers and Traders Association (VCTPA)**. At the top level, they are represented by the umbrella organization of the **United Coconut Millers Association**. The large umbrella association can only focus on those issues that benefit the entire industry like increasing the coconut stock, while the individual associations focus more on niche areas such as marketing and product standards. These small associations are the ones that actively work with the corresponding government agencies to introduce standards.

In interviews, the VCPTA spoke about working with the **FDA** to develop new standards for the virgin coconut oil industry. VCTPA developed the standards and actively engaged the bureaucracy and the Congress to accept these regulations. The standards were passed and now guide the industry. While the larger umbrella organization might have supported these standards, it was the specific industry association that shepherded the process to completion. A similar structure appears to hold in the banana industry where large companies and international exporters focus membership in one association, and smaller producers and even individual provinces or regions form and join other associations.

Lawyers and law firms play a key role in the business registration and licensing processes in the Philippines. The complex nature of registration, through multiple agencies and two levels of government, means that mistakes are often made. Likewise, the reliance on both paper and electronic submissions is often confusing. In interviews with individuals registering a corporation, for example, a lawyer was always hired to guide this process. The expense of hiring a lawyer or a law firm was simply considered by many interviewees as the cost of doing business. Also, lawyers were often used in the renewal of business licenses or the permitting process. The primary reason for hiring lawyers to help businesses at this stage is mainly to due to the arbitrary nature of LGUs that might hold up a business license indefinitely, a common complaint by stakeholders. The use of lawyers at the permitting stage appeared to focus on ensuring documentation was compliant with not only Filipino law but with any international statutes or requirements in an importing country.

Accountants and accounting firms play a key role in both the registration with BIR initially, as well as the longer-term process of complying with both the BIR and LGUs. In interviews with BIR and individuals, it was found as a common practice to utilize an accountant to help with the books of account and invoice approval. Likewise, the use of electronic accounting systems made it all but impossible to not hire an accounting firm to install the system and work with BIR to get it approved for usage. The lack of capacity to use simple, off-the-shelf accounting software packages makes the accounting function difficult for small businesses. In the case of the United States where most small businesses utilize these packages, accounting is made easier to manage without always having to hire accounting staff. This is a constraint as physical ledgers increase operational costs for a small business.

The use of individuals (i.e. **fixers**) to navigate the complexities of business administration processes is common and may seem like a market-based solution to the problems at hand. However, a businessperson is at the mercy of a fixer over the long-term once utilized. The systemic problem is not solved; rents are generally paid and the legal status of registration remains a problem. One interviewee shared their experience about hiring a fixer around a fire inspection issue with the LGU. Even after incurring a substantial expense, the problem was only solved for one year before it resurfaced during the next inspection period. The long-term solution for this business owner was to utilize a competent NGO to fulfill the function of the fixer and to ensure that the mayor of the LGU knew what was happening. Unfortunately for many businesses, such routes do not exist.

SOCIAL DYNAMICS

President Duterte came to office stating that the need to reform the licensing and renewal processes for businesses was critical to making the Philippines open for business. This election promise was followed up through early administrative action. In August 2016, a JMC was signed between the DTI, Department of Interior, Department of Information and Communication Technology and the National Competitiveness Council (NCC). This JMC requires all business permits and licensing systems at the city and municipal level to streamline using new revised standards. These new Business Permits and Licensing Systems (BPLS) standards mandate two days to register a business and one day to renew a business license at the local level. LGUs are required to use the same print and electronic forms, as well as need only two

signatures on the form. This show of political will on behalf of the President leaves open the possibility that the Philippines can move rapidly to change the business registration process.

RECOMMENDATIONS

Impact: High
Feasibility: High
Affordability: Medium

1. Support the President's JMC to lessen steps in LGU registration and expand the focus to ongoing compliance burdens: The President is supporting a push to streamline registration across all LGUs. MCC should work with key municipalities to pilot training and IT solutions. The City of Davao seems to be at the forefront of this type of initiative and has developed key local solutions to the issue. While not every municipality has the resources of Davao[12], many other municipalities also do not have the volume of businesses registering or renewing permits. The training, streamlining and speedy processes adopted at Davao could be studied and replicated at a national level if found to provide the necessary solution.

Impact: High
Feasibility: High
Affordability: Medium

2. Work with the DA and the DoH to ensure a streamlined process for product approval in key value chains: After selecting value chains for the Compact, MCC should set up a program of technical assistance and training for the DA and DoH to speed up the overall licensing requirements for identified key commodities. New products need to reach market in no less than three months. The ability of industry to speed products to market is a key component of an export strategy and the ability to be a first mover in a new space. At present, the added time and expense to export or develop new markets acts as disincentive to businesses. In agriculture, there is an added cost in that goods are perishable and have limited shelf life. To promote agriculture as an export industry, a fast certification process must be developed to nurture the new agriculture exports. This speeding up or streamlined process will allow the Philippines to continually seize market advantages. A streamlined process built for one commodity could be replicated for other commodities.

[12] Davao City is the second largest city by population in the Philippines and one of the most progressive cities when it comes to business registration. The Office of the Major has supported the computerization of registration that allows for both processes to flow smoother, as well as real time management information on where a form sits in the system. To comply with the JMC, Davao is looking at ways to speed this process even more by further combining steps and making payment processes more straightforward.

REGISTERING PROPERTY

Stable and clear ownership rights are critical to encouraging the productive use of and long-term investment in agricultural land, and are also an important element in accessing credit through land as collateral. Land ownership, land use, and land administration all present potential issues, particularly when land administration duties are scattered across various national, regional, and local government institutions. The issue of customary land tenure can also pose a fundamental and complex challenge in many developing countries. Customary land systems are often opaque, informal, and vary by region or tribe.

Formal property rights over agricultural land and coastal waters in the Philippines are administered under a complex, confused, cumbersome, and expensive system. The system is prone to difficulties in creating and transferring formal title, overlapping claims, prolonged dispute resolution, and residual gender bias. In rural areas, an informal system of access and use rights prevails, which is largely opaque to outsiders, mostly undocumented, and far below the standards expected of modern economic transactions. These conditions serve to limit investment by agribusinesses and rural agricultural entrepreneurs, and thus limit the productivity of the land. This system is the heritage of centuries of colonial rule, the adoption of colonial institutions by the independent Republic, and the interplay of competing interests within the democratic state. No wonder then that reform efforts since the 1990s have been stymied by legislative and institutional roadblocks. As the current administration has adopted land administration reform as a priority agenda, there may be finally the political impetus to push through legislative and institutional reform.

This chapter covers property rights relevant to Philippine agriculture, namely: alienable and disposable (A&D) lands, both private and public. It also tackles access and usufruct rights in inalienable lands, as well as coastal waters, specifically covering seaweed-farming permits.

LEGAL FRAMEWORK

Perhaps more so than any other AgCLIR chapter in the Philippines, the legal framework for registering property must be understood within a historical context.

Spanish Colonial Period - Beginning in the 15th century, Spanish colonization imposed the Regalian doctrine, in which all lands in the country were placed under the ownership of the King of Spain. Formal land rights were conferred by the King, and administered by his representative, the Governor-General. Governance and religious conversion of the natives was facilitated by forced resettlement of the population into clusters around the Catholic churches, which were mostly established by monastic orders. The modern landscape of the *cabecera* (capital), *poblacion* (town), *barangay*, and *sitio* (sub-village), were shaped by this program. Individuals and even whole barangays who opted out, fled or kept to the hinterlands.[13] The resettled population continued farming, but only Spaniards, local elites and later the educated, could gain access to the Spanish system of land acquisition. This became the root of vast inequalities in

[13] Abinales, P.N., and D. Amoroso. 2005. State and Society in the Philippines. Rowman and Littlefield Publishers.

the modern era as the elites acquired formal title over vast areas cultivated by commoners. Customary tenure meanwhile continued to prevail in the uplands among those now known as indigenous cultural communities or indigenous peoples.

Key Laws and Regulations

Constitution of the Republic (1987)

EO No. 209 – Family Code (1998)

PD 27 – Emancipation of Tenants (1972)

PD No. 1529 – Property Registration Decree (1971)

RA No. 386 – Civil Code (1949)

RA No. 3844 – Agricultural Land Reform Code (1963)

RA No. 6657 – Comprehensive Agrarian Reform Law (1987)

RA 7160 – Local Government Code (1991)

RA 8371 – Indigenous Peoples' Rights Act (1997)

RA No. 9700 – Comprehensive Agrarian Reform Program Extension with Reforms

RA No. 9710 – Magna Carta of Women (2009)

American Colonial Period - Following defeat in the Spanish – American War, Spain ceded the Philippines to the United States. The United States then proceeded to introduce the American legal system into its new colonial territory, including the Torrens title system, then in use in eight American states.[14] In addition, the Cadastral Act of 1913 provided for titling and adjudication of title by means of survey and registration. It identifies judicial process (i.e. order of court) as the means for modification of registered titles, and provides for both judicial and administrative process for constituting original title from public A&D land. To break the power of the monastic orders and address egregious land grievances, the colonial government subjected monastic lands to a distribution program with compensation.

The modern Philippine Republic began in 1946 upon its independence from the United States. Soon after, it enacted the **Civil Code of 1949**, which stipulated rules and regulations governing contracts (including the marriage contract), property relations, and action for quieting of titles. The population continued to push outward towards the uplands and new settlement areas, especially in Mindanao. Harsh inequalities in the settled areas fomented agrarian unrest, peaking in the Huk rebellion of the 1940s and 1950s. As under the early days of American rule, the Republic initiated a land reform program in 1963 under the **Agricultural Land Reform Code**. The Act authorized expropriation of agricultural lands above 75 hectares for transfer, with just compensation to qualified cultivators, namely: the landowner's relatives, existing tenants, and other farmers. The recipient of awarded land shall pay annual amortization for 25 years at 6 percent interest, and recipients could not transfer their land except by hereditary succession, for a ten-year period. The Act also abolished share tenancy, imposed a ceiling on land rent (25 percent of the average harvest of the preceding three cropping years, adjusted by any capital investments by the lessor); and established security of tenure. It created the Land Authority, predecessor of the DAR, to implement the operational aspects of the program. It also established the LANDBANK, to provide the financial services for land expropriation and transfer.

From Independent Republic to Martial Law **-** In 1971, then-President Marcos declared Martial Law, ushering in authoritarian rule. Several Presidential Decrees (PDs) sought to enact

[14] The eight states adopting Torrens title at the time were: California, Colorado, Illinois, Massachusetts, Minnesota, New York, Ohio, and Washington. Source: Holl, J., P. Rabley, M. Monacelli, and D. Ewan. 2010. The Earthern Vessel: Land Records in the United States. Presented at the Property Registration Industry Assocation Annual Winter Confernece, Washinton DC.

dramatic social and economic reforms. The **Property Registration Decree** consolidated previous laws on land registration. It affirmed the exclusive jurisdiction of the courts in original registration of titles, to hear petitions on these titles, render judgments, and make title modifications. The Decree reorganized the Land Registration Commission, predecessor of the Land Registration Authority (LRA), and assigned it several functions, including: 1) issuing decrees of registration pursuant to judgments of courts; 2) supervising all Registers of Deeds; and 3) verifying and approving subdivision, consolidation, and consolidation-subdivision survey plans of titles. Another key reform was the **Emancipation of Tenants Decree (1972)**, a more radical version of the Agricultural Land Reform Code. It covers rice and corn lands, reduces the retention limit to seven hectares, and shortens the amortization period to 15 years. It was largely successful in breaking up large rice and corn estates.[15]

Restoration of Democracy and the Fundamental Law - The People Power Revolution of 1986 deposed President Marcos, restored democratic rule, and led to a new **Constitution of the Republic** in 1987. The new government retained all the laws and most of the systems then prevailing, except when explicitly set aside by the Constitution, and by subsequent laws and amendments. The Constitution identifies property as a basic right. It also affirms that the use of property bears a social function. The Constitution assigns state ownership over lands in the public domain (public lands), waters, and natural resources. Of these, only agricultural lands may be alienated by the state. The Constitution restricts land ownership and acquisition to Filipino citizens or Filipino-owned corporations (minimum 60 percent Filipino ownership).

Following the mandate of the Constitution, Congress enacted several laws and regulations to further strengthen land reform. In 1987, the **Comprehensive Agrarian Reform Law** established the Comprehensive Agrarian Reform Program (CARP)**.** CARP provided for the redistribution of private and public agricultural lands to ARBs. Through CARP, ARBs were awarded a certificate of land ownership, to be amortized over a 30-year period. CARP also set a five-hectare limit to agricultural landholdings. Awarded lands may not be transferred for a period of ten years after its award, unless by inheritance or to another ARB. CARP was subsequently amended in 2009 by **CARP Extension with Reforms (CARPER).**

The **Local Government Code (1991)** devolves to LGUs the management of land use, the collection and disposal of property tax, and regulation of near shore waters. The **Indigenous People's Rights Act (1997)** recognizes native title over ancestral domains and ancestral lands of Indigenous Cultural Communities / Indigenous Peoples. It also provides for formal recognition of native title in the form of Certificate of Ancestral Domain Titles or Certificate of Ancestral Land Titles, which are transferable only within the same indigenous group. The **Family Code (1988)** provides for property relations between husband and wife, involving community of property, and conjugal partnership of gains, while **Magna Carta of Women (2009)** provides for full gender equality in the treatment of women, including in property laws and relations.

[15] Otsuka, K. 1991. Determinants and consequences of land reform implementation in the Philippines. Journal of Development Economics 35(2): 339–55.

The Legal Framework for Coastal Waters in the Philippines

Until the Local Government Code of 1991, access to coastal waters for seaweed farming was governed by **Fisheries Administrative Order 146 (1983)**. Under this order, a license to culture needed to be obtained from the BFAR of the DA. Permits may be granted to Filipino citizens, duly registered partnerships, associations, corporations that are at least 60 percent-owned by Filipino citizens, or registered cooperatives.

Individuals may be issued an aggregate of up to a hectare farm lot, while cooperatives or companies may require up to a 30-hectare plot. Seaweed farm lots must be separated from each other by a minimum of 60 meters. A license to culture lasts for ten years, subject to renewal, and permit fees are very modest.

Permits for use of coastal waters were devolved under the Local Government Code in 1991. It is likely however, that LGUs are patterning their licensing after procedures of the national government. The quality and enforcement of regulations, however, is highly uneven. In some areas, there are reports of unregulated seaweed farming, especially in areas where coastal populations are growing, LGU administration is feeble, and other unregulated activities are widespread (such as informal coastal settlement). On the other hand, there are LGUs such as in the municipality of Calatagan, Batangas, which impose a maximum size of farm lot of 0.2 hectares to ensure quality of coastal waters and to provide access opportunities to more farmers. Even in Calatagan though, there have been reports of seaweed farmers' rights not being adequately protected (i.e. being denied access to foreshore areas by a wealthy beach resort owner) and release of contaminated water adversely affecting seaweed growth and quality.

IMPLEMENTING INSTITUTIONS

The Philippines has of total 30 million hectares of land. Of this, 15 million is classified as forestland, 14.2 million is classified as A&D lands, 0.8 million hectares is unclassified. A&D lands are released from the public domain with the overall consideration that they are not needed for forest purposes. Non-forest purposes include agriculture, town sites, settlements, and industrial areas. A&D lands are only those that can be tilled and privately owned.

Key Implementing Institutions

- Bureau of Internal Revenue (BIR)
- Community Environment and Natural Resources Office (CENRO)
- Department of Environment and Natural Resources (DENR)
- Department of Justice (DOJ)
- Land Administration and Land Management Bureau (LMB)
- Land Management Services (LMS)
- Land Registration Authority (LRA)
- Land Titling Computerization Project
- National Commission of Indigenous Peoples (NCIP)
- Provincial Environment and Natural Resources Office (PENRO)
- Registry of Deeds (RD)

LAND REGISTRATION

A&D lands are titled as parcels registered with the **LRA** under the **Department of Justice (DOJ)**. The functions of the LRA are: 1) maintaining the central repository of records involving titled lands, as well as registered transactions involving untitled lands, 2) issuing certificates of title upon court order; 3) issuing transfer certificates of title and maintaining title history or record of transactions; and 4) providing technical assistance to courts and other agencies with respect to land registration.

There are 168 **Registry of Deeds (RDs)** under the LRA, which maintain land titles. Historically, land titles were held in paper records, and were often lost due to fire, flood, and other disasters. Since 20008, land titles have begun to be digitalized through the implementation of the **Land Titling Computerization Project**. Currently on its fourth phase, there are now 152 computerized RDs, in which titles are held in electronic form in the central registry database. By 2019 it is expected that all 11.5 million manually issued titles will have been converted into e-titles.[16]

While the record system is now generally accessible and searchable, reliability is another question. RDs reportedly do not retire old records, so often names may be associated to various records in the database, which refer to the same property.[17] In the early phase of computerization, the LRA was implementing a central verification process to identify technical defects such as open parcels, wrong area, wrong location, duplicating or overlapping parcels. However, LRA opted to terminate this vetting process, citing difficulty in obtaining documents and data.

The process of transferring titles involves the following steps summarized in Figure 7 below. For agricultural lands, there is an additional clearance to be obtained from DAR to certify that the land does not fall under any of the restrictions for transfer of agricultural land under the Comprehensive Agrarian Reform Act.

[16] Ortile, R. 2015. Updates on the LTCP and the implementation of eTitling Standardization Program. LRA, Manila.

[17] Eleazar, F. et al. 2013. Improving land sector governance in the Philippines. Land Governance Assessment Framework (LGAF) Final Report. World Bank, Washington, D.C.

Figure 7: Steps in the Transfer of Title

Step	Activity	Duration	Cost ($ or % of property value)
1	Obtain a certificate true copy of title from the RD to check for existence of title and encumbrances	4 days	$4.22
2	Prepare notarized deed of sale and related documents	1 day	1 - 2%
3	Obtain tax clearance certificate (LGU Treasurer's Office) and certified copy of tax declaration (LGU Assessor's Office)	1- 2 days	$7.36
4	File for and pay for the capital gains tax and documentary stamp tax with an authorized agency bank (BIR Forms 1706 and 2000)	1 day	6% for CGT 1.5% for DST
5	Obtain the Certificate Authorizing Registration (CAR) from BIR	1 day	$2.32
6	Pay the transfer tax to the LGU Treasurer's Office	1 day	0.75% + $2.52
7	Apply for transfer of title with the RD	10 days	Various fees
8	Obtain new tax declaration from the LGU Assessor's Office	2 days	No fee

Source: LAMP2. 2010. Study on Registration of Subsequent Land Transactions

Despite the advantages of formal registration of titles, it is often the case that subsequent transactions of titled land are often not registered. A study of subsequent transactions on titles and certificates of land ownership revealed that more than half of those under new owners had unregistered transactions. This was attributed to a lack of familiarity with the process, too many requirements, lack of knowledge of the need to register or where to register, the presence of red tape, and the high cost of back taxes.[18]

LAND MANAGEMENT

The **Department of Environment and Natural Resources (DENR)** is the national agency in charge of the environment and management of natural resources. This includes all land that is not otherwise devolved to LGUs. The DENR has regional branch offices, as well as offices at the provincial and sub-provincial levels, respectively the **Provincial Environment and Natural Resources Office (PENRO)** and the **Community Environment and Natural Resources Office (CENRO).** The DENR oversees the issuing of free patents for original titles to A&D lands. The process of applying for free patent titles is shown in Figure 8.[19] These are official timelines and limited to processing with DENR (i.e. processing time for supporting documents in other offices is omitted).

For mass titling programs covering public A&D lands, the DENR under AO 2007-09 prescribes the *systematic adjudication* process. This is a government-initiated process of determining the validity of claims of ownership of land and other rights and interests in land, on a locality basis and progressing barangay by barangay, with the end of issuing patents to all untitled land.

[18] Nicer, D. 2015. DENR Integrity Program. Presentation made at the Asian Development Bank, 27 May.

[19] The process flow assumes application is for patents below five hectares; from five to ten hectares, the order of approval of free patent is done at the regional DENR office; above 10 hectares, approval is done by the Secretary at the Central Office.

Figure 8: Steps in the Issuance of a Free Patent for Agricultural Land

Step	Activity	Duration	Office
1	Pre-application Provide documentation showing identity of land, such as lot number, survey card, tax declaration, or deed of sale. Obtain certified true copy of approved survey plan, technical description, or survey map Provide tax declaration and tax receipt, and certificate of residency from the Barangay Obtain Certificate of Status of Land	0.5 days	CENRO
2	Filing of application with supporting documents Certified True Copy of approved survey plan or cadastral map Copy of technical description Affidavit of two disinterested persons attesting to occupancy Certificate from Regional Trial Court of no pending case Certification of Zoning from LGU Affidavit from applicant of no other applications filed Government-issued ID	1 hour	CENRO
3	Assessment and payment of fees	25 min	CENRO
4	Conduct of field investigation	3 days	CENRO
5	Preparation and posting of notice	16 days	CENRO
6	Order of approval	0.5 days	CENRO
7	Transmittal of documents to PENRO	2 days	To PENRO
8	Review of documents; Order of Approval of Free Patent	0.5 days	PENRO
10	Transmittal letter to RD	10 min	To RD

Source: DENR (2016). Citizen's Charter Process No. 1. www.denr.gov.ph

The DENR's **Land Management Bureau (LMB)** oversees cadastral surveys[20], while the regional **Land Management Services (LMS)** maintains the cadastral map and oversees approving specific land surveys.[21] As of 2010, about 55 percent of the country's land area was covered by approved cadastral surveys. This left about 14 million hectares across 881 municipalities and cities, which were partially surveyed or unsurveyed. The reason for this backlog is lack of funds for conducting surveys, as cadastral surveys cost up to $60 per hectare. To close this gap, beginning in 2010, the government undertook a Cadastral Survey Program covering all areas of the country without approved surveys. As of 31 March 2016, outside of the ARMM, approved surveys accounted for 82 percent of total land area. The imminent completion of the program does not mean that the cadastral map of the country is trouble-free. Even if an area is already classified as having an approved survey, in some areas (especially those whose

[20] A cadastral survey refers to a survey conducted to delineate political boundaries and to determine the boundaries of all parcels within an entire municipality or city for land registration, land titling, and other purposes.

[21] A land survey refers to a survey the determines and delineates the form, extent and position of a specific tract of land.

surveys were done before 1941), such approved surveys may be unreliable, or incomplete, as war had destroyed or damaged land records.[22]

LAND ACQUISITION

DAR is the lead agency for implementing CARP. DAR targets private agricultural land above five hectares[23], as well as non-private lands under its jurisdiction. DAR employs various modes of acquisition, namely: voluntary offer to sell, voluntary land transfer (now defunct), and compulsory acquisition. From 1972 to 2015, DAR distributed 4.7 million hectares of land to about 2.7 million ARBs. Including public A&D lands, a total of 7.3 million hectares of land has been distributed. Based on 2015 estimates, there remains a balance of 636 thousand hectares of private agricultural land for distribution and 410 thousand hectares of land for compulsory acquisition. The steps involved in compulsory acquisition under DAR are detailed below:

There have been numerous implementation problems with DAR's redistribution efforts. From the outset, DAR was stymied by the poor state of land records, effectively bringing the entire process to a halt. Of the remaining balance of over 600,000 hectares, 64 percent is still stuck at step one of the process. Problems with documentation include outdated records (i.e. titles still in the name of the original deceased owner, titles not reflecting subdivision among heirs, or titles sold without undergoing reregistration), missing titles, overlapping titles, multiple titles, spurious titles, and erroneous technical descriptions or surveys. The modification of existing titles or reconstitution of missing titles requires a court order, the processing of which is extremely tedious. There are also delays associated with the activities of non-DAR agencies. In 2015, there was 60,000 hectares submitted by DAR to other agencies for further processing still pending.

Despite passage of the CARPER deadline, DAR is still able to proceed with distribution of landholdings for which Notices of Coverage has been served. As of November 2016, there are about 67,827 hectares for which Notices of Coverage have yet to be issued. Covering these lands will require another law after CARPER.

[22] Llanto, G., and M. Rosellon. 2013. An assessment of the effectiveness and efficiency of the cadastral survey program of the Department of Environment and Natural Resources. Discussion Paper No. 2013-24. Philippine Institute for Development Studies, Quezon City.

[23] The Comprehensive Agriculture Reform Program set the rights of persons to own or retain, directly or indirectly, any public or private agricultural land, the size of which shall vary according to the factors governing a viable family-size farm (such as commodity produced, terrain, infrastructure, and soil fertility), but in no case shall exceed five hectares.

Compulsory Acquisition of Land under DAR involves the Following Steps:

1. Research of documents (i.e. collation of land records, copy of title, tax declaration)
2. Ocular inspection and projection
3. Issuance of Notice of Coverage served to the landowner informing him or her of formal proceedings for acquisition of land for redistribution.
4. Receipt of response (if any) from the landowner – includes petition for exemption, or nomination of beneficiaries, and delineation of retention area.
5. Identification of beneficiaries – involves information campaign, receipt of applications, posting of preliminary list, screening, posting of Final Master List, and oath taking before a judge.
6. Joint field investigation of DAR and LBP – produces land valuation worksheet, memorandum of valuation, conduct of lot allocation and subdivision survey, preparation of survey plan, submission of survey plan to DENR for verification and approval.
7. Issuance of Notice of Land Valuation, Order to Pay, and actual payment via deposit to account of owner by LBP, who issues Certificate of Deposit.
8. Certificate of Deposit is transmitted by DAR to RD, who cancels landowner's title and issues Republic of the Philippines title.
9. DAR issues Certificate of Land Ownership Award and transmits to RD for registration.
10. Beneficiaries are physically installed on awarded land.

The **National Commission Indigenous Peoples (NCIP)** was created under the Indigenous Peoples' Rights Act as the primary agency to recognize, protect, and promote the rights of indigenous people. Indigenous people are estimated to account for 14 percent of the population and are classified into 110 distinct ethno-linguistic groups, occupying about 7.7 million hectares of ancestral domains or lands. The Indigenous Peoples' Rights Act created an Ancestral Domain Fund for the delineation of ancestral domains. The annual budget of the fund has been around $10 million. Unfortunately, this has been far from sufficient and the NCIP suffers from insufficient funds and organizational capacity. Nonetheless as of 2015, a total of 158 certificates of ancestral domain titles and 258 certificates of ancestral land titles have been issued, covering 4.3 million hectares. Another 557 applications covering 2.6 million hectares are still pending.[24]

Another problem is the persistence of collective titles. About 46 percent of the total land distributed by DAR was in the form of collective title. Of these, 76 percent were awarded to beneficiaries not in active producer organizations, and therefore not qualified for collective title provision under the Comprehensive Agrarian Reform Law (Section 25). Subsequent subdivision efforts have whittled collective titles down to 18 percent, however, poor land records have again stymied the completion of this balance. In addition, there are operational problems in identifying ARBs awarded land in the 1990s, and many collective titles are in land not under the authority of CARP. Many are no longer cultivating land, some have died, some have transferred their holdings, etc.[25]

The **BIR** of the Department of Finance collects the capital gains tax, the documentary stamp tax, and the estate tax. The BIR treats the "capital gains tax" as based solely on the gross sales price, or zonal values, whichever is higher. Together with other taxes and fees, this raises the

[24] De Vera, D., and S. Libre. 2015. Indigenous Peoples in the Philippines: a background. Philippine Association for Intercultural Development (PAFID). In: Philippines. Lok Niti 19/3, ANGOC, Quezon City.

[25] De los Reyes, V. 2016. End of Term Report of Secretary Virgilip de los Reyes: For the term from July 2010- June 2016. Department of Agrarian Reform, Quezon City.

cost of transferring title to about 10 percent of market value, as opposed to the international benchmark of only 1 percent.[26] Thus, the high cost of capital gains tax is cited as the main reason for non-registration of land transactions. Transaction costs go up further in the case of transfer by inheritance, in which case the transaction is subject to an estate tax at a rate of 20 percent at the highest bracket. The estate tax, however, contributes to only 0.1 percent of BIR collection, as estate filers account for only 7 percent of deaths.[27]

Local Government Units: Under the Local Government Code, LGUs are given powers to determine broad categories of land use (agricultural, residential, commercial, etc.) in the form of comprehensive land use plans. LGUs are also empowered to collect and use the real property and transfer tax. After decentralization, there have been repeated criticisms of the deteriorating quality of public services provided by LGUs. As mentioned in the previous chapter on business administration procedures, all LGUs are not created equally from a staffing and information technology perspective. Human resources for planning and administration at the local level are meager, especially for fourth to sixth class municipalities, and there is a mismatch between devolved function and their ability to generate local revenues. The efficiency of property tax collection is low, because of political resistance to updating assessment values.[28]

[26] Eleazar, F. et al. 2013. Improving land sector governance in the Philippines. Land Governance Assessment Framework (LGAF) Final Report. World Bank, Washington, D.C.

[27] Boo, D. 2011. Situationer on estate taxation in the Philippines: issues and prospects. NTRC Tax Research Journal 23(4): 1 – 24.

[28] Manasan, R. 2005. Local Public Finance in the Philippines: Lessons in Autonomy and Accountability. Philippine Journal of Development: 32(2): 31-102, and Esguerra, J. 2006. Rural Growth and Development Revisited: Governance Issues and Reform Imperatives for Rural Growth. WB Report No. 36691. World Bank, Washington, D.C.

The Problem of Overlapping Mandates for Land Administration Systems in the Philippines

The norm for land administrations systems is that registered titles are fully reflected in and consistent with the official cadastral map. This is not always the case in the Philippines as three agencies (DAR, DENR, and NCIP) are mandated to undertake distribution of land. There are several reasons for this:

Under the Property Registration Decree (1971), the LRA is empowered to verify and approve survey plans of existing titled land. It, therefore, maintains its own cadastral index maps based on its own surveys. This information, however is not shared with the LMB. Likewise, RDs typically do not hold copies of the LMB maps.

The LMB cadastral maps are mostly not updated to reflect later subdivision or consolidation of parcels, even though LMB approves the surveys that precede these transactions. The LMB is not updated about registration of titles corresponding to approved surveys.

Neither agency has official information about land use (e.g. whether a titled property or surveyed lot is in agricultural use). This information is presumably with the LGUs in the form of tax declarations, zonal ordinance, and real property tax payments. Only the zoning ordinance ends up with a government agency, namely the Housing and Land Use Regulatory Board. None of these agencies or government units share information.

Another agency, the NCIP, has been given the mandate to conduct land surveys covering ancestral domains. Consistency between the instruments and accompanying projections has not always been achieved. Overlaps between instruments issued have been encountered.

The Joint DAR-DENR-LRA-NCIP AO No. 01 (2012) provides for procedures to follow in case of contentious areas, i.e. areas that are the subject of conflicting claims among DAR, DENR, and NCIP. This is a salutary first step but is far from resolving the gamut of issues related to overlapping mandates.

SUPPORTING INSTITUTIONS

Supporting Institutions

- Alternative Law Groups (ALG)
- Congress for People's Agrarian Reform
- Court System
- Geodetic Engineers of the Philippines
- Integrated Bar of the Philippines
- Katarungang Pambarangay
- Lawyers and law firms
- National Center for Legal Aid
- NGO Coalition for Agrarian Reform and Rural Development (ANGOC)
- Philippine Partnership for the Development of Human Resources in Rural Areas (PhilDHRRA)
- Surveyors

Court System: The court system of the Philippines is divided into lower courts (namely the municipal and regional trial courts) and higher courts (namely the Court of Appeals; the Court of Tax Appeals, the Sandiganbayan, and the Supreme Court). The court system is a mechanism for obtaining original title of land; amending of land titles (except transfer of ownership); and resolving land disputes. However, the parallel between judicial and administrative jurisdiction in the issuance of title has resulted in overlaps on the ground. There are numerous cases in which parcels have been issued a patent by the DENR to one owner and by judicial decision to a different owner, with both titles registered with RD. Furthermore, the judicial system of the Philippines is widely acknowledged as slow and prone to delays. The backlog for the entire system for all types of civil and criminal cases was estimated at 971,837 in 2010. Each judge on average tries three cases a day.[29] In case of land disputes, more than nine-tenths of cases elevated to the Supreme Court take more than 20 years for final resolution.[30] A survey of lawyers found the top-ranked reasons for prolonged court procedure include a congested court calendar,, overuse of motions of consideration or postponement; insufficient number of judges and courts, the absence of judges, prosecutors, lawyers, witnesses, and corruption among judges and/or judicial personnel.[31]

Katarungang Pambarangay: Prior to formal hearings in the formal justice system, certain types of cases may first be heard through an informal, community-based dispute settlement mechanism, known as the *Katarungang Pambarangay* (Barangay Justice System). Its coverage includes real property disputes, alteration of boundaries, and removal, pledge, or sale of mortgaged property. Since 1993, prior hearing at the *Katarungang Pambarangay* for relevant cases has been made mandatory. In 2011, a total of 461,834 disputes were referred to the Katarungang Pambarangay, or which 77 percent were settled.[32]

Private lawyers or law firms: Lawyers are required in notarization (done by a notary public), as well as in cases of dispute over property claims and taxation; many of them are engaged through law firms. There are numerous lawyers and law firms throughout the country. However,

[29] Albert, J. 2011. The Philippine Criminal Justice System: Do we have enough judges to act on filed cases? Beyond the Numbers. PSA, Quezon City. http://nap.psa.gov.ph/beyondthenumbers/2013/06132013_jrga_courts.asp#_ftn2.

[30] Eleazar, F. et al. 2013. Improving land sector governance in the Philippines. Land Governance Assessment Framework (LGAF) Final Report. World Bank, Washington, D.C.

[31] Action Program for Judicial Reform (n.d.) A survey of private legal practitioners to monitor access to justice by the disadvantaged. Swiss Agency for Development and Cooperation, Department of Justice of the Philippines, and United Nations Development Programme.

[32] Albert, J. 2011. The Philippine Criminal Justice System: Do we have enough judges to act on filed cases? Beyond the Numbers. PSA, Quezon City. http://nap.psa.gov.ph/beyondthenumbers/2013/06132013_jrga_courts.asp#_ftn2.

their services are expensive relative to average income of petitioners; the cost of hiring a lawyer averages from $200 to $1000, beyond the reach of the average farmer. In fact, the **Integrated Bar of the Philippin**es has set up a **National Center for Legal Aid** to assist indigents in their legal requirements. In addition, **the Alternative Law Groups (ALG)** is a coalition of 20 legal resources non-governmental organizations that adhere to the principles and values of alternative or developmental law. These organizations have distinct programs for developmental legal assistance that is primarily concerned with the pursuit of public interest, respect for human rights and promotion of social justice. Unfortunately, awareness of such services is low among the disadvantaged.[33]

Surveyors: Professional surveyors in the Philippines must be geodetic engineers licensed by the Geodetic Engineers of the Philippines. The Geodetic Engineering Act (1998) prohibits the conduct of official land surveys other than by licensed geodetic engineers. As mentioned previously, high cost of survey is cited as a reason for non-registration of titles. Land surveys require precision instruments and prohibit the use of low cost options such as hand-held GPS receivers. High precision surveys done by private Geodetic Engineers still undergo review in government – occupying about half the staff of land-related offices in the regional DENR. It typically takes more time to verify survey documents than conducting the fieldwork. Even when surveys are conducted, non-compliance is rampant. Due to an absence of qualified staff, government agencies are forced to allow verification of the work of Geodetic Engineers by non-licensed personnel in government.[34]

NGOs and People's Organizations (POs): have been active in land administration and land tenure issues in the Philippines, especially in rural areas. In the 1970s and 1980s, the peasant struggle for land rights were mainly conducted by means of insurgency under the Communist Party of the Philippines. The return of democracy in 1986 saw the emergence of various progressive organizations advocating land rights issues for peasants. An early coalition was the **Congress for People's Agrarian Reform (CPAR)**, which pushed for an agrarian reform program, ultimately culminating with CARP. Collaboration between NGOs, POs, and government in land reform, land administration, and land use has been mainstreamed in various laws and regulations. CARP and CARPER, for example, recognizes conferment of CLOAs to farmer collectives. Among the oldest land rights NGOs in Asia and active in the Philippines is the Asian **NGO Coalition for Agrarian Reform and Rural Development (ANGOC)**. Established in 1979, ANGOC is a regional association of 15 national and regional networks of NGOs engaged in food security, agrarian reform, sustainable agriculture, participatory governance, and rural development. It is headquartered in Quezon City. Specific to the Philippines is **Philippine Partnership for the Development of Human Resources in Rural Areas (PhilDHRRA)**, a network of 68 NGOs involved in community organizing, capacity-building, research, and advocacy in rural Philippines, spanning 71 provinces.

[33] Action Program for Judicial Reform (n.d.) A survey of private legal practitioners to monitor access to justice by the disadvantaged. Swiss Agency for Development and Cooperation, Department of Justice of the Philippines, and United Nations Development Programme.

[34] Lopez, E. 2013. Geodetic Engineering Roadmap. Presentation at the 2013 National Directorate Convention Program, Geodetic Engineers of the Philippines.

SOCIAL DYNAMICS

Informal land markets: Customary tenure was the default land rights arrangement before the imposition of a formal legal system. The alienation between ordinary farmers and the formal land system implies the persistence of a modern form of customary tenure. A study of a barangay Kuya in South Upi, Maguindanao offers a unique lens on the surprisingly well-organized informal market, which likely prevails in other parts of the country. The barangay occupies 6,515 hectares of land, where many farmers offer their farm parcels as pledge for the return of money. The lender obtains access and usufruct rights if the money is not repaid. Farmers unable to pay their debts forfeit their rights entirely.

Transactions were outside the legal system, but documented and legitimized by involvement of the barangay government. The documents were written in Filipino or English, in the format of a legal affidavit, where parties intending to borrow money or receive payment swore to ownership of certain parcels. The barangay kept one copy of the signed pledge or waiver. Pricing varied very widely. In 2008, for parcels of size 2.5 hectares, the amount paid for a waiver ranged from $100 to as much as $2,600. It is likely though that smaller amounts may have been associated with a history of unpaid debt, or that lands were in less favorable locations. Buyers or lenders are typically residents of a village or a nearby town, or otherwise have familiarity with the barangay (i.e. mobile traders).[35]

Disputes and open conflict in resource rights: The dysfunctional land administration system has created a climate of contestability of land rights. As parties are frustrated with formal dispute resolution, the dispute frequently descends to open conflict. A common battleground is Mindanao, where competing land claims are often the consequence of contradictory rulings by authorities with overlapping mandates. The land reform program, especially in Maguindanao and Lanao del Sur, became an occasion for title irregularities under the voluntary-offer-to-sell scheme. DAR unfortunately failed to verify the identity of claimants and authenticity of land titles, resulting in open conflict between actual owners and CARP beneficiaries. Finally, in these conflict-prone areas, the wider political struggle is partly driven by historical land-related grievances, which the central government has so far failed to address.[36]

At the village level, customary tenure is not entirely able to extinguish land conflict. In the case of barangay Kuya, land-related conflict was frequent, owing to non-involvement by heirs or other interested parties in the original transactions; death of the original party; unclear boundaries; counter-claims to the property; undocumented transactions; and fraud. The problem was aggravated when the transaction was not recorded in a document (hence most likely the reason why documentation has become the norm despite the lack of legal recognition). Some villagers complain that barangay officials may sometimes acquire interest in a dispute owing to ethnic, family, and financial ties.[37]

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[35] Gulane, J. 2013. Informal land markets and conflict in Maguindanao. In: Lara, F., and S. Schoofs. Out of the Shadows: Violent Conflict and the Real Economy in Mindanao. International Alert, London.

[36] IOM-WB. 2013. Land disputes in conflict affected areas of Mindanao. Report of the Joint World Bank – International Organization for Migration Scoping Mission May 2013.

[37] Gulane, J. 2013. Informal land markets and conflict in Maguindanao. In: Lara, F., and S. Schoofs. Out of the Shadows: Violent Conflict and the Real Economy in Mindanao. International Alert, London.

Gender and land rights: The country's laws strongly affirm the principle of gender equality and women's rights. However, some of the major land tenure instruments still tend to favor title holding by men (see Figure 9). Likewise, private land titles are in practice issued in the name of the husband. In a few provinces (covered under the LAMP Project), titles are more detailed as to whether acquisition is through the husband or the wife. Unfortunately records for private land titles are not gender disaggregated. Nonetheless considerable progress has been made, especially with the enactment of the Magna Carta of Women, and the CARPER. Land titles and now the certificate of land ownership routinely includes the names of both spouses.

Figure 9: Holders of Various Land Tenure Instruments, by Sex

Holder, Instrument, and year	Women	Men
Individuals, Emancipation Patent, 2011	56,723	348,505
Individuals, CLOA, 2011	574,449	1,186,772
PO members, CBFMA, 2012	67,520	1,550,660
Right holders, CADT, 2010	725,818 (men and women)	

Source: Panganiban, I., and E. Roque. Women's land rights in the Philippines: a scoping study.

However, notwithstanding its progressive provision on community of property, the Family Code contains a provision (Article 96) that in cases of disagreement over administration and disposal of property, the husband's decision shall prevail, subject to recourse by the wife to the courts, which must be exercised within five years. The Magna Carta of Women provides for an executive initiative to propose amendments to the Family Code. Despite several bills filed to repeal the offending provisions, Congress has yet to affirm the principle of absolute equality. The Family Code provision (and subsequence reluctance of Congress) is a window into the cultural and social attitudes in Philippine society towards women. The articles reflect the traditional view that the husband's decision should prevail, under the prejudice that men are wiser and possess better judgment.[38] This is discussed in more detail in the Social and Gender Dynamics chapter.

RECOMMENDATIONS

1. Establish a single land administration agency, consolidating the functions of land titling, surveying, and adjudication: The single land administration agency shall take on the task of maintaining the registry of land titles and projecting titles into a single map to ensure in law and in space. Procedures to amend registered titles shall be simplified, eschewing judicial process in favor of administrative or quasi-judicial processes. The land administration agency shall be given the authority to undertake these administrative or quasi-judicial functions. The agency will absorb land-related personnel and functions of the LRA, DENR, and NCIP. One version of this proposal is to transform DAR into an agency called the Department of Land Administration that will issue certificates of title, approval of surveys, land distribution, and adjudication of all land matters (except zoning). As the current government

Impact: High
Feasibility: Medium
Affordability: Medium

[38] PCW. 2013. Ensuring women's equal rights in marriage and family relations: removing inequalities in the administration and enjoyment of community property or conjugal partnership under the Family Code. Policy Brief No. 7. Philippine Commission on Women, Manila.

has adopted land administration reform as a priority agenda, there may finally be the political impetus to push through legislative and institutional reform. The creation of a single land administration agency can also greatly facilitate the establishment of a one-stop shop (OSS) for land registration, which would greatly reduce the time and transport cost impeding property registration by smallholders. Further coordination with other government agencies at both the national (including BIR) and LGU level would be needed, but as experience of past reform efforts has shown (i.e. LAMP2), such coordination is not feasible in the Philippines context and may be less suited as an intervention under the second compact.

Impact: Medium
Feasibility: Medium
Affordability: High

2. Adopt tax reforms towards reducing the cost of transferring real property, including condonation of onerous charges: The capital gains tax is currently based on gross property value, contrary to the original concept of being a tax on income due to net capital gains. The tax code can be amended to restore the original formula for capital gains. In return for conceding deduction of original capital cost and following the precedent of the tax rate on interest income, the rate for net capital gains can be raised to 20 percent. This will help minimize the short-term revenue erosion from the reform. The deductions should be adjusted to account for inflation (perhaps inferred from changes in zonal value) and the cost of land improvement.

Impact: Medium
Feasibility: Medium
Affordability: Low

3. Encourage as many LGUs as possible to adopt systematic titling programs. Systematic adjudication and systematic titling approaches, have demonstrated high acceptability and workability in diverse and often traditionally problematic settings. Systematic titling has now also won official endorsement in all the key agencies. The experiences of past LGUs that have adopted this can be used to motivate others to scale up the adoption of systematic titling. To support this effort, technical assistance to support capacity to implement and sustain effective and efficient land and resource management systems at local and national levels can be provided. Adoption of administrative reform measures will require considerable inputs to build capacity and systems among LGUs, community stakeholders, and the national government, both at headquarters (i.e. use of information technologies and connectivity) as well as branch offices. Technical proficiencies for surveying, land records maintenance and analysis, coastal resource management, as well as social development capacities for dispute settlement, needs to be built at the local level.

ENFORCING CONTRACTS

There is a strong correlation between the confidence that businesses have in available commercial dispute resolution systems and the strength of a country's economy. The expectation that courts and other tribunals will enforce the law with efficiency, transparency and fairness encourages good-faith business dealings and further discourages breach of agreements. Of course, enterprises must be willing to enter contracts in the first place. In several countries visited in past AgCLIR diagnostics, a widespread 'culture of contracts' simply did not exist, particularly in the agriculture sector. Written contracts were rare; where they existed, they were not taken seriously and were frequently ignored without consequence. Side-selling of agricultural products, for example, was commonplace, even with contract farming arrangements in place. The impact of these informalities was grave, with far fewer transactions among individuals and enterprises between those that are not fully acquainted than might otherwise be possible.

The Philippines' formal and informal framework for contract enforcement has developed a breadth and complexity that mirrors the country's diverse agricultural economy. Farms range in size from tiny subsistence family parcels, to mid-sized cooperatives owned by ARBs, to professionally managed plots of several thousand hectares connected vertically into global supply chains. Almost all these farmers in these structures have relationships defined by written or informal contracts that cover the land they till, the inputs the purchase, the credit they take, the labor they hire, the goods they sell and other aspects of their various value chains where the farmers are involved.

At the top of the food chain, well-represented large business entities enter scrupulously-detailed commercial contracts and agreements with each other, with exact specifications on the roles and responsibilities of each party, certification standards, methods of inspection and verification, terms and conditions of delivery and payment, inherent risks, penalty and mitigation clauses and payment methods. These kinds of contracts and agreements bind supermarket chains, fast food companies and branded food suppliers to larger agri-business growers, traders, transporters and processors in predictable relationships that keep their shelves and restaurants filled with known, corporate products. While the occasional cooperative or group of small suppliers may break into this market, this kind of contracting is more capital intensive, knowledge intensive and requires precision farming, where the poor, women and the marginalized have only a small role to play.

On the other end of the spectrum, outside of the commercial contract food chain, contractual disputes over smaller contracts between villagers are taken to village or "barangay" committees for settlement, before taking those to the next level of courts. The Philippines has been doing a good job in resolving local disputes by adopting time-tested procedures that involve minimum formal systems and give legal recognition to pre-existing, ancient, family-oriented village justice systems. The barangay system serves as a critical, accessible, low cost and effective forum, which is managed quite well with few concerns raised about gender sensitivity and a high level of satisfaction, in marked contrast to the formal court system.

LEGAL FRAMEWORK

Key Laws and Regulations

Philippine Constitution

RA No. 386 – Civil Code of the Philippines (1949)

RA No. 876 – The Arbitration Law (1953)

RA No. 7160 - Local Government Code (*Katarungang Pambarangay* – 1991)

RA No. 9285 – Alternative Dispute Resolution Act (2004)

Rules of Civil Procedure (1997)

Revised Rules for Small Claims Cases (2015)

Rule of Procedure for Small Claim Cases (2009)

Special Rules of Supreme Court on Alternative Dispute Resolution (2009)

Speedy Court Trial System

The Philippines has a well-developed formal legal system that provides a solid basis for creating agribusiness contracts, and enforcing them both in court and through arbitration. The formal legal system, including the **Philippine Constitution (1987)**, the **Civil Code of the Philippines (1949)**, and the **Rules of Civil Procedure (1997)**, reflects the country's rich history, and includes elements of traditional justice, Spanish civil law, American common law, the Philippines' own robust jurisprudence and lawmaking, and Sharia Law in some Muslim areas.

However, this system is heavy with procedure and technicality, and is more affordable by the rich and powerful. The World Bank's 2016 Doing Business Rankings[39], for example, found that it takes 842 days to enforce a contract judicially in the Philippines. This compares poorly with other ASEAN and East Asian countries, where enforcement average is 560 days.[40] Standard commercial contracts are non-transparent; highly procedural litigation overwhelms the court system; and English is the primary formal language used in the legal system, highly diminishing its accessibility to the non-English speaking local population. As mentioned in the previous chapter, the backlog of unresolved cases in the court system was over 900,000 in 2010.

Although Philippine courts have been recognizing arbitration clauses as binding since the 1920's, the legal framework for, and process of, arbitration continues to evolve. Philippine laws from both 1953 (**The Arbitration Law**) and 2004 (**The Alternative Dispute Resolution Act**) provide legal support for alternative dispute resolution (ADR). The ADR system was given a further boost in 2009 by the **Special Rules of the Supreme Court on Alternative Dispute Resolution,** which has brought the Philippines formal arbitration procedures up to international standards. This arbitration system is mostly used for high dollar value, commercial cases.

At the other end of the formal legal framework are small claims courts. Small claims courts were authorized in the Philippines in 2009 through the **Philippine Rule of Procedure for Small Claims Cases**. The process is modeled after the United States small claims system, and was developed with assistance from the American Bar Association. The system has proven popular for enforcing contracts, and in 2015, the **Revised Rules for Small Claims Cases** doubled the jurisdictional authority level from $4,847 to $9,691.[41]

[39] www.doingbusiness.org

[40] It is worth noting that local attorneys have noted that the World Bank may overstate the time it takes to enforce disputes, as Philippine law provides for a phase during which disputes can be resolved in mediation, while the World Bank's methodology simply adds this phase to the total length of time

[41] http://www.philstar.com/metro/2015/12/20/1534408/sc-revises-rules-small-claims-courts

There have been some recent reforms to the legal framework, including expanded e-Court and small claims systems, both substantially supported by USAID, and the **Speedy Court Trial System** that may, eventually, decrease the time it takes to enforce some contracts. The e-Court system is still just in initial testing phases, mostly in the national capital and a few major cities. New Supreme Court rules are trying to address delays through reforms to cut down on procedural roadblocks, such as placing limits on frivolous appeals, enforcing required time frames for trials and settlements and being less lenient with attorney or witness absences. It is difficult to establish if these will cumulatively have the desired efficiency effect, but at least efforts are currently being made.

Parallel to this formal legal system, are the more informal and effective local ADR mechanisms. Local contract disputes are largely settled at the barangay level. A village based justice system was first established in 1978 by Presidential Decree. This was repealed and replaced in 1991 with the Local Government Code (*Katarungang Pambarangay*), which requires that all disputes between residents of the same city or municipality be brought to the barangay first for conciliation and mediation, before they are brought before regular courts.[42] Contract disputes within the Chinese-Filipino community can be mediated using their own community associations.

Finally, while labor contracts were largely beyond the scope of this chapter, it is worth noting the importance of agreements with both laborers and unions to the agribusiness economy, and their special status in Filipino jurisprudence. While much of Filipino contract law and drafting may follow patterns familiar to American laws, its labor laws, like its agrarian reform laws, are very different and far more protective of workers. The Supreme Court has recognized the employer-employee relationship as one imbued with the public interest. Thus, agribusinesses are under constant attack for "contractualizing" workers – that is making them contract workers, often through third party companies, to avoid creating a legally required and protected employer-employee relationship.

IMPLEMENTING INSTITUTIONS

Larger commercial agreements or contracts between sophisticated parties are usually enforced formally through the court system, or, if agreed, through formal arbitration or mediation. The Philippine judicial system includes a hierarchy of **Municipal Circuit Trial Courts**, **Metropolitan Trial Courts**, **Municipal Trial Courts, Regional Trial Courts**, **Courts of Appeal** and the **Supreme Court.** Original exclusive jurisdiction at the trial court level can depend on the subject matter, nature and amount of the claim, or both. There is a specialized court to resolve corruption claims, specialized tax courts and some specialization in intellectual property cases.

Key Implementing Institutions

- Barangay dispute resolution committees (*Lupon Tagapamayapa*)
- Formal trial and appeal courts
- Small Claims Courts
- Philippine Mediation Center (PMC)
- Philippine Dispute Resolution Center (PDRC)
- Singapore and Hong Kong International Arbitration Centers

[42] American Bar Association. 2012. Access to Justice Assessment for Philippines – Mindanao.

Litigants in contract suits are typically encouraged to go through court-assisted mediation. This is a voluntary process conducted under the auspices of the court by referring the parties to the **Philippine Mediation Center (PMC)** for the settlement of their dispute. Through this process, litigants are assisted by a mediator accredited by the Supreme Court.[43] If court assisted mediation through the PMC fails, litigants in contracts disputes can then be required to go through pre-trial conciliation, mediation or early neutral evaluation with a **Judicial Dispute Resolution Judge**. If that fails, then the case can proceed to trial with another judge.[44]

The **Philippine Dispute Resolution Center (PDRC)** is the main local non-profit offering recognized arbitration services, and tends to focus on larger, commercial cases.[45] Larger Manila based businesses, especially foreign owned businesses, established the PDRC as a voluntary organization to improve the legal framework for arbitration. There have been no agricultural related arbitration cases decided by the PDRC. This is not surprising as although the PDRC is very interested in providing more training for attorneys and potential arbitrators in regional cities, it is constrained by funding. Many commercial contracts in the Philippines include arbitration clauses that subject contract enforcement to either the **Singapore or Hong Kong International Arbitration Centers**. It is not known if agribusiness contracts have been enforced in those venues.

For **small claims courts**, the process is informal, mostly takes place in Tagalog and lawyers are prohibited from appearing in person. An early survey of results noted that most plaintiffs were women, though no recent data is available to ascertain if this is still the case. The process is regarded by stakeholders as efficient and cases are resolved in an average of 76 days. Typically, the judges urge parties to settle, and then issue a decision only if they cannot. Settlement discussions, hearings and a decision can take place and find completion within one or two days.

Some agricultural cooperatives use the small claims process to resolve contractual disputes. Banks and other lenders have been heavy users of the small claims system for debt collection, though this was not initially expected.[46] Judges are given wide discretion under the law to make equitable decisions in small claims, and can set aside interest payments they deem usurious. Although there is no usury law, recent appeals court decisions have set aside contracts with 65 percent annual interest, and imposed in its stead a 12 percent rate. Small claims could be useful to rein in some of the more abusive finance contracts entered with agricultural input suppliers or traders (as is discussed in more detail in the Competing Fairly chapter).

As mentioned in the Legal Framework section, a well-functioning justice system exists at the village level. **Barangay dispute resolution committees** (known as ***Lupon Tagapamayapa*)** are composed of respected people in the village, who take oaths to decide cases fairly and without conflicts of interest. Simple, comprehensible procedures are followed, and local

[43] Philippine Judicial Academy web page, http://philja.judiciary.gov.ph/pfaq.html, accessed Nov. 21, 2016.

[44] Ibid.

[45] Other than the construction sector, for which there is a dedicated arbitration procedure and service.

[46] In fact, lenders' fondness for small claims courts led the American Bar Association to recommend that the jurisdictional level only be raised by 50 percent, rather than doubled for fear that the process could be taken over by lenders.

languages are used. Disputes between people living in the same village must go through the barangay system before they can be brought to court, thus providing an interface between the formal and informal systems. These are critically important in settling smaller contract claims between residents of the same village, and most cases that went through the required barangay system are resolved to the parties' satisfaction without going to court.[47] The team includes a recommendation to study expanding this from villages to a "market town" system for agricultural disputes, to help resolve contract disputes between farmers and cooperatives, area traders, lenders and suppliers.

SUPPORTING INSTITUTIONS

Typically, the sole focus of the enforcing contracts chapter in the AgCLIR methodology is on how parties to contracts can be made to keep their word. The sanctity of contract is an implicit assumption. During the study, issues surrounding basic fairness of how agribusiness contracts are entered with smallholders and cooperatives came to light. The fundamental inequalities that underlie Filipino society were apparent in the contract contexts we discussed, creating unequal and potentially unenforceable agreements. The AgCLIR methodology does not invite considering the details or merits of agriculture agreements. However, in the Philippines, the Country Compact Team expressed a strong interest in having the study consider what could be done to improve the income, productivity and agribusiness linkages of smallholder farmers. This "bottom up" smallholder point of view then became an important part of the study's working perspective.

Key Supporting Institutions

- Bar associations
- Business associations
- Department of Agrarian Reform (DAR)
- Department of Agrarian Reform Adjudication Bureau
- Donor funded projects
- Judicial training institutes
- Large agribusiness
- LANDBANK / Commercial lenders
- "Sikhas" other informal sponsors
- Presidential Agrarian Reform Committee

The team then expanded the normally strict focus on the existence and efficiency of contract enforcement mechanisms, to look at underlying issues of fairness in contracting. Filipino law, like American law, discourages contracts of adhesion and judges can overturn contracts if one signatory was under undue influence, clearly did not understand the agreement, signed in breach of a fiduciary obligation, or on other equitable grounds. The process of agrarian reform has created a complicated backdrop for contracts with ARBs and ARB cooperatives. Multiple interviewees expressed concerns about widespread practices that lead smallholder farmers to sign adhesion contracts in English language that they could not understand, often on behalf of nominally independent cooperatives that were in fact investor-run. These were made in probable violation of multiple laws, going against the letter and spirit of agrarian reform laws and regulations.

Agribusiness Venture Agreements (AVAs) between ARBs and foreign investors for plantation crops are subject to special review. AVAs have their own adjudication process in case of dispute. DAR is responsible for reviewing, approving, and monitoring all AVAs. AVAs without DAR approval can be deemed null and void. However, in practice, when companies do present

contracts to DAR for approval, it can take years to get approval. Thus, companies very seldom show their agreements to DAR and DAR does not void them. The **Department of Agrarian Reform Adjudication Bureau (DARAB)** has authority to resolve disputes involving AVAs, and can rule on petitions to revoke them, while the **Presidential Agrarian Reform Committee (PARC)** was set up in part to resolve larger contract claims about agrarian reform properties. PARC has a 'pocket veto' to rule on the legality of long-term, larger commercial land leases to ARB property. When President Duterte held the first PARC meeting in a decade earlier this year, three leases totaling over 1,000 hectares were annulled. The setting aside of these contracts may be a preview of further actions under the new government, since the new DAR Secretary strongly backs a drastically revised "genuine" agrarian reform law. If passed, this could put in question the contractual and legal basis for much of large scale Filipino agriculture. Even if the law does not pass, there may be ample grounds to question many contracts entered with and for ARBs, and perhaps other smallholders and their cooperatives. This could be especially problematic for foreign and large local investors who have thrived under lopsided agreements and captive cooperative structures that are an "end run" around agrarian reform. Some promising disruptive alternatives are being developed, discussed below, that merit further study and possible emulation.

LANDBANK and other commercial lenders. As discussed in the Getting Credit section, formal lenders and their needs define much of the contractual framework, and decide how and when to enforce their claims. Thus, farmers often choose to take the risk of a 60 percent informal loan to a nine percent a formal loan arrangement, as discussed in the box below. The networks of "*sikha*" sponsors play a critical supporting role for smaller cooperatives and smaller farmers. These sikha traders maintain on-going relationships with their clients, providing inputs and the knowledge how to use them, credit, access to markets and other services under informal or lightly formalized agreements. Many of them are ethnically Chinese, and are linked into complex, non-legalistic, sometimes centuries-old networks of family and clan rewards and obligations that have helped Chinese business people thrive so remarkably throughout Southeast Asia. At higher levels, for larger investments, there is of course more formality, but the true systemic strength lies in the "bamboo roots" of inter-connections, reputation and honor that keep words kept. These organic supporting institutions may take even more from small holders than formal agribusiness or formal lenders, and could be even more resistant to change, but without them, much activity would grind to a halt.

Formalized **business associations**, **bar associations** and **judicial training centers** all provide support to contract creation and enforcement through enabling information exchange among members, establishing good practice guidelines and ensuring professionalism. As noted, bar associations can play a supportive role in spreading the use of arbitration. The judicial training institute was instrumental in helping get small claims courts up to speed quickly.

Donor funded projects of various kinds have adopted specific topics, and at times made great progress with them. The **American Bar Association Rule of Law Initiative** was, as noted above, instrumental in helping get both small claims and E-Court processes off the ground.

The Unifrutti Transformational Business Partnership Model

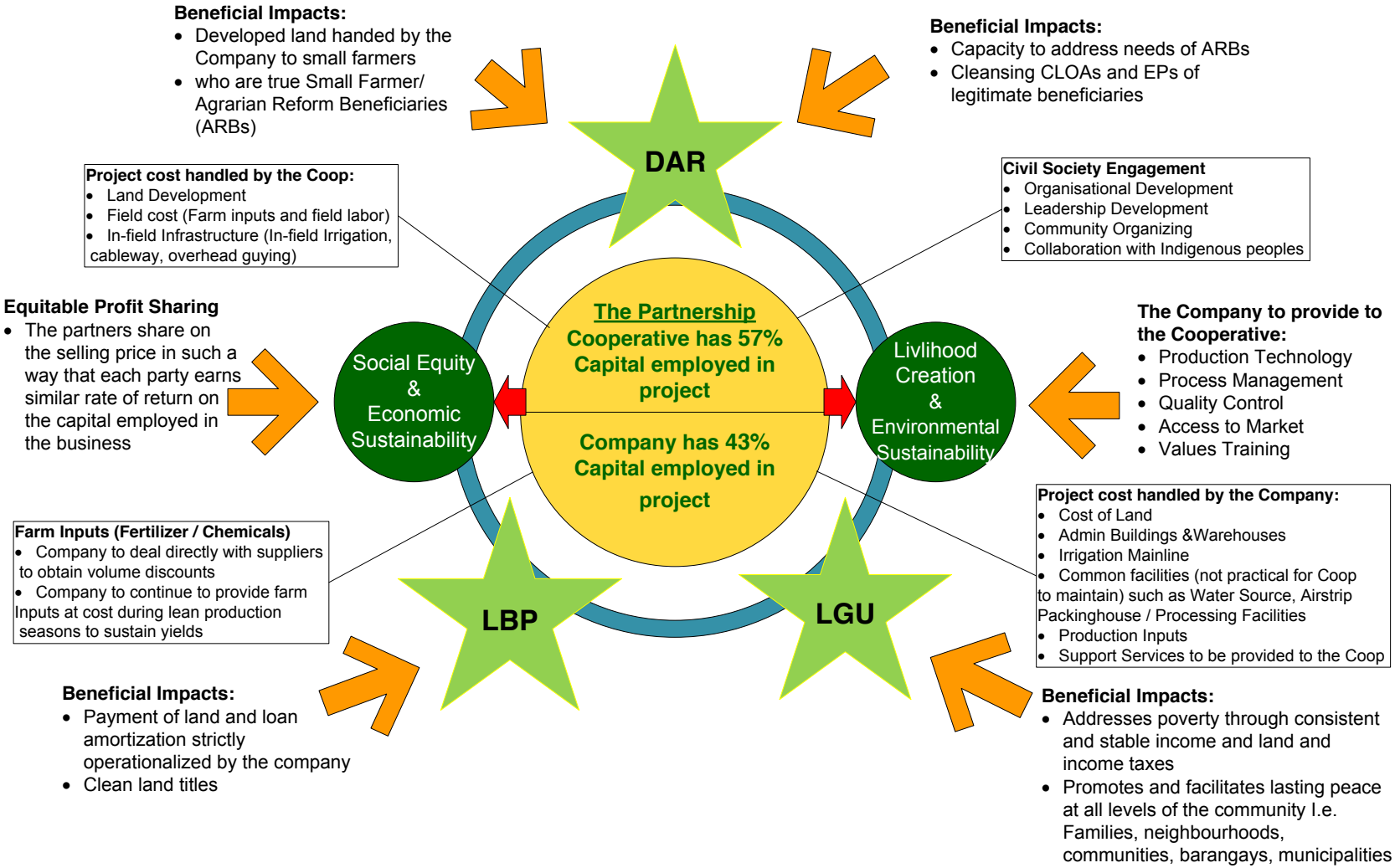
Chiquita Unifrutti in Mindanao is one of the major players in Filipino large-scale plantation agriculture. It has adopted a values-driven and disruptive business model it calls 'transformational business partnerships'. Unifrutti is working actively to encourage other plantation farmers to adopt this model, in lieu of the usual lease or growership arrangements, and could use help to get traction.

Unifrutti is particularly interesting for its work over the past 20 years in the Moro Islamic Liberation Front controlled Bangsomoro area, growing fruit, creating jobs, earning money and fostering peace successfully in a conflict area, which all others have seen as a no-go zone. It is playing a key role trying to mobilize World Bank / Japanese International Cooperation Agency commitments of over $250 million.

In multiple conversations in Mindanao, Unifrutti was mentioned as paying farmers substantially more than other growers, who reportedly collude to set low prices for the bananas they buy. The Unifrutti transformational business partnership model brings professional management and financial reporting to the cooperatives it works with, by having investors handle all input purchases and cooperative bookkeeping in a transparent way. Cost and revenue sharing are designed to motivate farmers, and provide them substantially higher incomes than under the usual lease arrangement. The approach is deeply oriented towards encouraging environmentally sustainable, community oriented, long-term and mutually beneficial investment. Contracts are kept quite simple, non-legalistic and non-adversarial, as befits the relationship-building model.

The president of Unifrutti, John Perrine, credibly reports having good relationships with the current administration and current head of the DAR, who supports the model Unifrutti has pioneered. A graphic summarizing Unifrutti's Transformation Partnership Model is included on the next page. If the government continues to question the validity of current agribusiness contracts, the Unifrutti model might provide a viable and acceptable alternative other may wish to continue. Additional research into the Unifrutti model is needed to get a better sense of its viability and attractiveness as an alternative to the standard large plantation approaches.

Corporate – Cooperative Transformational Business Partnership Conceptual Framework
Creating Value to Multiple Entities



Developing Block Farming in the Philippines

Small farm size is a major problem in the Philippines, severely limiting farm income and productivity. The Philippine government has recently started to address the problem using block farms under the Sugarcane Development Act of 2015. The problem is especially acute in sugar, where very small farmers dominate, the optimal farm size is 58 hectares and protective tariffs are under pressure. Cocoa and other crops also suffer from small farm inefficiencies. Under block farming, farmers owning different parcels, not necessarily next to each other, agree to work as one unit for all purposes for the covered crop.

As part of the Sugarcane Roadmap, the Swedish International Development Agency is spearheading a program to bring small farmers together in block farms of at least 30 hectares within a two-kilometer radius, without changing ownership. The block farmers will jointly purchase, set standards, coordinate planting, harvest, borrow, sell and otherwise try to act as one, cohesive economic unit as much as possible. The model is showing some initial promise in sugar, and may be worth trying to expand to other crops.

Block farming presents thorny issues of how contracts are created and enforced. A 2016 paper on 'Improving the ASEAN-Competitiveness of Philippine Smallholder Sugar Farmers Lessons on Contract-Enforcement and Coercion-Constraining Institutions' by Jane Lynn D. Capacio and Virgilio de los Reyes, considers in detail how informal, organic social contracts work in block farms, and how to push the limits of this informality to expand block farming to include people outside of a trusted social network, where peer pressure is an effective enforcement mechanism. It also looks at how and when formal enforcement can be used. This promising approach, still in its infancy in the Philippines, merits continued close study in sugar, and testing in cacao to begin to address the country's urgent need to aggregate production against a backdrop of small-sized farms.

SOCIAL DYNAMICS

As mentioned earlier in this chapter, agrarian reform has created a complicated legal background for enforcing contracts relating to land covered by the reform program. The social dynamics of agrarian reform share that complexity. Agrarian reform banned most holdings larger than five hectares, with transitional exceptions and forced distribution of land. After 30 years of the reform, these exceptions look like permanent temporary solutions. As noted, only around 25 percent of plantation farms are based on ARB's and the others, for various reasons, escaped reform.

The theory of change behind the redistribution of land via agrarian reform was, and remains, to take what was a deeply unfair concentration of land wealth, distribute it to millions and thus create a thriving class of peasant entrepreneurs with tiny parcels, on which a modern and prosperous agricultural economy could be built. Successes of consecutive governments have been measured by their ability to turn this theory into change. The reality, however, has often thwarted the theory of change, and will likely continue to do so, but the system and politics are too deeply invested in agrarian reform to scrap it. Agrarian reform in the Philippines has a life of its own, and a deep hold on a national psyche of millions of land tillers or even those a step away from them.

The reality of the needs of large-scale, capital intensive, modern, export oriented, plantation agribusiness is not compatible with the egalitarian intent of the agrarian reform movement, and with the conflicting demands of its legal context. Cooperatives have represented a work around for larger businesses that require dynamic, commercially viable, large-scale plantations for commodity crops. However, the weak capacity of cooperatives leaves them open to exploitation and opportunists have used cooperatives to aggregate property control.[48] These appear to often be former landowners for cooperatives formed from existing plantations, and local politicians or their cohorts for coops formed from state lands. The system is clearly not working. As put in the Executive Summary of the FAO-DAR Study:

> *"… despite the 26 years AVAs have been in existence, there are very few examples of successful arrangements between ARBs and investors. Most of the ARBs are not aware of their obligations and entitlements under their contracts, for most are written in a language that they do not understand. Their lack of understanding of their agreements has been exacerbated by the lack of adequate legal representation and full transparency from their own cooperative leaders. The capacity of the farmer's organizations to run and operate their farms, make collective decisions, understand financial statements and*

[48] Reviewing agricultural cooperatives and how to assist them was largely beyond the scope of this assignment. The FAO has provided many ideas about the causes of weakness of agricultural cooperatives formed under agrarian reform, and how to address them (FAO. 2012. Guiding Principles for Responsible Contract Farming Operations, Rural Infrastructure and Agro-Industries Division). In addition, the presentation 'Agricultural Cooperatives in the Philippines' by Dennis Araullo, presented at the 2006 FFTC-NACF International Seminar on Agricultural Cooperatives in Asia. This presentation that found multiple institutional failures including: 1) the proliferation of small and very small-scale weak cooperative organizations with narrow activity and membership bases; 2) the lack of government funding support, and 3) the absence of a centralized coordinating or integrating institution on capacity building and continuing education and training as well as promotion of integrated cooperative marketing and production systems."

enter into intelligent negotiations about the terms and conditions of their agreements was also identified as a major shortcoming." [49]

Several interview respondents expressed some support, albeit sometimes grudging, for the Duterte regime and its "get tough" policies. Optimistically, this new regime's popularity and willingness to act forcefully might be a reform moment, when different social contracts can be crafted. With luck and cleverness, these revised contracts can perhaps serve smallholder farmers better to achieve their elusive goal of achieving sustainably greater productivity and higher incomes – without killing the golden goose of needed investment in globally competitive agribusiness. Well-designed targeted MCC interventions that capture the spirit of the reform-minded new administration could help the Philippines to find that delicate balance.

The extreme procedural complexity of the Filipino legal system and over-lawyering of standard contracts moves parallel to the more human, organic and relationship-rooted world of informal or lightly formalized contracts and contract enforcement. Rather than looking at how to change the paradigm and simplify the system, lawyers have displayed the tendency to help the poor in good faith by providing them with legal services, or at least legal training so they can represent themselves better within the existing systems and structures. Instead, the team holds the view that simplified and uniform template contracts should be established to bring long-term clarity and equity for farmers, more than complex agreements drafted by attorneys. After almost three decades of vulnerable cooperative structures and arrangements, a constructive path forward may lie in undertaking a deep re-think of the system, building on promising alternate approaches.

The recent government change provides a rare reform opening, where MCC engagement can be catalytic in helping define a renewed, simplified and more effective social contract around the interface between agribusinesses and small holders.

RECOMMENDATIONS

Impact: Medium
Feasibility: High
Affordability: High

1. Support to expand commercial arbitration to agriculture export hub cities: Other than in construction, commercial arbitration in the Philippines has not penetrated much beyond Manila. The PDRC is a small, volunteer non-profit, with the regulations and procedures in place for conducting internationally recognized commercial arbitration. Assistance to expand knowledge of arbitration and perhaps to train arbitrators regionally in agricultural hub cities could support use of this alternative dispute resolution mechanism for commercial contracts.

Impact: High
Feasibility: High
Affordability: High

2. Create clearer, fairer templates, contracts and standards for smallholders and cooperatives to promote usability and promote fairness: Small holders and cooperatives are too often asked by investors and banks to sign very complex, one sided English language commercial contracts that they cannot understand. This leads to confusion, unfairness and many defaults. The DAR has some templates, but has not been prescriptive in

[49] FAO. 2016. Multi-sectoral study on the Agribusiness Venture Arrangement policy and implementation under the Comprehensive Agrarian Reform Program. http://www.fao.org/3/a-i6239e.pdf

requiring them. Providing clear, simplified, balanced template agreements in Tagalog for small holders and cooperatives would increase their ability to understand what they are signing, increase their likelihood of compliance and increase the mutual trust needed for long-term success. There is a growing body of research and consensus around ways to encourage responsible contract farming to draw from, and this is referenced in the Actionable and Prioritized Recommendations section below later in this report.

3. Conduct technical analysis to better understand informal and formal agreements under which smallholders are bound, with a focus on the Unifrutti Transformational Partnership Model: Closely connected with the last recommendation, small farmers and cooperatives often enter informal or minimally documented agreements with various traders, suppliers, lenders, warehouses, transport providers and others. These largely trust and relationship based agreements are basic to the functioning of the agricultural economy, but comparatively little is known about how they are structured, how the parties understand them, what makes them work and how they are enforced. This primary, field level research would cast a light on these agreements, seeking to understand them and their financial impacts better. One model worth studying is Chiquita Unifrutti. Chiquita Unifrutti has developed a unique way of structuring growership agreements, with a holistic, community oriented and values based approach that provides better farmer incomes while providing Unifrutti a profitable business model.

Impact: Low
Feasibility: High
Affordability: High

GETTING CREDIT

Lack of credit can be one of the greatest barriers hindering growth of the agriculture sector in developing countries. Numerous factors may contribute to this situation, including unclear property rights, limited forms of acceptable collateral, limited financial infrastructure, and specific risks faced by the agriculture sector. Many of the issues with respect to access to finance vary significantly based on the type of borrower, the type of financial provider, the type of finance and often the nature of the value chain in which the borrower operates. Access to credit requires an in-depth examination of both alternative collateral options and secured transactions, as well as existing sources of internal value chain financing. It also requires examining the market and financial infrastructural drivers behind low levels of agribusiness lending, including the lack of risk mitigation tools and information asymmetries.

For the most part, the enabling framework for agriculture/agribusiness in the Philippines is in place, or in development. Financial institutions are awash in liquidity and government policies are in place to penalize banks' lack of investment. Yet, despite what appears to be a surfeit of government focus and resources, access to agribusiness finance is still in its early stages of development. Only 14 percent of farmers have borrowed (from any source) to invest in their farm or farm business in the previous 12 months.[50] Existing financial sector lending technology is typically 'old school' (i.e. project based) and production based finance is usually in the hands of government or quasi-governmental structures and programs, with a bias towards agrarian reform beneficiaries[51] and/or politically emphasized crops (i.e. maize and rice) that are not always viable businesses due to small landholdings, low margins, and lack of business and production technology and skills.

Access to finance also remains challenging for small and medium sized enterprises (SMEs), as applicants are faced with a veritable mountain of paperwork to obtain a loan. Alternative collateral use is still not widespread and creative utilization of value chain partners by financial sector partners to mitigate risk or reduce costs is still in its early stages.

One major challenge is that financial institutions lack innovative and creative products for agriculture, primarily because they don't see agriculture as an interesting business opportunity. Some lenders consider farmers as a forced or social finance, with a high chance of low returns to the business, thereby putting the credit at risk. Almost all stakeholders who were interviewed mentioned that this lack of enterprise and productivity can be a factor that disincentivizes lending

[50] http://www.worldbank.org/en/programs/globalfindex

[51] Agrarian Reform Beneficiary refers to farmers who were granted lands under Presidential Decree No. 27, the Comprehensive Agrarian Reform Law and Republic Act No. 9700 or the "Comprehensive Agrarian Reform Extension with Reforms" and regular farm workers who are landless, irrespective of tenurial arrangement, who benefited from the redistribution of lands, regardless of crops or fruits produced, to include the totality of factors and support services designed to lift the economic status of the beneficiaries.

To feed this market gap, government programs and institutions are in place, but are just starting to emerge from traditional lending methodologies. Corresponding crop and portfolio insurances are not sufficiently capitalized and may not be economically viable without continued government support.

LEGAL FRAMEWORK

Key Laws and Regulations

RA No. 10000 - Agri-Agra Reform Credit Act (2009)

Agri-Agra Implementing Rules and Regulations (2011)

Circular No. 855 – Guidelines on Sound Credit Risk Management Practices (2014)

Circular No. 908 – Agriculture Value Chain Financing Framework (2016)

National Strategy for Financial Inclusion

RA Act No. 8435 – Agriculture and Fisheries Modernization Act (1997

RA Act No. 9510 – Credit Information System (2008)

RA Act No. 9520 – Philippines Cooperative Code (2008)

RA Act No. 10693 – Microfinance NGOs Act (2015)

The legal framework for access to agriculture finance is governed by the **Agri-Agra Reform Credit Act (2009)**, which was signed into law by then President Arroyo, as well as the accompanying **Agri-Agra Implementing Rules and Regulations (IRR)** approved in 2011. The responsibility for enforcing laws and circulars related to agriculture finance is entrusted to the Bangko Sentral ng Pilipinas (BSP). This law stipulates that all banking institutions, whether government or private, shall set aside at least 25 percent of their total loanable funds for agriculture and fisheries credit, of which at least 10 percent of the loanable funds shall be made available for ARBs (beneficiaries may also include cooperatives and associations with good standing) and the remaining 15 percent should be directed towards agribusinesses. Under this law, financial institutions may fulfill the requirements through alternative compliance: such as providing wholesale/rediscount loans to retailers of credit, investment in bonds issued by government owned providers of credit, investment in rural infrastructure projects, or direct investments in preferred stock of rural financial institutions. Non-compliance results in penalties of 0.5 percent of the shortfall. Of the penalties collected, 90 percent is shared between the Philippines Crop Insurance Corporation (PCIC) and the Agricultural Guarantee Fund Pool, while the remaining 10 percent is remitted to BSP to absorb the costs of supervision.

Circular No. 855 – Guidelines on Sound Credit Risk Management Practices (2014) establishes general risk management practices for financial institutions.[52] It has been touted as a "loosening" of some regulations by promoting analysis of cash flow, rather than securement of collateral as the basis for lending.[53] It also allows use of non-audited financial statements to provide a basis for loan analysis. For instance, microfinance loans and other credit accommodations not exceeding $60,000 are exempted from submission of financial documents such as Income Tax Returns and other supporting financial statements. Start-Ups are also

[52] http://www.bsp.gov.ph/downloads/regulations/attachments/2014/c855.pdf

[53] The circular lowers the percentage of collateral, which a Financial Institution can lend from 70-80 percent down to 60 percent. Theoretically this could have an impact on loans secured by property. However the regulations counteract this tightening by allowing Financial Institutions significant leeway to offset the regulation through the proper assessment of capacity and willingness to pay off the loan subject.

exempted during the first three years of operations or banking relationships.[54] The relaxing of some of these requirements should promote MSME lending, which will likely include agribusiness.[55]

Circular No. 908 – Agriculture Value Chain Financing Framework (2016) provides regulations to expand lending along value chains. To encourage on-farm lending, the central bank increased the prevailing single borrower's limit from 25 to 50 percent.[56] This will allow banks to lend to the bigger businesses in the value chains. This is supposed to loosen credit along the entire value chain, thus better linking value chain actors, and ultimately lowering credit risk.[57] However, a single borrower limit can also be a very risky approach, especially in a sector that is not usually diversified. Additionally, Circular No. 908 allows banks to offer more appropriate products to value chain actors such as accounts receivable financing and/or warehouse receipts. Further, Circular No. 908 ensures that financial institutions have a "disaster contingency mechanism" in place to provide timely relief to a borrower who may have difficulty paying the loan in case of natural catastrophes.

These three acts / circulars noted above were those which stakeholders mentioned as the most influential for agricultural lending. There are, however, several other laws that also impact access to agricultural finance:

- **Agriculture and Fisheries Modernization Act (1997)** limits the implementation of government credit programs to government financial institutions. It also prohibits government non-financial institutions from engaging in the provision of credit.
- **Cooperative Code (2008)** provides the legal mandate for cooperatives that are engaged in the provision of credit.
- **Microfinance NGOs Act (2015)** provides the relevant policy and legal environment for microfinance NGOs.
- **Credit Information System Act (2008)** establishes the Credit Information Corporation (CIC) as the central registry and repository of all credit information.

Most stakeholders interviewed agreed that most of the laws and regulations related to financial institutions and transactions do not include any obviously inherent biases against lending to agriculture. However, financial institutions often mention that the Agri-Agra directive is difficult to adhere to. The most significant challenge is the nature and size of the agrarian reform beneficiaries. Most are very small (the average farm size in the Philippines is 1.3 hectares), which puts them way outside the typical customer segments of most commercial banks. Additionally, the actual list of potential beneficiaries is outdated and contains a high incidence of beneficiaries who are either dead or have sold their land. Accordingly, less than one tenth of the 10 percent target is usually lent.[58] The edict requiring 15 percent of loanable funds to be

[54] http://www.rappler.com/business/industries/banking-and-financial-services/133366-microfinance-loans-bsp-2015

[55] The government also has a mandated MSME lending directive.

[56] A single borrower may qualify for a loan up to 50 percent of the total capital of the financial institution.

[57] http://www.bworldonline.com/content.php?section=Finance&title=bsp-approves-new-financing-framework&id=124636

[58] http://www.bsp.gov.ph/statistics/stataarcpbs.asp

directed to agribusiness has a much higher compliance rate (13 percent as at June 2016). The universal and commercial banks, as well as the thrift banks, have a low compliance rate especially for the "Agra" component, but many of the rural and cooperative banks meet or exceed the requirements of both the components. Unfortunately, the bulk of the lending capital is in the hands of the universal and commercial banks.

BSP notes that this law is under review currently and they will be working with their counterparts in other government departments to assess the nature of any modifications, noting that the 25 percent of loanable portfolio should be less arbitrary and somehow be based on demand of the sector. Agriculture and fisheries make up just 10 percent of the gross domestic product of the Philippines, although it does occupy a disproportionate labor contribution, due to its low mechanization and small average land sizes.[59]

Other constraining regulatory issues include the inability for any institution to have more than 999 branches due to BSP's computer system's structural limitations[60] and a 27 percent tax rate on insurance premiums which imposes substantial additional costs for smallholders availing insurance on their own (a constraint only for private insurance providers).

Moveable Property Registry: The introduction of collateral registries for movable assets normally has a positive impact in increasing access to finance for firms and lowering interest rates.[61] The use of alternative collateral may have the impact of leveraging additional investment in agriculture, as MSMEs may be able to pledge other assets, in lieu of land title, to secure loans. In the Philippines, the oldest law related to registry of property is the 1906 Chattel Mortgage Law. Since then, there have been additional laws enacted which provide a rather haphazard framework for registering and securing property and transactions.[62] In 2012, a Technical Working Group was established and they came up with a framework document that provided recommendations on how to pursue a best practice reform of secured transactions. In 2016, the group filed a bill with the Senate Banking Committee and it is currently undergoing a technical review. This proposed bill will modernize and reform these laws in line with best practices and it will also include the construction of a modern, more comprehensive registry which will include non-traditional asset classifications as acceptable collateral/property which could positively influence agriculture finance including the use of warehouse receipts, livestock, inventory, forwards contracts, leases, and expected harvests.

Related Policies: Initiatives related to financial inclusion have been developed by the BSP and they have the responsibility to take deliberate measures to promote financial inclusion in the Philippines. BSP has adopted the concept that financial inclusion is a worthy policy objective

[59] You might normally expect bank lending approximate the sector's contribution to GDP with some adjustments per growth rates.

[60] All branches need to be approved before opening.

[61] https://blogs.worldbank.org/allaboutfinance/does-introduction-movable-collateral-registries-increase-firms-access-finance.

[62] Including Act No. 2137 – The Warehouse Receipts Law (1912), Act No. 2243 - Record of Mortgages issued by public service corporations to secure bonds, and other purposes (1913), Act 386 – Civil Code of the Philippines (1949), Presidential Decree No. 1529 – Property Registration Decree (1978), Act 7393 – Quedan and Rural Guarantee Corporation (1992), and Act 10142 – Financial Rehabilitation and Insolvency Act.

that can be pursued alongside the promotion of financial system stability and integrity. As early as 2000, the BSP played a key role in the development of sustainable microfinance in the country by setting in place an enabling policy and regulatory framework for microfinance. The success of microfinance efforts has emboldened the BSP to move toward a more ambitious goal of increasing access to financial services for all. In 2007, the BSP became one of the first central banks in the world to establish an office dedicated to financial inclusion when it created the Inclusive Finance Advocacy Staff (IFAS). Their **National Strategy for Financial Inclusion** was adopted in 2015.

IMPLEMENTING INSTITUTIONS

Central Bank: BSP serves as the central bank of the Philippines and has a wide mandate and authority. The BSP provides policy directions in the areas of money, banking and credit. It supervises operations of banks and exercises regulatory powers over non-bank financial institutions with quasi-banking functions. Financial institutions under the regulation and supervision of the BSP include the following structures: thrift, rural and cooperative banks, universal banks, commercial banks, and foreign banks. There is not a specific legal structure for microfinance institutions. In 2000, the General Banking Law mandated the BSP to recognize microfinance as a legitimate banking activity. However, in practice there are a range of NGOs, multipurpose cooperatives and other structures, which may offer credit but do not take public deposits and therefore, do not fall under the regulation and supervision of the BSP.

Key Implementing Institutions

- Agriculture Guarantee Pool Fund (AGPF)
- Bangko Sentral ng Pilipinas (BSP)
- CARD Bank Inc.
- Cooperative Development Authority (CDA)
- Irrigation Associations
- Land Bank of the Philippines (LANDBANK)
- Multipurpose Cooperatives
- Non-Government Organizations (NGOs)
- Philippine Crop Insurance Program
- Thrift banks
- Rural banks and financial cooperatives
- Securities and Exchange Commission (SEC)
- Sikat Saka Program
- Small Business Association
- Tulay sa Pag-unlad (TSPI)

CDA: As mentioned in the Business Administrative Procedures chapter, the CDA is charged with registering all cooperatives. Financial service cooperatives are jointly regulated by CDA and BSP, with the former assuming the lead regulatory powers. Credit cooperatives are solely registered and regulated by the CDA.

SEC: SEC is responsible for registering all stock corporations, non-stock corporations, and partnerships. This includes the registration of NGO MFIs. The SEC has also made a recent push to register informal lending institutions.[63]

Commercial Banks: There are 41 universal and commercial banks in the country, which provide 13 percent of their loanable funds to the agriculture sector.[64] This translates to roughly 90 percent of all the formal credit delivered to the agriculture sector, the bulk of which goes to

[63] http://www.sec.gov.ph/wp-content/uploads/2016/11/2016AdvisoryInformalLenders.pdf.

[64] Universal and commercial banks offer the widest variety of banking services among financial institutions. In addition to the function of an ordinary commercial bank, universal banks are also authorized to engage in underwriting and other functions of investment hours, and to invest in equities of non-allied undertakings.

larger agribusiness. More than half of this formal credit is generated through alternative compliance.

The largest provider of directly compliant agricultural finance and the fourth largest bank in terms of assets, deposits and loans is the government owned **LANDBANK**. It has an ample reach with almost 351 branches across the country.[65] As of March 2016, LANDBANK had lent 7.5 percent of its total portfolio to smallholders either directly or via cooperatives. Despite falling short of the 10 percent Agri-Agra target, LANDBANK has financed almost 50,000 farmers (cumulatively) either directly or through farmers' groups, usually cooperatives. In the agricultural finance sector, LANDBANK provides both wholesale and retail loans. Wholesale loans are distributed to cooperatives and rural banks. Retail loans are made to smallholders, SMEs and LGUs. These can be for working capital, trade finance, or equipment finance purposes. One of their flagship programs is the **Sikat Saka Program** in which upwards of 5,000 rice farmers have received non-collateralized production loans, endorsed by their local **Irrigation Associations** and disbursed through their bank accounts. This program, completely insured by the **PCIC**, is expected to be expanded.

LANDBANK notes that one of the biggest constraints to financing agriculture is risk and, related to this, the lack of available insurance. As noted above, some of their borrowers do have PCIC insurance coverage on their investments and LANDBANK itself has $22 million of portfolio insurance under the **Agriculture Guarantee Fund Pool (AGFP),** managed by the **DA** (discussed in the Supporting Institutions section). However, LANDBANK claims that this insurance coverage is not sufficient. Other constraints to agricultural lending cited by LANDBANK include poor access to production and processing technology and weak organizational capacity on the part of borrowers.

Thrift Banks: Thrift Banks are savings and loans associations, and often include banks with a microfinance orientation. There are 62 thrift banks reporting to the BSP. The fourth largest thrift bank in the Philippines is the **Center for Agriculture and Rural Development (CARD) Bank Inc.** CARD has roots as a microfinance NGO and has rapidly grown into a leading provider of rural financial services in the country and the largest micro-finance institution with two million clients. CARD's primary microfinance product for agriculture is a group based incremental product, with a low starting point ($100)[66], which gradually increases as the number of cycles using the product increase. It offers a weekly, biweekly, monthly and quarterly repayment structure, which together with its low base, limits its usefulness as a seasonal production loan. However, the fact that CARD has a broad distribution network (it has almost 1,000 branches), a strong rural presence, and offers several targeted financial products, allows it to effectively and significantly impact the rural finance arena.

Rural Banks and Cooperative Banks: These are some of the primary providers of rural and agriculture credit in the country. There are currently 507 rural banks registered with the BSP. Rural banks are often owned by one person or family, but can sometimes have many branches. Increasing pressure from regulators through minimum capital requirements and restricted arms-

[65] As of March 2016.

[66] This is a classic low hurdle microfinance product. Group guarantee with a low initial starting point, rapidly increasing, upon successful management.

length lending has caused some rural banks to be bought, absorbed or closed. The cooperative banks, on the other hand, are owned by their members and have varying degrees of strength. On average, the cooperative banks exceed the minimum compliance thresholds for the Agri-Agra law and they are the only type of financial institutions that regularly meet both compliance thresholds. They focus on individual lending with collateral as security, although at times they use alternative sources of security.

Small Business Corporation (SBC): On 16 November 2001, the Small Business Guarantee and Finance Corporation and the Guarantee Fund for Small and Medium Enterprises were merged through Executive Order 28 and became known as the Small Business Corporation. This merger, driven by an increasing government focus on MSMEs and the creation of the "Magna Carta for MSMEs" in 2008, has led to a strengthening of the SBC as the government-financing arm for MSMEs. Today, SBC is the third largest provider of MSME financing, with a lending portfolio of over $60 million. It provides wholesale financing to microfinance and MSME lenders (cooperatives, rural banks and others), direct financing to MSMEs, as well as a credit guarantee facility delivered through partners.[67] It has over 10,000 clients, 150 partner financial institutions, and serve 65 of the 81 provinces across the country. SBC has four area offices, and nice desk offices set across Luzon, Mindanao and the Visayas. In early 2016, SBC has begun to pilot agribusiness lending in some of their offices. The Baguio office, for example, now has several pilot loans in coffee, rubber, cacao and organic vegetables. Its minimum loan size for this sector is $4,000 and the maximum term is three years.

NGOs: NGO players may be either formal finance players, such as microfinance NGOs or they may be multipurpose NGOs that finance their beneficiaries either directly or connect them with government credit programs or lead firms for finance, while also providing technical advice and marketing linkages to their clients. Several NGOs provide financing for agriculture, such as Alalay sa Kaunlaran (ASKI - part of the Opportunity International Network[68]), Taytay Sa Kauswagen Inc (TKSI, also part of the Opportunity International Network), and AHON SA HIRAP (ASHI).

Tulay sa Pag-unlad (TSPI) is one of the largest NGOs delivering finance. It chiefly provides microfinance but it also provides non-financial services such as microenterprise training. It has 146 branches, mostly in Luzon, and 90 of these have some agriculture finance. The main agriculture product it supports is rice, with some limited loans to high value crops such as horticulture. The lending is non-collateralized, group based, and the payments are structured around harvest. Many of their rice farmers have crop insurance, although TSPI notes that the payment process is onerous in the event of a claim. Agriculture finance is part of their growth strategy going forward. Currently they have almost 30 percent of their $24 million portfolio in agriculture, with approximately 17,000 farmers being financed. They expect to target 50 percent agriculture lending and grow their portfolio to 40,000 farmers within four years.

[67] The provision of both loans and guarantees covering loans to the same party can result in moral hazard, which is a lack of incentive to guard against risk where one is protected from its consequences.

[68] http://opportunity.org/.

Credit Cooperatives: A credit cooperative is a financial organization, owned and operated by its members, that creates a pool of savings from which loans for productive and provident purposes are drawn for the benefit of members. Per the CDA, there are over 3,000 registered credit cooperatives in the Philippines, as of the end of 2014.

Multipurpose Cooperatives: Multipurpose cooperatives are non-financial cooperatives designed around supporting the marketing function of producers. There are thousands of multipurpose cooperatives registered throughout the country under the CDA and a small percentage of these offers loans to their members. Multipurpose cooperatives are a natural distribution point for financial services and many government credit entities, such as LANDBANK and SBC, utilize them. However, many cooperatives are characterized as weak, dysfunctional, and lacking the administrative systems in place for financial selection, disbursement, and collection.

Buyer and Contract Financing: Despite what seems to be a plethora of credit options for the smallholder farmer and associated cooperatives, small farmers remain largely outside the formal lending system, especially those involved with crops that are not considered priorities by the government. This market gap is often taken up either informally through traders or more formally with a large lead firm buyer arrangement. The former takes on many forms, especially in the horticulture industry, where traders or "disposers" will lend (either in cash or in kind) for inputs with a commitment for delivery at harvest. This can often lead to the exploitation of smallholder farmers, as provided in an example in the text box below. This issue is discussed further in the Competing Fairly chapter of this report.

Example of Predatory Lending Practices

Disposers have a long-standing relationship with smallholders in the horticulture sector in the Cordillera Administrative Region of Luzon. These are usually traders that offer advances in either cash or inputs to farmers against a prescribed delivery later. These pre-financers respond to the very real cash and input needs of farmers, but pay a below market price for their goods at delivery after deducting the loan from payments. Further, disposers have an arrangement with the long-haul truckers to secure certain types of produce and farmers find it difficult to dodge this monopsony structure in the local markets. Only those smallholders who can bypass the "wet market" and sell directly to alternative purchasers (cooperatives or SMEs who supply a value-added product to a different segment, such as fair trade, exotic, or organic products) manage to evade this predatory relationship.

Why Rational Filipino Farmers Prefer 60 percent to 9 percent Annual Interest

The project team visiting Davao saw a stark example of the drawbacks of the overbearing Filipino contracting system while visiting two cooperatives. The members of the first cooperative had spent over a year planning with the LANDBANK and an international cocoa trading company to finance less than 100 hectares of new cocoa trees at 9 percent annual interest. The cooperative presented to the team many pages of complicated contracts in highly stylized legal English, including a LANDBANK loan, assignments, a tripartite memorandum and a production agreement – none of which had been translated into any local dialects that any of the cooperative members could understand, and all of which contained numerous burdensome clauses for the cooperative.

At the second cooperative, the members told us that they did not want to enter any written agreements out of fear that they would lose their land, and that they preferred instead to borrow money at 5 percent a month (60 percent annually) informally from their “sikha” – a local Chinese trader they know well.

The fact that rationally acting farmers (in the latter case, all women) would prefer taking the risk of taking loans at 60 percent annual interest from informal sources than nine percent annual interest formally, speaks volumes about how poorly the formal system serves the needs of those at the bottom. It is slow, confusing and imposes large, known and unknown risks on both cooperatives and their members. The informal system is quick, understandable and the cooperative members could accurately calculate the risks.

SUPPORTING INSTITUTIONS

Key Supporting Institutions

Agricultural Credit Policy Council (ACPC)

Agriculture Guarantee Fund Pool (AGFP)

Credit Information Corporation (CIC)

Card Pioneer Microinsurance (CPM)

Philippine Crop Insurance Program (PCIP)

Policy and Research: The country's commitment to provide financial support through credit is demonstrated by the creation of the **Agricultural Credit Policy Council (ACPC)** under the DA. The AFMA and the creation of the Agriculture Modernization Credit and Financing Program provide the legal framework for ACPC's involvement in the agricultural finance sector. The ACPC is mandated to coordinate and oversee the implementation of agricultural credit and guarantee programs to ensure that credit is made available and accessible to small farmers and fisher folk. It also has a mandate to empower the rural finance sector by facilitating institution-building programs for rural financial institutions including cooperatives and their farmer and fisher folk members.[69] In addition to providing research, promotion, and education functions, ACPC also indirectly delivers agriculture credit programs through partners, such as LANDBANK, the People's Credit and Finance Corporation, and wholesale loans to accredited cooperative banks.

Guarantee Funds: The Agriculture Guarantee Fund was founded on May 26, 2008 through an administrative order issued by the President. The DA leads the **Agricultural Guarantee Fund Pool (AGFP)** program, with LANDBANK as the institutional manager. The purpose of the pool is to mitigate the risks involved in agricultural lending through the provision of portfolio insurance for the lenders. The pool guarantees 85 percent of the loan in case of default.[70] Access to this pool encourages institutions to lend unsecured agricultural food commodity production loans to small farmers and fisher folk. LANDBANK has almost $22 million in loans under the AGFP, while TSPI has approximately $6 million guaranteed. There is a reduction in the premium if the underlying loans are insured by a third party and a further reduction if the loans are to agrarian reform beneficiaries. Financial institutions availing themselves of the guarantee lines seem satisfied but the coverage has a ceiling and is insufficient to meet the demand. Further it only covers seasonal production loans and not infrastructure or other medium to long-term investments.

Crop Insurance: There is a widely expressed need for insurance to cover natural disasters affecting agriculture, such as typhoons, landslides and floods. The Philippines is highly vulnerable to climate change induced hazards, particularly typhoons. The Philippines ranks as the 3rd most disaster-prone country in the world, experiencing an average of 20 typhoons a year – with Haiyan (local name Yolanda) being the most powerful typhoon in the world's recent history.[71]

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[69] http://www.acpc.gov.ph/

[70] All assets on a financial institution's balance sheet need to be "supported" by the institution's capital. The amount of capital that the institution requires depends on the riskiness of the balance sheet. This is what we call international BASEL standards. In this case, because the loans are essentially guaranteed by the government (up to 85 percent), they are assigned a risk weight of 20 percent, requiring less capital to support it. This is a significant benefit, especially to undercapitalized institutions.

[71] https://www.indexinsuranceforum.org/project/typhoon-index-insurance-philippines

Currently there are two options for agriculture insurance at the farm level.[72] Created in 1978, the **Philippine Crop Insurance Corporation (PCIP)** is a government-owned corporation that provides insurance protection to the country's agricultural producers, particularly the subsistence farmers. The PCIC model is based on the premise of insuring multiple perils. This type of coverage will protect the farmer against any weather-related losses, such as a tornado or a hailstorm. In addition, this policy may also cover incidences such as low yields, late planting, prevented planting and replanting costs. The PCIP has an existing capitalization of $40 million. While it claims to have 76 distinct insurance packages, their primary insured crops are rice and corn, and many of their products are delivered with premium subsidies, provided by the government. Based on the fact that PCIP has penetrated only 5 percent of the total market for agriculture insurance so far, they have recently applied for an increased capitalization of $200 million. As of November 2016, the bill is currently in the lower house. As noted, some financial institutions complained about the slow claims process as well as the minimal payout. TSPI notes that the average claimant received only $100 per hectare, although the average loan size (and likely investment) was upwards of $600 per hectare. Of the 7,690 farmers of high value crops who had claimed $5.2 million for damages from 1981 to 2000, only 1,357 farmers received payments, amounting to $18,000. This is only about 3 percent of the submitted claims.

There is another type of production insurance, which is currently under design by a joint venture, called **CARD Pioneer Microinsurance (CPM).**[73] This is a weather index based insurance, which will have a product that triggers in case of large weather events, considering both wind speed and rainfall. It should launch in pilot mode in 2017. Other pilots have taken place testing weather index based insurance but these still appear to be in test modes and are neither commercially launched nor widely available.

Credit Registry: A key part of a functioning credit environment is the existence of historical credit information. In 2008, the Philippines passed the Credit Information System Act, to be implemented by the **SEC**. The act was designed to: 1) improve the overall availability of credit to SMEs; 2) provide credit information at the least cost to eligible participants; 3) ensure the protection of consumer rights and the existence of fair competition in the industry, 4) reduce overall credit risk, thereby, contributing to a healthier and more stable financial system. The act created the **Credit and Information Corporation (CIC)**. The concept of this Act is that CIC receives mandatorily submitted data from a wide range of sources including banks, credit card companies, NGOs, financial cooperatives, government lenders and even pawnshops, consolidates credit data, acts as a central registry and provides access to such data to approved entities. Currently they have signed agreements with four credit bureaus: including CRIF, Transunion, Compuscan, and Credit Information Bureau Inc. In theory, a credit registry and the ability to credit score applicants could be a useful resource for agriculture lenders. However, the process of collecting data, especially from the administratively challenged rural banks and financial cooperatives, has proven taxing.

[72] Production insurance covers the farm risks, which may include weather or other risks. Portfolio insurance covers the financial institution. In one case, the farmer will receive a payout, which may allow him/her to pay the loan and any other investment made. In the other case, the financial institution will receive the payout and there is no certainty as to the nature of the arrangement with the farmer.

[73] This is a joint venture between CARD and their insurance arm, called Pioneer. They will also be developing an indemnity type of insurance.

SOCIAL DYNAMICS

Women in finance: Women can be landowners, producers, and other actors in the value chain in the Philippines. They can fill managerial roles in multipurpose cooperatives and financial institutions. There are no obvious biases against women in terms of policy or regulations. In fact, women, more than men, are more likely to have a bank account (38 percent of women have an account, compared to 31 percent of the general population).[74] Women are also the preferred customers of the microfinance oriented financial providers, such as CARD, TSPI, ASKI, TSKI and ASHI. Their typical methodology of group lending tends to be an effective guarantee mechanism for women, who feel comfortable accessing this type of finance.

However, as in many countries, women in the Philippines suffer from more subtle biases in terms of access to credit. They lack confidence in moving through the bank application process, especially when the paperwork and processes seem overlong. They also are less inclined to take on the additional risk of a loan, and fear losing their land and other assets in case of a shortfall in harvest or fluctuating market prices. Those who do own land may not have formal title and face restrictions on transferring land without male consent. Further, given the role of Filipino women in the household, they are often less mobile and unable to shop around, they are vulnerable to more expensive and possibly less appropriate credit. This was witnessed first-hand among horticulture and coffee producers in the Cordillera district, who took multipurpose credit from CARD. As CARD has the infrastructure to reach out to these women, the women took this credit even though the short and regular payment structures did not suit their agriculture cycles and the interest rates were between three and four percent per month. This is discussed further in the chapter on Gender and Social Dynamics.

Perceptions of agriculture businesses: The agriculture sector remains poorly served for access to credit in many regions of the Philippines. All financial institutions interviewed noted that the biggest constraint to lending in agriculture is the high risk. Yet banks and financial institutions lack a nuanced approach to evaluating risk and therefore, do not price for risk.

The main risk that all stakeholders cite is weather-based risk, but there is an underlying lack of confidence in the farmers' business and farming capacities and skills, which adds to the overall risk of the loan. Stakeholders state that smallholder farmers lack good business skills or entrepreneurial acumen. Low levels of financial literacy, technical training, and a limited understanding of modern production systems, as well as shortfalls in post-harvest handling result in low productivity and exposure to market price risks. This, in turn, results in poor credit risk assessments, which move the lenders to require hard collateral, or to offload the risk and responsibility to cooperatives, which may be equally under-qualified to assume the responsibility.

Those who qualify to receive loans, except for those relying on more informal sources or microfinance institutions, face a mountain of paperwork. Generally, very small farmers are daunted by the level of paperwork and are either unwilling or unable to pledge land as collateral. Instead, they end up receiving loans through informal rent seeking sources, some government

[74] Data from http://www.worldbank.org/en/programs/globalfindex. This is likely a testament to the coverage of the MFI oriented financial institutions and NGOs.

programs, and/or multipurpose loans via microfinance institutions. The latter source often comes with insufficient amounts and unsuitable repayment structures, forcing them to rely on other sources of income to make timely payments on time.

RECOMMENDATIONS

Impact: High
Feasibility: High
Affordability: Low

1. Provide technical support to financial and non-financial institutions to develop creative and alternative products, partnerships, and delivery channels to finance 'effective demand' of MSMEs in the value chains: This would include using value chain finance and creating innovative partnerships to reduce or share risk and costs. For example, using a lead marketer in the organic vegetable and herb supply chain to supermarkets to partially guarantee or even deliver finance to smallholders who produce regularly, may alleviate the pressure on the use of title for guarantees and could simplify the qualification and lending process. Similarly, financing nurseries of seaweed against established seaweed purchaser/processor contracts and deducting loan payments from seaweed delivery could lower value chain risk and cost. The focus should be on looking for consistency, volume and quality in supporting of farmers and MSMEs who are creating viable businesses and responding to market demand. Guarantee funds/facilities and other supply side interventions have not been shown to be sufficient to increase access to finance for smallholders and agribusinesses.[75] The facilitation of partnerships between actors and financial institutions that see a common business opportunity would be a complementary approach.

Impact: High
Feasibility: Low
Affordability: Medium

2. Provide support to the government in the provision of risk mitigation tools for the agribusiness sector: Assist the government to design a well-thought-out risk mitigation strategy, along with detailed costs for the agriculture sector, with the purpose of attracting private sector partners and increasing overall access to risk mitigation tools for all MSMEs and partner financers in the agribusiness arena. The idea is to set up an assessment of the risks to be undertaken and assess what financial resources and institutional support are required to address these risks.

[75] International Finance Corporation. 2014. Access to Finance for Smallholder Farmers – Learning from the Experiences of Microfinance Institutions in Latin America.

ACCESSING MARKETING INFRASTRUCTURE

Although Accessing Market Infrastructure is not a separate category in the World Bank Doing Business rankings, it is included in the AgCLIR diagnostic in recognition of its critical role in supporting smallholder farmers to make profits from their farms. For the sake of brevity and focus, this analysis centers on marketing infrastructure only and excludes productivity-enhancing public infrastructure such as electricity and water systems. This chapter looks at both "hard" and "soft" marketing infrastructure – specifically, the physical and information systems necessary to make strategic decisions and effectively trade agricultural products. This chapter examines the laws, institutions, and social dynamics that have led to the current state of the Philippines marketing infrastructure and those that promise to move it forward.

> **"The Philippines has severe infrastructure challenges, which makes it largely unprepared for the scale of growth of the economy,"** - Stefan Schmitz, Chief Executive Officer of Antrak Logistics

The Philippines covers a massive geographic area located in some of the world's busiest trade routes. The country is spread along 2,000 square kilometers across 7,000 islands, with over 36,000 kilometers of coastline. This distinct geographical formation poses unique infrastructural challenges. However, these challenges are confounded by a legacy of underspending on infrastructure, both from a development and maintenance perspective.

The Philippines transport system consists of road, water, air and rail transport. Road transport is dominant, accounting for 98 percent of passenger traffic and 58 percent of cargo traffic.[76] While the transport infrastructure has seen modest improvement in quality over the years, still much is to be desired given the poor road network and weak intermodal integration. Public sector underfunding has meant that private sector businesses have often built independent infrastructure solutions, such as ports, for their own purposes. This approach has led to disconnected infrastructure networks that do not adequately connect various islands or promote specific commodities. Instead, this fragmented approach drives up costs and entrenches various inefficiencies within the system.

Recent economic growth and the growing population have stressed this infrastructure to breaking point. While the coastline is massive, the sheer number of ports means that road networks cannot realistically reach every port. The use of private ports to directly access international markets means that public ports lose valuable income and volume resulting in higher prices for containerized cargo. Finally, smallholder farmers and cooperatives, which rely more heavily on a public road network and port system, miss vital opportunities to connect to domestic and international markets.

[76] Asian Development Bank. 2012. Philippines Transport Sector Assessment.

However, there has been a growing political commitment to increasing infrastructure investment. The two main implementing agencies for the sector, the **Department of Public Works and Highways (DPWH)** and the **Department of Transportation and Communication (DOTC)**, have received substantial increases to their budgets (discussed below). Additionally, the government has sponsored big ticket investments in integrated transport terminals, seaports, ferry terminals, airports, roadwork, and mass transit railway lines.[77] In addition to increased spending, the government has looked to move beyond its traditional build-operate-transfer (BOT)[78] approach to focus more on a Public-Private Partnership (PPP) model. The PPP model was launched in 2010, along with several high-profile projects and has been viewed as a success. As of November 2016, there are three major consortia participating in PPP related infrastructure projects.[79]

In addition to hard infrastructure, a value chain of storage and processing facilities must match targeted commodities for both the domestic and export markets. For some commodities, this means cold chains that include field chilling, climate controlled processing and cold storage. During the interviews, the team learned that farmers often sell on consignment to traders, who deduct money for any spoilage. Likewise, export markets only take the very top grade of products. The ability to properly handle and transport products means a longer shelf life and better pricing in export markets. The matching of a commodity with a logistics chain needs to be well understood. Previously, donor projects did not necessarily focus on matching logistics chains with value chains, which created problems of overproduction.

In terms of market information systems, the Philippines has legislatively put in place, several government agencies that are tasked with specifically working with smallholder farmers and cooperatives. However, the challenge is in the application of these systems. The fundamental function or applicability of a market information system and a government statistics agency are entirely different. A market information system must be a live system in real-time so that farmers, cooperatives and traders can access the same information simultaneously, which then serves the purpose of allowing level playing fields for all stakeholders in the value chain. The accuracy of the information is critical to making real-time decisions to buy and sell. Government statistics, in contrast, need to paint a larger picture of the agricultural economy to make informed policy decisions and analysis but the information is not required to be made available in real-time.

The best market information systems internationally are not run by government, but instead by stock exchanges (as in the case of the United States), or by private entities like NGOs or cooperatives (as is common in East and West Africa). In all these cases, data is real-time and made available via text messages to farmers. In the Philippines, the market information systems

[77] Oxford Business Group. 2016. Policy Improvements in the Philippines' transport and infrastructure sector.

[78] Build-operate-transfer (BOT) is a form of project financing, where a private entity receives a concession to design, build, operate, and maintain infrastructure facilities for a designated period. During the designated period, the private entity has the responsibility to raise the finance for the project and is entitled to retail all revenues generated by the project. The facility is then transferred to the public sector at the end of the concession agreement without any remuneration attached.

[79] Oxford Business Group. 2016. Policy Improvements in the Philippines' transport and infrastructure sector.

[5] Philippine agribusiness competitiveness and benchmarking study -- Component on trade facilitation and logistics.

have tended to be vested with Government and lack the real-time information critical to farmers. Previous market interventions in agriculture focused on the production side with little to no ties to the market. This led to overproduction or growing products that were not competitive across the country, once transportation costs were factored into the mix.

LEGAL FRAMEWORK

Like in other areas of agriculture, the Philippines has a clear legislative framework for the development and implementation of various types of infrastructure. Several policy documents exist that lay out a long-term strategy for hard infrastructure. Any necessary tweaks can be made by issuing executive orders or by updating implementing regulations. The one key legislative missing link is a transition of BOT to PPP legislation, and this is currently under review in the legislature. Similarly, on the markets and marketing information side, the legal framework is in place. The key challenges are the lack of clear lines of authority between different agencies, discussed in detail below.

Key Laws and Regulations

EO No. 116: Reorganization Act of the Ministry of Agriculture and Food

National Environmentally Sustainable Transport Strategy (2011)

National Market Code of the Philippines (2007)

Philippine Development Plan (2011 – 2016)

PD No. 505 – Philippine Port Authority Decree (1974)

RA No. 6957 – BOT Act (1990)

RA 7607 – Magna Carta of Small Farmers in the Philippines (1992)

RA No. 7718 – BOT Act (amended, 1994)

RA No. 8435 – Agriculture and Fisheries Modernization Act (1997)

RA 9136 – Electric Power Industry Reform Act (2001)

RA No. 10625 – Philippine Statistical Act (2013)

RA No. 10667 – Philippine Competition Act

RA No. 10668 – Foreign Ships Co-Loading Act

RA No. 10844 – Department of Information and Communications Technology Act (2015)

TRANSPORT INFRASTRUCTURE

Specifically addressing the transport infrastructure requirement of the agriculture sector, the **Magna Carta of Small Farmers in the Philippines (1992)** mandates that the government provides farm-to-market roads, feeder roads and bridges to link farmers to markets, with priority for areas where agricultural productivity is low. The **Agriculture and Fisheries Modernization Act (AFMA) (1997)** outlines the key roles and processes for investment in rural infrastructure. It provides that the DA works with the DPWH, DOTC, DTI and LGUs to address infrastructure requirements in accordance with this act. The upgrading of farm to market roads is one of the priority mandates of AFMA, which stipulates that their location should consider the number of farmers / fisherfolk affected, as well as the amount and importance of agriculture and fishery products in the area. LGUs are mandated to invest 10 percent of the cost of farm to market roads, although as discussed in the next section, this is constrained by financial constraints.

The **BOT Act**, enacted in 1990 and amended in 1994, is the legal framework for BOT and PPP projects. Under the Act, the PPP Center, under NEDA, is responsible for leading the coordination and implementation of all PPP projects. While the PPP Center originally did suffer from significant implementation constraints, it has since significantly improved implementation processes. An amended version of the BOT is currently under review and seeks to bolster the legal foundation of PPP to ensure longer-term continuity. Key provisions of the Act include

guidelines and procedures for the appraisal of PPP projects, a monitoring framework and protocols, termination payments, viability gap funding, and PPP best practices. The Act also institutionalizes the Project Development Monitoring Facility (PDMF), a key PPP funding tool (discussed below in the Implementing Institutions section). The Act has faced several political delays, but is expected to enact in 2017.

Overall goals and strategies of the government are covered under the **PDP (2011 – 2016).** The plan focuses on hard infrastructure by trying to address historical weaknesses, including building an integrated and coordinated network of transportation and rationalizing the functions of various government agencies.

Ports play a critical role in an island nation. Under the **Philippine Port Authority Decree (1974) (1968)**, the PPA was granted autonomous status to own and operate ports. The PPA sets all policies regarding ports, but does not operate private ports that are owned by corporations or individuals. The PPA has continuously been singled out for problems because it is self-regulating, with little to no oversight. This, along with other factors, has resulted in high charges at the main cargo ports. Larger companies or industries can afford to build private ports and bypass these public ports, but small and medium businesses are left to shoulder the burden of the payments to the PPA. Each year the PPA runs a surplus that is remitted back to the Government. The political will to completely reform the PPA seems to continually stall when reforms are undertaken (this is discussed further in the Implementing Institutions section).

In 2014, the **Philippine Competition Act** and the **Foreign Ships Co-Loading Act** replaced the 50-year-old Cabotage Act. Under this new administration, shipping costs for exports and imports are expected to go down because foreign-flagged vessels will now be allowed to carry imported cargo directly to the final Philippine port of destination. This will benefit the agriculture sector, as most agriculture producing regions are not located close to the major international ports. Smaller ports are expected to receive increased volume. Among other changes, the amended law will allow for foreign vessels to transport and co-load foreign cargos within Philippine waters and empty foreign containers will be allowed to transship between two domestic ports. The Cabotage reform will bring down the exorbitant costs of domestic shipping and improve competition and service standards as foreign carriers will bring in market demand based fair competition with the few local players who have dominated the local market so far. The major gateways have long been capable of handling bigger ships and the country's secondary gateways are now being improved to handle international vessels.

Inventory of Philippine Transport Infrastructure

Road network: The Philippine road network measured a total of 32,227 kilometers in 2013.

Tramlines: Tramlines extend to about 121 systems nationwide, with Benguet province accounting for 21.5 percent of all tramline projects, followed by Nueva Viscaya (7.4 percent) and Ifugao provinces (6.6 percent)

Seaports: In 2013, a total of 444 seaports were registered. Fifty-four percent of these were private, 14 percent were terminal ports while less than one percent was a base port. The remaining 26 percent were classified under other national/municipal ports

Airports: The Philippines has 203 registered airports in total, comprising of 85 national, 118 privately owned, and 128 unclassified airports and airfields. Forty percent of these airports were used in transporting agricultural commodities, while others were utilized for tourism and general aviation (16 percent), mining (13 percent), and forestry (9 percent). The rest included those for heavy equipment and multi-purposes as well as those already non- operational.

MARKETS AND STORAGE

The **Magna Carta of Small Farmers (1992)** states that every farmer shall have access to facilities for pre and postharvest activities, support services, and inputs. The law mandates that a predominantly agriculture-based city or municipality ensures that appropriate linkages with barangays, NGOs and concerned government agencies are established and through them assistance is made available to local farmers. **AFMA** mandates that all markets shall have adequate access to sanitation, public toilets, lighting and ventilation, ice plants and cold storage, and electricity to ensure cleanliness and sanitation. The **National Market Code of the Philippines (2007)** lays out how a public market building is to be built and how the market economy is to be operated. The law aims to standardize market systems and professionalize market services. Almost all major cities and municipalities in the country have a public market, which are either government owned or privately owned. For both types, the establishment is subject to permitting and licensing from the LGU (including requirements under the National Building Code, zoning laws, and applicable local ordinances). However, despite this legal framework, the supply and demand sides of agricultural markets in the Philippines are poorly inter-linked, so regions where agriculture is the main livelihoods face oversupply to markets, while non-agricultural regions often face undersupply.

The strengthening of the national cold chain infrastructure is a high priority area for the Philippine government and is defined as a basic principle of food safety under the Food Safety Act (2013). In practice, however, the use of refrigerated transport and storage facilities for maintaining quality and extending shelf life has met with varying degrees of success. The high cost of electricity is regarded as a major constraint for this, raising operating costs of cold chain operators in 1997 from 30 percent to 50 percent in 2015.[80] An impending increase in power rates by the electric power provider company Meralco, which is currently under hold through a

[80] Manalili, Nerlita M. et al. 2015. Rapid Appraisal of Selected Postharvest Facilities in the Philippines. Philippines Institute of Development Studies, Discussion Paper Series 2015-31.

Supreme Court temporary restraining order, is expected to put further pressure on operating costs. The **Electric Power Industry Reform Act (2001)** was cited by the Cold Chain Association of the Philippines in interviews, as the primary reason why power costs are high. Under this Act, a wholesale electricity spot market was created to establish a competitive, efficient, transparent, and reliable market for electricity. However, due to inadequate regulatory standards, defective rules and market abuse by industry players, the Act served to increase electricity prices.[81]

Power is not the only issue with the cold chain industry. There is also a disconnect between government policy and actual needs of business operations. **Administrative Order Five on the Rules and Regulations on Hygienic Handling of Newly Slaughtered Meat (2012)** under NMIS, for example, allows meat to take up to eight hours to go from the slaughterhouse to the sales area. This, however, runs counter to the Codex Alimentarius, an internationally recognized food safety standard, which stipulates that the transfer time not pass two hours.

MARKETING INFORMATION SYSTEMS

Agricultural marketing information systems, if dependable and timely, can inform the business and investment decisions of farmers, traders, and larger agribusiness. In the Philippines, the provision of marketing information is almost exclusively provided by government agencies.

The **1966 Act Creating the Office of the Agriculture Marketing News Service (AMNEWS)** set out to create a system to gather information related to agricultural marketing, establish regional centers of operations to gather reports, disseminate agriculture-based news, and extend immediate guidance to smallholder farmers in terms of product marketing. AMNEWS was launched in 1968 under the Bureau of Agricultural Economics (BAEcon), with 10 radio transceivers, 10 provincial trading centers, and 67 retail items.

AMNEWS went through several changes and BAEcon was transitioned into the BAS though the **Reorganization Act of the Ministry of Agriculture and Food (1987).** Also in 1987, **Executive Order 133: Reorganizing the DTI** restructured DTI and granted it powers to develop and maintain an integrated and computerized marketing information system for domestic and international trade, industry, and investments. This facilitated the development of a database of buyers and sellers of domestic and international products, including agricultural crops and commodities.

In 1992, the **Integrated Agriculture Marketing Information System (AGMARIS)** established a systematic approach in assessing and responding to marketing information requirements of farmers and traders at the local level and policy makers at the national level. AGMARIS, in relation to AMNEWS, had a decentralized marketing information system to improve the access of users from provinces. In 1994, the AMNEWS and AGMARIS were integrated and renamed as the Integrated AGMARIS-AMNEWS Monitoring System. The integration intended to implement a comprehensive marketing information system for unprocessed agriculture commodities traded in major local trading centers.

[81] Manalili, Nerlita M. et al. 2015. Rapid Appraisal of Selected Postharvest Facilities in the Philippines. Philippines Institute of Development Studies, Discussion Paper Series 2015-31.

When **AFMA** was passed in 1997, it called for the establishment of a market information system for the use and benefit of farmers, fisherfolk, cooperatives, traders, processors, LGUs and the DA. The AFMA mandated the BAS to provide technical assistance to end users in accessing and analyzing product and market information. BAS collected data and disseminated the survey results of: 1) farm prices, 2) wholesale prices, 3) retail prices, 4) pesticide and fertilizer prices, and 5) marketing costs (including marketing costs, margins, and channels of distribution). Eventually, the functions and key personnel of the BAS were incorporated into the PSA through the **Philippine Statistical Act (2013)**. This law made clear that data from the PSA shall be the official statistics of the government. At present, the PSA administers the Integrated AGMARIS-AMNEWS Monitoring System of major commodities. The available information includes the price per unit, price range (high/low), and prevailing prices.

Going beyond data collection and management, marketing information should reach as wide an audience as possible. The passage of the new **Department of Information and Communications Technology Act (2015)** has helped address this concern with the establishment, operation, and maintenance of ICT infrastructure in unserved and underserved areas. This law sets up a new national level agency, the Department of Information, Communication and Technology (DICT) to oversee information and communications technology. DICT's agenda includes the deployment of fiber optic cables and wireless technologies to improve internet speed, provision of Wi-Fi access at no charge in selected public places including parks, plazas, public libraries, schools, government hospitals, train stations, airports, and seaports, and the development of a National ICT Portal.

IMPLEMENTING INSTITUTIONS

Key Implementing Institutions

- Agriculture and Fisheries Market Information System (AFMIS)
- Department of Agriculture (DA)
- Department of Agrarian Reform (DAR)
- Department of Interior and Local Government (DILG)
- Department of Public Works and Highways (DPWH)
- Department of Transportation and Communication (DOTC)
- Local Government Units (LGUs)
- National Food Authority (NFA)

As discussed above, the legal framework for marketing infrastructure is largely in place. The challenge for the Philippines lies in the poorly designed bureaucratic structures and ineffective implementation. Historically, there have been several reasons for this. First, there was a tendency to overcentralize the decision-making processes of infrastructure projects at the national level, which led to a lack of understanding of local needs. Second, during previous administrations, there was a politicization of the bureaucracy itself. This led to instances where projects were more focused on currying favor with votes over achieving a true development mandate for the country. Third, a lack of clear organizational and communication guidelines between national agencies and LGUs was a constant challenge, particularly in the case of hard infrastructure, which these LGUs were tasked to build and/or maintain. Fourth and most critically, there were inadequacies and shortages of technical skills and capabilities in managing infrastructure projects. The lack of overall capacity of LGUs has been found a recurring theme throughout this AgCLIR study. Fifth, there was the issue of underfunding. The data highlighted below shows how budgets have only recently started to consistently address infrastructure challenges. Finally, infrastructure projects have been rife with corruption. Worldwide, the

building of government infrastructure and the issuing of government contracts is one of the largest sources of corrupt practices. The Philippines is not different in this regard.

TRANSPORT INFRASTRUCTURE

In 2016, the Philippines allocated $15.5 billion (of the $60 billion total national budget) for public infrastructure. This is 34.8 percent higher than the previous year's allocation of $11.5 billion and almost four times that of the 2010 budget. **DPWH** oversees construction and maintenance of the Philippine national road network (15 percent of the entire network), as well as major flood control and water resource projects. As per their road infrastructure policy and strategy, DPWH prioritizes national roads serving designated key agricultural production areas and growth centers. In 2016, DPWH received the largest share of the infrastructure budget with $5.4 billion.

The DPWH has a series of historical weaknesses including a general lack of operational transparency and accountability. These have led to procurement related risks such as substandard or abandoned projects. The World Bank assisted the **Philippine Rural Development Project (PRDP)** to focus on insufficient financing for road maintenance (see text box below). Beyond governance, DPWH is notorious for its lack of coordination within its own offices as well as with other agencies of the national government and LGUs. For example, DPWH often builds roads that are immediately torn-up by other sections of DPWH due to interference with drainage. This situation only gets worse outside the mandate of DPWH with other agencies or LGUs departments.

The Philippine Rural Development Program

The PRDP is a $27.48 billion financial package that aims to improve the productivity of small farmers and fisher folk as well as their access to markets. The program is implemented by the DA. Infrastructure spend accounts for 70 percent of the program, and includes farm-to-market roads, bridges, tire tracks, communal irrigation, potable water systems, post-harvest facilities, production facilities, fish landings, fish sanctuaries, storage facilities, trading posts, green houses, solar driers, and slope stabilization. Small business and livelihood activities also benefit small-scale and poor producers through the provision of technical assistance, training, market linkages, and financial assistance.

DOTC is responsible for developing and maintaining the Philippines transport and communication systems. In 2015, DOTC had a budget of $1.2 billion with a specific increase of 22 percent for the agriculture sector. The DOTC used $310 million of their allocated funds for various airport and seaport projects.

The maintenance of the massive network of Barangay and farm to market roads has, since the implementation of the Local Government Code in 1991, been devolved to the **LGUs**.[82] A common problem in devolving the building and maintenance of road to LGUs is that the **municipal government** remains the entity that determines each Barangay's budget towards roads. The municipal governments tend to fully focus only in managing their own resources and responsibilities towards Municipal Roads, which are only a small part of the country's road

[7] http://www.gov.ph/downloads/1991/10oct/19911010-RA-7160-CCA.pdf

system. The reality of administrative practices has shown that either the municipalities assume that Barangays have already budgeted their own separate funds for road infrastructure or that they believe they have no role to play in the budget allocation towards Barangay Roads. Thus, rural Barangay roads get severely undermined due to the lack of sufficient funds, capacity and leadership in LGUs around road building and maintenance.

DA, DAR, and the Department of the Interior and Local Government (DILG): While the main overall infrastructure agencies are responsible for and receive most of the transportation funding, other agencies such as the DA, DAR and DILG also play significant roles in infrastructure projects. This speaks to the overlapping and conflicting relationship of mandates between agencies. Specifically, the DA manages the PRDP.

As 65 of the Philippines provinces are coastal, port facilities are critical to the economy of the country. Commercial ports are either public or private. Public commercial ports are owned and operated by the government. These cater to vessels weighing more than 30 tons. Private commercial ports are owned by an individual or a business entity. Fishing ports could be either government or privately owned. Feeder ports, which focus on linking neighboring small islands and nearby urban centers, are owned and operated by the government.

The PPA owns the clear majority of ports throughout the country. It either operates the ports directly or grants operating contracts to a port management company. The biggest ports are in the Manila International Container Terminal and South Harbor. These are operated under long-term concessions by the International Container Terminal Services Inc. and Asian Terminals Inc. Private ports are usually for private industrial use, with some exceptions such as the Harbor Center Port Terminal in Manila that serves as a commercial port for foreign and domestic ships but is not permitted to handle containerized cargo.

There are several ports under independent authorities, such as the **Subic Bay Ports Authority** or the **Cebu Port Authority**. These ports were set up to serve as competition to PPA and to anchor independent economic zones. There are also several ports that were devolved to the LGUs, including feeder ports built by the DOTC. The newest innovation in ports in the Philippines is the RoRo Terminal System that has been built to link transportation and development corridors. This provides an alternative to interisland ferry services. Under this system, a vehicle can drive onto the boat fully loaded. This means a container does not need to be filled allowing for smaller shipments to move economically. Also, loading and unloading fees at each port do not have to be paid. Finally, costs in time are decreased as vehicles move faster than the time taken for lodging and unloading cargo containers. Ro-Ro encourages the production and trading sectors along selected corridors by cutting down on the logistics costs between islands in both time and money.

Ro-Ro has been successful due to its ability to reduce high inter-island freight costs. Freight rates for container movements between Manila and Mindanao are 25 times the rate per kilogram compared to international shipping prices. This is the result of several factors including oligopolistic pricing of wharf handling services and a monopoly on inter-island shipping services. Beyond these factors, government regulation also plays a role in the high cost, with a ten percent VAT on services like shipping and a 34 percent income tax on shippers simply passed

onto the customer. The freight costs are extremely high in comparison to other ASEAN nations. These costs hinder overall competitiveness of all economic activities and just not agriculture.

Several major port investments are supporting ASEAN integration including the $24 million upgrade of the Iloilo and General Santos City ports. The PPA President Raul Santo said that the budget will be used to provide each port with two cranes. The project will increase the efficiency of the ports by almost three times. Despite these recent investments, PPA has been subject to a high level of criticism. The private sector believes that the PPA cannot be the policy formulator, implementer, regulator and financier all at the same time. It believes the PPA focuses on cost recovery and return on investment at the expense of service quality, and that this adds undue costs. In comparison, the Cebu Port Authority has less red tape, shorter offloading times and cheaper costs. As an autonomous port without the need for lengthy approval from a Manila based head office, approval and release of funds for port improvements are efficient. While it does not have the volume to compete with larger ports, it prioritizes passenger convenience and has modern facilities. Per interviewed CPA officers, with better internal control and effective management alone, it managed to raise revenues from $5 million to $26 million without needing to increase fee rates.

MARKETS AND STORAGE

The two types of warehouses used by farmers and traders in the country are the silo and the conventional warehouses. As of 2011, there were 2,020 silo units and 12,197 conventional warehouses. A large percentage of the silos are concentrated in Visayas (69 percent), with 20 percent in Luzon and 11 percent in Mindanao. For conventional warehouses, 56 percent are in Luzon, 32 percent are in Mindanao, and 12 percent are in Visayas. The range of technology in the silos and warehouses depends on ownership and usage.

The **Livestock 'Oksyon' Markets (LOM)** are accredited by the Bureau of Animal Industry (BAI), which is part of the DA. LOM's provide buyer and sellers the opportunity to transact business guided by scale weights and grading system. In 2014, there were 162 LOMs nationally. Again, these are largely concentrated in the Visayas (51 percent), Luzon (33 percent), and Mindanao (16 percent).

The **Fish Landing Facilities** are both public and private facilities. The private commercial fish landing centers numbered 444 in 2014 with most based in Mindanao. Municipal fish landing centers totaled 8,492 in 2014 with most located in Visayas (47 percent), Luzon (28 percent), and Mindanao (24 percent).

In addition, there are two types of food terminals: **Municipal Food Terminals (MFTs)** and **Barangay Food Terminals (BFTs)**. MFTs and BFTs are designed to function as distribution and marketing systems that offer safe and quality meat, poultry, fish, vegetables and fruits. They are funded by the DA, with some limited funding from LGUs for structural enhancement (i.e. traffic routing, parking areas). MFTs are designed to function as trading centers where growers can bring produce in large volumes for direct trading with wholesalers, thus reducing the need for layers of middlemen. MFTs are usually operated by LGUs, with oversight from a DA municipal agriculture officer. For the period of 2007-2013, about 186 MFTs were operational, with 69 percent classified as functional. There are several reasons why MFTs do not function,

including: 1) bad location, either in proximity to nearby markets or in a non-accessible area, and 2) the lack of sufficient LGU support in promoting the MFTs.

In contrast, BFTs serve as food distribution points at the barangay level, where farmers can bring their produce for sale, as well as purchase food and non-food products at low prices. They are either managed by the LGUs, a farmer or fishers' cooperative, or a regional council depending on DA's willingness and suitability. For the period of 2007-2013, about 1,258 BFTs were operational, with 88 percent classified as functional. Poorly functional BFTs are attributed to poor management of the facilities.

In contrast, MFTs are designed to function as trading centers where growers can bring produce in large volumes for direct trading with wholesalers, thus reducing the need for layers of middlemen. MFTs are usually operated by LGUs, with oversight from a DA municipal agriculture officer. For the period of 2007-2013, about 186 MFTs and 1,258 BFTs were established. At present, 88 percent of BFTs and 69 percent of MFTs are classified as functional.

The **NFA** is the government agency under the Office of the President in charge of ensuring supply and prices of staple cereals. NFA procures and markets rice and corn including operating storage facilities. The role NFA plays in the market is not satisfactory to either farmers or to other private sector actors. The warehouse operators and traders do not like the limits on supply or pricing structures, including on imports and exports. The farmers, in turn, do not like the rigidity in NFA's procurement requirements.

MARKETING INFORMATION SYSTEMS

As mentioned above, the AFMA provided for the installation of a market information system for the use and benefit of farmers and fisher folks, cooperatives, traders, processors, LGUs, and the DA. However, delivery of this system was poor, owning to an inability to take advantage of appropriate technology and a lack of clear division of responsibilities between DA, BAS, the former Agriculture Marketing Assistance Services, and the former Agriculture and Fishery Information System. In 2010, DA officially launched the **Agriculture and Fishery Market Information System (AFMIS)** that was a consolidation of the market information activities already being performed by DA.[83]

The Philippines was also the beneficiary of the FAO **Agriculture Market Information System (AMIS)** program. This three-year program (2013 – 2016) strengthened national capacities to produce and use accurate statistics, effectively monitor markets and produce relevant data for food security. AMIS focuses on testing and validating improved technologies, preparing guidelines and documenting field experiences, as well as training national statistical officers and DA in apply improved methodologies. While the commodity focus of AMIS was rice, the project was considered a success and could serve as a model for enhancing information systems for other agricultural commodities.[84]

Within the DA, the newly formed **Information & Communications Technology Service** (DA-ICTS) is responsible for providing leadership in the development and implementation of reliable

[83] http://afmis.da.gov.ph/.

[84] Further information AMIS is available from their website: http://www.amis-outlook.org/technical/philippines/en/.

and cost effective ICT systems. In 2016, DA-ICTS supported several marketing information functions, including the enhancement of AFMIS, the enhancement of the Agribusiness and Marketing Assistance Price Monitoring System, and the development of a crop production monitoring system.

In partnership with the University of the Philippines Los Banos, DA-ICTS runs the research project **Smarter Approaches to Reinvigorate Agriculture as an Industry in the Philippines (Project SARAI).** The project operates an integrated crop monitoring and forecasting system, which includes text weather advisories, active monitoring of crop production areas, an online knowledge portal and rigorous technology transfer. The current proposal under consideration aims to ensure that the governments initial investment in Project SARAI is mainstreamed in all the country's farming communities.

DA-ICTS is also currently engaged in several proposals that could fundamentally transform the provision of agriculture marketing systems in the Philippines. Building on both AFMIS and AMIS, the new DA Information and Communication Technology Service (ICTS), in partnership with PSA, DA Agricultural Marketing Assistance Service, the DA Agriculture and Fisheries Information Division, and the DA Philippines Council for Agriculture and Fisheries, is currently developing the **Farm-Level Market Exchange Systems (e-FLAMES)**. The goal of the system is to provide a web based system to offer a wide range of industry and trade information to farmers and traders. Specifically, the four objectives of the project are: 1) to increase the availability and accessibility of quality agricultural commodities at affordable prices at the community level, 2) to reduce middle men with the help of ICT, 3) to develop a virtual market for farmers and fisherfolk to be engaged in direct marketing to distributors, and 4) to encourage community empowerment and create livelihood opportunities. The expected output of the project is a web-based portal for agriculture and fishery trade, comparable to online e-commerce companies like Alibaba. The project is estimated to cost $30 million with an IT service provider providing the investment to be recouped through either a minimum percentage or advertisements. This proposal is currently pending review and approval by the DA Secretary.

Another proposal by the DA-ICTS is to develop the **Agri-Info Blast System**. This mobile technology aims to provide real-time agriculture and fishery information to farmers and fisherfolk. The Agri-Info Blast System pilot project will work by disseminating information through text messaging. The target beneficiaries are the 12 million farmers and fisherfolk that are currently in the Registry System for Basic Sectors in Agriculture. The service will be delivered by a solutions provider for free. This provider will recoup their investments through ad buys and advertisements. Opportunities for partnering with mobile manufactures as part of their corporate social responsibility will be explored.

Strong Nautical Highway Ro-Ro

In 2003, a policy allowed Ro-Ro ferry services to operate as an alternative to traditional long-distance interisland shipping services. The system allows vehicles to drive onto and off the ro-ro ferries without the need to offload cargos thus, affording savings in terms of handling cost (labor and equipment) and time. The Strong Republic Nautical Highway is composed of three major trunk lines: the western, eastern, and central. These three major lines consist of 12 main routes served by different shipping operators. The program focused on the building and rehabilitation of port facilities to accommodate 42 ro-ro vessels run by 25 shipping operators.

The impact of Ro-Ro has been a significant reduction in transport costs for traders in terms of cargo handling charges and wharfage fees. As a result of the opening of the nautical highways, (i) goods are being shipped more efficiently, (ii) transport costs have been reduced, (iii) new inter-island and regional links are being created, (iv) regional markets have expanded, (v) tourism has benefited, (vi) local area development is being accelerated, (vii) logistics practices are changing, and (viii) the domestic shipping industry is restructuring and becoming more competitive. It is estimated that the use of ro-ro offers a saving of about 12 hours in travel time between Mindanao and Luzon, and a reduction of about 30 percent in the cost of freight transport and 40 percent in the cost of passenger transport.

SUPPORTING INSTITUTIONS

Supporting Institutions

Association of International Shipping Lines (AISL)

Chamber of Customs Brokers (CCBI)

Confederation of Trucker Associations of the Philippines (CTAP)

Container Depot Alliance of the Philippines (CDAP)

Inter-Island Deep Sea Fishing Association (IDSFA)

Philippine International Seafreight Forwarders Association (PISFA)

Philippines Liner Shipping Association (PLSA)

Philippine Ro-Ro Operators Association (PROA)

Supply Chain Management Association of the Philippines (SCMAP)

United Port Users Confederation

The Philippines has an extremely vibrant and well-organized set of business associations that surround the supply chain and logistics industries. These associations serve a traditional role of advocating for their members, as well as protecting their economic interests of their members. The unique features of Philippines law that protect inter-island shipping or limit the foreign ownership of companies in the Philippines also apply to the transportation and logistics industry. The poor road infrastructure and congestion is a regular complaint for the industry. The **Philippines Liner Shipping Association (PLSA)**, the **Container Depot Alliance of the Philippines (CDAP)**, the **Supply Chain Management Association of the Philippines (SCMAP)**, **Confederation of Trucker Association of the Philippines (CTAP)**, **Association of International Shipping Lines (AISL)**, **Philippine International Seafreight Forwarders Association (PISFA)**, **United Port Users Confederation (UPC)**, **Philippine RORO Operators Association (PROA)**, **Inter-Island Deep Sea Fishing Association (IDSFA)** and the **Chamber of Customs Brokers (CCBI)** all support efforts by the government and the private sector to develop the Philippine Multimodal Transport and Logistics Roadmap. This roadmap is viewed by the private sector as addressing the long-term growth and development of the ports, roads and cold storage.

Each individual association also has specific issues as their focus. CTA, for example, is focused on issues like traffic congestion in metro Manila and the Government's effort to get older trucks off the roads. AISL is focused on issues like cabotage and the ability to provide interisland shipping services. SCMAP is focused on port congestion as well as issues like the price of electricity for cold storage. Associations such as the UPC, CCBI and CDAP are more port centric, while others like IDSFA and PROA are more focused on the infrastructure outside of Luzon and the ability of these ports and roads to support their businesses. Specifically, PROA lobbies to continue support for public funding to Ro-Ro facilities as opposed to containerized ports. The IDSFA is considering issues like cold storage facilities at fishing ports. The vast diversity of the issues that these private sectors organizations lobby in the infrastructure sector highlights the confusing array of rules and regulations across various government agencies.

In other AgCLIR chapters, the role of associations and cooperatives was explored in the business registration process, access to credit and land registration. In the access to market infrastructure section, associations and cooperatives are only now stepping into the void to act as a link to markets. To date, the most valuable market links for smallholder farmers have been through large multinational companies (Unifruitti) or large local companies (Jollibee). The

market links provided by these companies means higher prices to the farmers and guaranteed markets.

Increasingly, **Farmers' organizations** and **industry associations** are changing the structure and processes of agricultural marketing. For example, the **Northern Mindanao Vegetable Producers Association** successfully formed market clusters, based on farmers' capability, interest and capitalization. The Association served as the face to the market and organized the entire process. Beyond traditional players in the private sector, new technology players are attempting to disrupt traditional market channels. B2Bpricenow.com runs an e-marketplace through which farmers and cooperatives can market their wares, bypassing traditional trader networks that often manipulate market prices.

Development partners: Several donor institutions provided support to the country's infrastructure sector, including the ADB, JICA, the Australian Agency for International Development (AUSAID), the United Kingdom's Department for International Development (DFID), MCC, and the World Bank.

SOCIAL DYNAMICS

In the Philippines, gender concerns are embodied in two laws, namely: Women in Development and Nation Building Act (1991), and the Magna Carta (2009). The former promotes the integration of women as full and equal partners of men in development and nation. The latter seeks to eliminate discrimination against women by recognizing, protecting, fulfilling and promoting the rights of Filipino women, especially those in the marginalized sectors of society.[85]

The Philippines' DPWH recognizes gender concerns in road infrastructure development as reflected in its Guidelines for Mainstreaming Gender Equality Actions in Road Infrastructure Projects. The guidelines states that **"**In principle, all road infrastructure projects, both locally and foreign funded must be gender responsive and are expected to be compliant with this policy and that gender equality actions are to be executed at the planning, design, preconstruction, construction and maintenance stage. The execution of gender equality actions will be guided by gender tools - Toolkit for Making Road Infrastructure Projects Gender Responsive and are an intrinsic part of this order.[86]

Despite these initiatives, women remain to be at a disadvantage when it comes to access to transportation. In the rural areas, motorcycles or "*habal habal*" are the only choice of motorized transport both for passengers and cargoes alike. In a household, women must be dependent on men for mobility as very few Filipinas ride motorcycles unlike their Vietnamese and Indonesian counterparts. Access to marketing information is difficult for women in rural areas, just as it is for men, because of weak ICT infrastructure. Mobile phones are utilized more by men than women in the family, due to cultural practices. The women are often the economic decision makers

[85] Koirala, Krishna H. 2015. The Role of Gender in Agricultural Productivity in the Philippines: The Average Treatment Effect.

[86] Mercy Corp. 2015. Gender and Market Development: A Framework for Strengthening Gender Integration in Market Systems Development.

within the business they operate. Their inability to use a cellphone means that they cannot access critical market data timely.

RECOMMENDATIONS

Impact: High
Feasibility: Medium
Affordability: Medium

1. Enact legislation for the PPA to be either a regulator or a funder of port infrastructure, but not both: Undertake a process of legislative review, understand best practices and build a better PPA for the future of port development. This includes a wide stakeholder engagement and a drafting of legislation for consideration. It must take into consideration that the government needs to replace all lost revenue should the PPA change functions from being a regulator. Likewise, legislation needs to address monopolies in the industry.

Impact: Low
Feasibility: High
Affordability: High

2. Conduct a gaps analysis of the agricultural marketing information systems in the Philippines, as well as a technology needs assessment of what smallholders require to access these systems. Agriculture marketing information (particularly regarding daily price information, crop forecast, climatic risk, etc.), is critical to both smallholder farmers and larger agribusinesses. DA made very positive strides in improving the provision of these services through the newly established DA-ICTS. There is, however, a lack of a common understanding of all current and planned initiatives by the DA, development partners, and research institutions. As such, a mapping and gaps analysis would be beneficial to understand all the component pieces, how they fit together and where the information gaps may be for the agricultural sector.

Impact: High
Feasibility: High
Affordability: Low

3. Invest in Ro-Ro Corridors in new areas based upon commodity selections. The success of Ro-Ro model is undeniable. Despite this, there has been not much of focus on building similar commodity corridors that focus on crops and processing centers which could help launch an agriculture revolution in the Philippines. A recommendation from this study team is to select one production area and design a corridor to allow small farmers to participate in production, lessen their transport costs to market and allow a public private partnership around it, reflecting the government's commitment to PPP. In such a PPP model, the Government may consider building the feeder roads while the private sector builds a port and operates the ships.

TRADING ACROSS BORDERS

There is broad consensus that deeper integration of countries and communities into regional and international markets contributes to more stable food supplies and spurs development. The Trading Across Borders chapter is divided into two parts: Trade Policy and Trade Facilitation. Trade Policy pertains to a country's commitment to building and sustaining formal trade relations with its neighbors, its region, and international markets, through mechanisms such as mutual tariff reductions. Trade Facilitation refers to the simplification and harmonization of a country's international trade procedures, in line with current best practices and globally accepted standards. Trade Facilitation also looks at how procedures and controls governing the movement of goods across national borders–both by customs agencies and other border control authorities – can maximize efficiency while safeguarding legitimate regulatory objectives.

The Philippines has made good progress in liberalizing foreign trade. There are no export taxes, restrictions are limited to a few strategic commodities, and free trade agreements with ASEAN and other trading partners allow the country to enjoy preferential access to markets. Import tariffs have been greatly reduced, and while most-favored-nation (MFN) tariffs still provide relatively higher protection for agriculture, rates for ASEAN countries have been set to zero for all goods except rice and sugar. Some trade facilitation initiatives have been pursued, most involving the use of information technology applications for trade-related permits and documents. A good number of institutions and programs also provide various support for exporting.

Despite this positive enabling environment, the trade performance of the Philippines has been limited. In 2014, total exports were $62.1 billion and total imports were $65.3 billion, for a trade deficit of $3.2 billion (see Figure 10). The trade balance has been negative since 1975, except in 1999 and 2000 when positive balances of $4.3 billion and $3.6 billion were achieved. Most exports come from manufacturing with $51.6 billion in 2014 (83 percent), while the agriculture sector contributes only $4.6 billion (7.5 percent). Agriculture exports from the Philippines pale in comparison to Vietnam's $10 billion, Malaysia's $26 billion, and Thailand's $30 billion.[87]

However, there are encouraging developments in trade performance. The trade deficit has been on a downward trend since 2011 when it registered a high of $12.2 billion. Agro-based exports increased annually in the period 2008 to 2014 by some 9 percent, outpacing total export growth of 4 percent. Reforming burdensome SPS regulations, eliminating remaining quantitative restrictions [88] and tariff quotas, and further streamlining the Bureau of Customs (BOC) procedures can help further unleash the potential of agricultural exports. SPS measures are necessary for products to be accepted in international markets but their implementation can be made less onerous if processes discriminate by risk involved. The remaining quantitative restrictions and tariff rate quotas may be politically difficult to eliminate but the tariffication of

[87] Data from FAOSTAT.

[88] Quantitative restrictions are limits imposed on the volume or value of goods traded by a WTO member. The General Agreement on Tariffs and Trade (GATT) requires the general elimination of these restrictions — except in defined circumstances.

quantitative restrictions in 1996 has shown that it can be done without hurting the domestic industry, especially because recourse to trade remedies – anti-dumping, countervailing, safeguards and special safeguards – are legislated. With respect to BOC process streamlining, the agency has just been given a fresh mandate to modernize its systems to make the release or loading of goods faster.

Figure 10: Philippine Exports by value (USD$), 2008-2014

	(F.O.B. value in millions U.S. dollars)					Annual	Share	
	2010	2011	2012	2013	**2014**	**GR**	**2008**	**2014**
TOTAL EXPORTS	51,498	48,305	52,100	56,698	62,102	4.0%	100.0%	100.0 %
Ago-Based Products	2,922	4,015	3,579	4,248	4,660	9.0%	5.7%	7.5%
Forest Products	28	50	58	92	86	16.7%	0.1%	0.1%
Mineral Products	1,929	2,840	2,337	3,412	4,038	8.3%	5.1%	6.5%
Petroleum Products	371	648	465	843	446	(15.7%)	2.5%	0.7%
Manufacture	44,694	39,320	44,260	47,025	51,607	3.9%	83.5%	83.1%
Special Transactions	1,553	1,432	1,401	1,077	1,265	(3.1%)	3.1%	2.0%
Re-exports	612	672	369	194	282	(12.5%)	1.3%	0.5%
TOTAL IMPORTS	54,933	60,496	62,129	62,411	65,398	2.4%	100.0%	100.0 %
TRADE BALANCE	(3,435)	(12,191)	(10,029)	(5,713)	(3,296)	(13.1%)		

Source: Philippine Statistics Authority

LEGAL FRAMEWORK

TRADE POLICY

The Philippines has made good progress in liberalizing foreign trade with unilateral action supported by multilateral, regional and bilateral trade agreements. The country has been a signatory of the **General Agreement on Tariffs and Trade (GATT)** since 1979, a member of the **World Trade Organization (WTO)** since 1995, and committed to the **WTO Agreements on Agriculture and Sanitary and Phytosanitary Measures**. The country is also a founding member of ASEAN, established in 1967, and is thus participating in **the ASEAN Trade in Goods Agreement (ATIGA)** and various free trade agreements that the ASEAN forged with other countries, namely China under the **ASEAN-China Free Trade Area**, Korea under the **ASEAN-Korea Free Trade Area**, Japan under the **ASEAN-Japan Comprehensive Economic Partnership Agreement**, Australia and New Zealand under the **ASEAN-Australia-New Zealand Free Trade Agreement,** and India under the **ASEAN-India Free Trade Area**. It also

has a bilateral trade agreement with Japan, the **Philippines-Japan Economic Partnership Agreement**.

Key Laws and Regulations:

ASEAN Harmonized Tariff Nomenclature (2007)

DA AO No 1 - MAV Implementation Guidelines (1991 and 1992)

DA AO No. 8 and No. 9 - SPS Regulations on Imports (2008 and 2009)

RA No. 8178 - Agricultural Tariffication Act (1996)

RA No. 8550 - Fisheries Code (1998)

RA No 8751 - Countervailing Act (1999)

RA No. 8752 - Anti-Dumping Act (1999)

RA No. 8800 - Safeguard Measures Act (2000)

RA No. 10611 - Food Safety Act (2013)

RA No. 10863 - Customs Modernization and Tariff Act (2016)

The export policy regime is largely enabling. The country has had no export taxes since 1986, with an exception on logs. It enjoys MFN and preferential access to WTO member and ASEAN member countries. It enjoys preferential status in the European Union under the **Generalized System of Preferences Plus (GSP+).** The Philippines also enjoys preferential access to the United States for sugar in the form of a sugar export quota. The Philippines does, however, restrict the exports of rice, corn, sugar, selected fish spawners and breeders, fingerlings and planting materials to protect domestic supply of commodities deemed strategic for the economy.

Tariffs on imports have been greatly reduced but agriculture is relatively protected. MFN tariffs averaged 10.2 percent for agriculture[89] and 5.8 percent on non-agriculture products as of 2011.[90] The highest rates are for rice and sugar.

A few quantitative restrictions also remain in agriculture. Consistent with the **WTO Agreement on Agriculture**, the **Agricultural Tariffication Act** lifted all quantitative import restrictions on agriculture retaining only that for rice. The negotiated special treatment for rice under the WTO Agreement on Agriculture extends to 2017. Minimum access volumes or tariff quotas are in place for rice, corn, live animals except bovine animals, pork and poultry meat, coffee, sugar, onions, and potatoes, together representing some 0.9 percent of tariff lines, with in-quota tariffs of some five to 10 percentage points lower than out-quota. Fish products are also imported only when there is a need as prescribed under the **Fisheries Code of 1998**.[91]

Preferential treatment for ASEAN countries is significant. Tariffs on imports from ASEAN are all zero as of 2015, except for rice at 35 percent and sugar at five percent. As early as 2011, average tariffs for agriculture imports from other countries with agreements directly with the Philippines and with the ASEAN were also lower than MFN by 6.2 percent for Australia and New Zealand and 0.5 percent for India.[92] Figure 11 shows the country's average MFN tariffs for agriculture and the preferential rates given under the trade agreements earlier mentioned.

The elimination and reduction of tariffs do not leave the sector unprotected. Trade remedies like the **Anti-Dumping Act** and **Countervailing Act** are in place to protect against the deluge of

[89] Harmonized System (HS) chapters 1 – 24.

[90] World Trade Organization. 2011. Trade Policy Review: Philippines.

[91] The WTO Agreement on Agriculture does not include fisheries products.

[92] Republic of the Philippines Tariff Commission. Executive Order on FTAs. http://www.tariffcommission.gov.ph/special-executive-orders-on-fta.

imports through exporter dumping or subsidies. There is also the **Safeguards Measures Act** to prevent serious injury to domestic industries due to an increase in imports, in which special safeguards kick in if the volume or price of goods meets certain pre-determined limits.

Figure 11: Philippine Tariff Rates, 2011

Description	Tariff lines	MFN Applied (%)	ASEAN CEPT (%)	AK FTA (%)	AC FTA (%)	AANZ FTA (%)	AI FTA (%)	AJ CEPA (%)	PJ EPA (%)
Total	8,299	6.4	0.1	2.0	2.1	1.8	5.8	3.1	2.3
HS 01-24	1,271	10.4	0.5	4.4	4.3	4.2	9.9	6.3	4.7
HS 25-97	7,028	5.7	0.1	1.6	1.7	1.3	5.1	2.5	1.9
By WTO category									
WTO Agriculture	1,145	10.2	0.5	4.8	4.1	4.3	9.8	6.2	4.7
Animals and animal products	125	22.9	0.9	13.3	13.4	12.8	21.8	14.3	12.4
Dairy products	35	3.5	0.0	0.0	3.5	1.5	3.3	2.4	2.1
Fruit, vegetables and plants	295	9.9	0.0	3.8	5.1	3.7	9.4	5.9	3.3
Coffee and tea	40	16.9	0.0	12.5	1.9	8.5	16.8	11.1	10.8
Cereals and preparations	152	11.1	2.3	5.2	3.9	5.2	10.4	8.0	6.5
Oil seeds, fats and oils and their products	181	7.2	0.0	4.2	0.2	1.8	7.1	3.8	3.2
Sugar and confectionary	28	14.7	5.5	11.3	10.4	10.6	14.1	12.2	8.3
Beverages, spirits and tobacco	104	8.5	0.0	0.5	0.7	2.1	8.1	4.6	3.5
Cotton	5	2.6	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Other agricultural products	180	4.5	0.0	1.4	1.8	0.9	4.4	1.6	1.2
WTO Non-agriculture (incl. petroleum)	7,154	5.8	0.1	1.6	1.8	1.4	5.2	2.6	2.0
Fish and fishery products	206	8.7	0.0	1.0	3.7	2.3	7.8	4.7	2.9

Source: World Trade Organization

TRADE FACILITATION

The BOC has a fresh mandate to simplify, modernize and align its customs procedures with global best practices under the **Customs Modernization and Tariff Act (2016)**. This law also mandates the use of information and communications technology and other appropriate applications to make the release of clearances and goods faster. The agency is currently holding hearings to get private sector inputs for preparing the law's implementing rules and regulations.

The ASEAN also promotes several trade facilitation projects. One is the adoption of the **2007 ASEAN Harmonized Tariff Nomenclature** (the AHTN Protocol), which saw the Philippines' tariff structure simplified and reduced from 10,688 to 8,299 lines at the Harmonized System eight-digit level. The AHTN Protocol follows the six-digit HS commodity classification codes of the World Customs adding two more digits to the codes for subheadings used across ASEAN.

Implementing SPS measures are enabled partly by the **Food Safety Act (2013)**, which provides a single framework and comprehensive set of functions to protect consumers against unsafe food. Meanwhile, plant and animal protection in SPS is legally enabled by a host of laws that lack a common policy framework aside from providing different levels of SPS mandates. These laws are: **Act 3639 creating the Bureau of Animal Industry**, **Act 3101 on the regulation of biologics**, **PD 1144 creating the Fertilizer and Pesticide Authority**, **PD 1433 or the Plant Quarantine Law**, **Republic Act 1556 on the regulation of animal feeds**, **RA 8550 or the Philippine Fisheries Code**, and **RA 9296 or the Meat Inspection Code**.[93] Additional legal issuances requiring review, repeal, reform, and/or consolidation into a comprehensive SPS / Biosecurity Law are included in on the next page.

The differences in legal mandates across commodity-specific institutions has resulted in an SPS system that lack coherence, is highly uneven across commodities and confusing to the private sector, suggesting the need for a consolidation of these mandates into a comprehensive SPS or biosecurity law. SPS measures can vary by product and by trading partner depending on the appreciation of risk, the capability and the mandate of the regulating agency, but are one of the major deterrents to greater international trading of agriculture-based products from the Philippines.[94] Meant to protect humans against unsafe food and plants and animals against pests and diseases, these measures include requirements for prior import permits from regulatory agencies; health, SPS clearances from exporting countries; inspection at the border upon entry of imports or before shipment of exports; a host of supporting risk analysis, product and trader registration, facility accreditation, product treatment, and product testing, in either or both importing and exporting countries before imports and exports can be allowed. The requirements extend beyond the trading entity or traded product because traceability[95] is increasingly sought by developed country trading partners.

One specific indicator of the lack of coherence in SPS regulations is the wide divergence of fees collected on seemingly similar activities. This incoherence is compounded by a lack of easy access to information on fees, forms and regulations. This is discussed more in the following section of Implementing Institutions.

[93] Acts were passed before the Philippines became a republic, PDs were issued during the martial law years (1972 - 1986) and RAs, in this case, were enacted after 1986, facts which already say much about the possible differences across the laws given the differences in the eras they were crafted.

[94] There are also SPS measures for domestically produced food but many producers and most consumers are not conscious of these.

[95] The ability to know where the inputs for the traded product came from.

Some Legal Issuances Requiring Review, Repeal, Reform and/or Consolidation into a Comprehensive SPS / Biosecurity Law:

- Act 3639 creating the Bureau of Animal Industry selected sections.
- Act 3101 on regulation of biologics
- PD 1144 creating the Fertilizer and Pesticide Authority
- PD 1433 or the Plant Quarantine Law
- RA 1556 on the regulation of animal feeds
- RA 8550 or the Philippine Fisheries Code selected sections
- RA 9296 or the Meat Inspection Code
- RA 10536 on meat inspection
- EO 430 on biosafety
- RA 7160 or Local Government Code selected sections
- EO 460 on Autonomous Region in Muslim Mindanao selected sections
- RA 7227 on SBMA selected sections
- RA 8435 on agricultural modernization, selected sections
- RA 8048 and RA 10593 on coconut preservation
- P.D. 1208 creating the Abaca Industry Development Authority, selected sections
- RA 8485 or Animal Welfare Act, selected sections

IMPLEMENTING INSTITUTIONS

TRADE POLICY

The main body that defines trade policy is the **National Economic Development Authority (NEDA)** Board through its multi-agency **Committee on Tariff and Related Matters (CTRM)**. This cabinet-level committee is assisted by inter-agency sub-cabinet and staff-level working groups and the **Tariff Commission (TC).** The TC administers the Philippine tariff schedules and tariff nomenclatures. It monitors the impact of tariffs on the economy, national competitiveness, and consumer welfare. Finally, it evaluates and processes petitions for tariff changes; anti-dumping and countervailing duties; and renders rulings on tariff classification of imported goods.

BOC processes exports and imports at the border and undertakes a range of related functions to collect the correct customs duties and fees and to suppress smuggling, other customs fraud, and entry or exit of contraband. The **DA** endorses or approves policies specific to agriculture, like those relating to SPS functions of its agencies and Minimum Access Volumes (MAVs). With respect to the rice quantitative restrictions, the **Inter-Agency Committee on Rice and Corn**, led by the DA, determines quantities to be imported based on estimated domestic supply and demand. **NFA**, a state-trading enterprise, holds the sole right to import rice but it has allowed the private sector to import through tariff quotas.

Key Implementing Institutions

Trade Policy

Bureau of Customs (BOC)

Department of Agriculture (DA)

Department of Trade and Industry (DTI)

National Economic Development Authority (NEDA), Trade and Related Matters Committee

National Food Authority (NFA)

Tariff Commission

Trade Facilitation

Bureau of Animal Industry (BAI)

Bureau of Plant Industry (BPI)

Bureau of Fisheries and Aquatic Resources (BFAR)

Export Marketing Bureau

Fertilizer and Pesticide Authority (FPA)

Food and Drug Administration (FDA)

MAV Secretariat

National Dairy Corporation

National Meat Inspection Service (NMIS)

Philippine Coconut Authority (PCA)

Philippine Fiber Industry Development Authority (PhilFIDA)

Sugar Regulatory Administration (SRA)

TRADE FACILITATION

Several regulating agencies provide clearance for agriculture and agriculture-based imports and exports. These agencies are the **FDA** for processed food products; the **Bureau of Plant Industry (BPI)** for raw and fresh plant products; the **Bureau of Animal Industry (BAI)** for animal products, feeds, and biologics; the **BFAR** for fishery products; the **NMIS** for fresh and frozen meat; the **NFA** for rice import quantitative restrictions, corn import MAVs, and rice and corn exports; the **MAV Secretariat** for MAVs outside of rice, corn, and sugar; the **FPA** for fertilizer and pesticides; the **SRA** for sugar import MAV and exports, and the **Export Marketing Bureau** for coffee exports.[96]

There are also some other commodity specific agencies whose mandates give them jurisdiction and have expertise on specific products, like the **PCA**, **PhilFIDA**, and the **National Dairy**

[96] Department of Trade and Industry and the Export Marketing Board. 2015. Philippine Export Guidebook.

Corporation but only the BAI, BFAR and BPI are internationally recognized as issuers of the phytosanitary, sanitary and health certificates. In these cases, the latter agencies rely on the input of the former agencies for the issuance of certificates. The few overlaps in commodity jurisdictions have also been managed by cooperation agreements between the concerned agencies. For example, in the case of small animals that can be plant pests, both the BAI and BPI share regulations and collaborate on their respective jurisdictions.

The DA supported efforts to codify and make sense out of the various regulations, some of which have no SPS objective. A website dedicated to SPS issuances is in operation.[97] These initiatives give information, generally in raw form such as lists and texts of issuances by type, and require additional development to become helpful for stakeholders. A user searching for regulations on exporting some product will have difficulty identifying the relevant issuance, much less know if the issuance has been superseded. A user searching for current fees being charged by regulatory agencies is also likely to encounter difficulty. Figure 12 below presents a list of the available fees on export-related services by agency on selected products.

The facilitation of trade has been an ongoing concern, addressed by several projects that have yielded mixed results. The **Electronic-to-Mobile (E2M) Customs system** of BOC sought to allow the electronic handling of most trading transactions but failed to eliminate the manual submission and handling of regulatory documents and reduce broker/BOC personnel contact, including in duties assessment. The main component of E2M is an application module for import processing and covers mandatory online registration of traders/brokers, electronic lodgment of entry declarations through value-added service providers, manifest submission, submission of information from import licensing agencies, selectivity, payment, and online release. The system met with multiple criticisms. One main critique focused on the fact that the assessment of duties remains a manual, repetitive process (it comes after system assessment of duties, record of payment, trigger of release from the port operators' premises and, finally, inspection) and the fact that it still requires manual submission of permits and requests for inspection to regulating agencies. The system currently remains incomplete, especially in export transactions.[98]

[97] Government of the Philippines Official Gazette. SPS Legal Issuances. http://spsissuances.da.gov.ph/index.php/8-sps-legal-issuances.
[98] International Finance Corporation. 2012. Philippine Agribusiness Competitiveness and Benchmarking Study: Component on Trade Facilitation and Logistics.

Figure 12: Fees on Export-Related Services, by Agency, Selected Products

	Registration / Accreditation	Inspection of goods for export	Issuance of export certificate
Bureau of Plant Industry: Fresh fruits, vegetables	Not available	$0.08/MT or fraction of a ton	
Bureau of Plant Industry: Living plants	Not available	$0.20 per shipment of 10 pieces or less; in excess of 10 pieces, plus	
Bureau of Animal Industry: Carabao, Cattle, Buffalos	$40–$201 beef cattle breeder farms accreditation	Not available	Free
Bureau of Animal Industry: Swine, Sheep and Goats	$503–$1,000 for swine breeder accreditation, $201 for small ruminants	Not available	Free
Bureau of Animal Industry: Veterinary Products	$120 manufacturer registration; $48 importer/ distributor registration; $24 product registration for unbranded; $48 for branded	Not available	Not available
Bureau of Animal Industry: Feeds	$9 - $15	Not available	Not available
National Meat Inspection Service	$36 license to operate AAA facility; $40 for GMP; $100 for HACCP	Free	Not available
Philippine Coconut Authority	$4-$50 depending on capitalization up to $30,000; 1/5 of 1% of capitalization for capitalization above $30,000	$62+$19 per 2 container vans for desiccated coconut; $62+$0.09/MT for copra, cake, meal, pellets; $62+$12/MT for coconut oil and derivatives;	$6
Philippine Fiber Development Industry	$60–$109 for traders; $120-$362 for GBE; $24–$96 for buying station; $157–$217 for processor	Not available	Not available
Fertilizer and Pesticide Authority: Fertilizer	$72 filing fee; $80–$171 for manufacturer; initial reg. depends on capitalization; $20–$96 per additional activity; $36–$72 product registration local; $84–$121 imported	Not available	$12
Bureau of Fisheries and Aquatic Resources: Fish	Not available	$2 for sensory exam $6–$9 / test depending on lab test	$1 filing fee
Bureau of Fisheries and Aquatic Resources: Seaweed	Not available	$4–$6 / test depending on lab test	$1 filing fee
Food and Drug Administration: Food products	$40 - $180 for micro; $301 for small; $603 for medium; $1200 for large manufacturer license to operate; $300 for trader license to operate; $50 – $301 for product registration; All initial registration, renewal fees generally higher	Not available	$20

Source of Data: Various Administrative Orders/Issuances/websites

The BOC also adopted a **risk-based inspection system**, which facilitated more efficient movement of imports. Shipments are classified by risk: a high risk "red lane" where imports are subject to physical examination and documentary review implying an average of one to two days for clearance; a moderate risk "yellow lane" which requires documentary review and takes an average of four hours for clearance; and a low-risk "green lane" where goods are not subject to any documentary review or physical inspection and takes an average of two hours for clearance. The BOC also has "super green lane" where clearance is immediate. To use the super green lane an importer needs to: 1) be accredited by BOC, 2) be a registered user of a remote lodgment facility and holder of a certificate of registration, 3) have actively imported for at least one year at the time of filing the application, 4) be a regular importer of the same type of product(s); and 5) be willing to undergo voluntary audit.

The other trade facilitating initiative promoted by the ASEAN is the pursuit of a **National Single Window (NSW)**, a computer system which allows traders/brokers to acquire, electronically, all the necessary supporting licenses/clearances/permits for imports and exports declarations. The NSW was launched in January 2010 at the Manila ports, with four priority government agencies included. By 2011, it was reported live in 30 agencies, with ten more non-permit-issuing agencies to be connected to the server.[99] The NSW, however, lacked an interface that would send the NSW-approved permits and clearances automatically to e2m-Customs. The full development and implementation of the NSW was derailed for two reasons: 1) it was not considered a priority initiative by the Aquino administration, and 2) the bidding process for phase two of the project was declared a failure by the government in 2012 after it rejected both joint venture bids that were submitted.[100] The concept is being pursued again under a new project name, still focused on the interoperability of systems of regulating agencies and BOC, with the new Department of Information and Communications Technology taking on a key role.

The DA also automated its SPS import clearance system under the **DA Trade System**. The facility, used by the BAI, BFAR and BPI, enables accredited importers to submit their applications, be validated, and pay fees electronically. It eliminated manual steps such as the submission of application form and support documents, over-the-counter payment of fees, manual typing of forms, physical signature on documents, and notarization of the import permit. This was possible because an earlier initiative on streamlining and harmonization of SPS measures saw agreements among the concerned agencies to harmonize forms and approval processes for import permits. The DA Trade system operates 24/7 to process electronically filed applications and arrange for the auto-debit of import permit fees and their approval. Improvements in cycle time from hours to less than 10 minutes and cost reductions of up to 75 percent have been reported. In addition, documents handled by importers and agencies were reduced, response time became more predictable, and compliance with policies and procedures, improved. The system was recently enhanced to allow the MAVSec to electronically receive, process and approve applications for MAVs.

[99] International Finance Corporation. 2012. Philippine Agribusiness Competitiveness and Benchmarking Study: Component on Trade Facilitation and Logistics.

[100] http://www.portcalls.com/phs-national-single-window-2-project-bidding-fails/#

SUPPORTING INSTITUTIONS

Key Supporting Institutions

Bureau of International Trade Relations

Center for International Trade Expositions and Missions

Export Development Council

Export Marketing Bureau

National Competitiveness Council

Philippine Exporters Confederation, Inc.

Philippine Trade Training Center

Trade Policy and Procedures Simplification Committee

There is no shortage of institutions, including public-private bodies, purely private organizations, and government agencies, supporting the trade policy formulation and trade facilitation. The **Export Development Council**, a public-private partnership, was created by the Export Development Act to develop and oversee the implementation of the Philippine Export Development Plan. The Export Development Council is currently provided secretariat support and is housed by the DTI. The Export Development Council has a **Trade Policy and Procedures Simplification Committee** that focuses on recommending trade policies that would strengthen the export industry, including 1) simplifying systems and procedures pertinent to export to reduce the time and cost of doing business, 2) optimizing the use of information technology in streamlining the systems and procedures pertinent to export, and 3) assisting in ensuring that the tariff structures favor national interests.[101]

The **NCC** is another private-public sector institution supporting government efforts to increase the competitiveness of Philippine industries. Its working group on the NSW is helping to 1) identify strategies, activities, and steps that would increase transparency in cargo processing, 2) provide a more accurate, timely, and cost-efficient exchange of trade information, 3) reduce customs operational costs, 4) streamline processing of import and export clearances and permits, and 5) improve BOC revenue collection. The DTI Competitiveness Bureau serves as the NCC Secretariat.[102] Among the new projects being proposed for the CNN is Project Repeal, which seeks to streamline the regulatory system for industries, including agribusiness, by reviewing the legal basis of regulations and working to delist, amend, consolidate or repeal those that have become irrelevant and unnecessary.[103]

The **Philippine Exporters Confederation** is the umbrella organization of Philippine exporters. It is a non-profit private organization mandated to strengthen the country's export industry through its export promotion and development programs.

[101] Export Development Council. About Us. http://www.edc.net.ph/page.php?view=about_us

[102] National Competitiveness Council. About Us. http://www.competitive.org.ph/about-us/about-ncc

[103] Press releases indicate that NCC's TWGs have initially identified for review or action 17,388 department orders and issuances from eight government agencies namely: Department of Finance, the Senate, Department of Trade and Industry, Department of Tourism, Department of Budget and Management, Department of Energy, Land Transportation Franchising and Regulatory Board, and Securities and Exchange Commission.

Figure 13: Processes for the Export of Fresh Mangoes and Import of Meat

Process to Export Fresh Mangoes

1. Destination country conducts pest risk analysis of Philippine mangoes,
2. Philippines and destination country agree on an export protocol that involves vapor heat treatment (VHT)
3. Exporter requests accreditation of VHT facility from BPI. BPI inspects facility and grants accreditation. Destination country inspector may audit facility.
4. Exporter registers as importer with BPI. Broker registers with BOC. BPI and BOC grant registration.
5. Exporter requests BPI for inspector to monitor mango treatment.
6. Exporter treats mangoes with BPI inspector monitoring. Inspector signs phytosanitary certificate of mangoes.
7. Exporter or broker submits export declaration and phytosanitary certificate, pro forma invoice and packing list to BOC.
8. BOC inspects goods and issues authority to load with reference number and returns export declaration to exporter/broker.
9. Copy of export declaration is forwarded to Arrastre, exporter/broker pays Arrastre and wharfage fees.
10. Ports authority inspects cargo, cargo is loaded, certificate of inspection and loading is issued.
11. Exporter/broker submits certificate of inspection and loading to BOC.
12. Exporter sends phytosanitary certificate, commercial invoice, packing list, and bill of lading to destination country importer.

Process to Import Meat

1. BAI and NMIS inspect facilities in source country.
2. Philippines accredits inspected facility as exporter.
3. Importer requests accreditation of processing plant and/or meat warehouse/cold chain facility.
4. Importer registers as importer with NMIS, Broker registers with BOC, NMIS and BOC approve registration.
5. Importer requests import permit from NMIS, NMIS grants import permit.
6. Exporter requests sanitary certificate from source country authorities, sends copy of certificate to importer.
7. Exporter ships product and sends importer packing list, bill of lading, commercial invoice.
8. Importer/broker lodges entry declaration through VASP. E2M assigns reference number and calculates taxes due.
9. Importer prints temporary assessment notice and fills up original copy of entry declaration indicating reference number and attaches commercial invoice, packing list, bill of lading, assessment notice, import permit and sanitary certificate and submits these to BOC.
10. BOC conducts document check and computes payment due. E2M triggers payment.
11. Exporter pays port charges and gets gate pass.
12. Cargo is transported to cold storage/warehouse.
13. Importer/broker submits request for inspection to NMIS. NMIS goes to facility, opens containers and inspects cargo.
14. Importer unloads meat from container.

DTI also has several agencies involved in export promotion. These include the **Bureau of International Trade Relations**, which provides analysis and develops the Philippine's positions for negotiations on trade agreements; the **Export Marketing Bureau**, formerly the Bureau of Export Trade Promotion, which provides various assistance and services to exporters, including market matching, industry and market analysis, and market information; the **Center for International Trade Expositions and Missions**, which promotes the Philippines' products and services worldwide through trade fairs and missions and other export promotion activities; and the **Philippine Trade Training Center** which provides training on entrepreneurship and exporting for micro, small and medium sized enterprises.

SOCIAL DYNAMICS

There is widespread perception that policies and practices surrounding imports and exports have a social bias. The continued high trade protection for rice is rooted in the belief that, as a country with a huge population, the Philippines needs to be self-sufficient in this main staple to have food security. Numerous studies have shown that 1) pursuit of rice self-sufficiency has meant and will mean inefficient use of resources better spent on other crops with export potential, 2) rice policy has not lifted rice farmers out of poverty, 3) support for rice has increased rice prices to the extent that poverty incidence is kept higher, and 4) the country can attain food security by other means. Despite this evidence base, the frequent response of policy makers is that rice protection is a political issue more than an economic one, and that rice is a political crop. Somehow this insistence on the importance of rice self-sufficiency has affected foreign trade, not just in the sense that export crops are starved for support, but also in terms of the populace's general attitude towards imports and exports. It appears that there is little awareness of how imports have brought down prices and made goods available for consumers of agriculture products or how exporting has the potential to increase farmers' incomes. The pervading belief is that agricultural imports displace farmers who then remain poor and exports will only enrich the traders. This may well be true given the state of infrastructure and information that hinder farmers from getting a more equitable share of the profits in the value chain.

Limited awareness of the importance of SPS measures is apparent. Price premiums for quality do not easily reach farmer, so farmers are not concerned about quality issues. This results in situations where exporters cannot find high quality raw material supplies to satisfy demand, losing the chance to demonstrate reliability as a supplier and establish longer-term relationships with markets. The other issue with SPS measures, which affects customs procedures as well, is the history of pervasive corruption in many government services. Regulations are thus, commonly viewed as opportunities for rent seeking. A stronger information campaign on the importance of food safety and quality to human health and the economy, and a continued focus on limiting opportunities and incentives for corruption will help address these issues.

With respect to gender in trading across borders, there are no indications that women have fewer opportunities to participate as traders or as regulators. While no numbers on the distribution of accredited importers / exporters or regulatory personnel by gender were obtained, field interviews show that a good number of women are engaged in this field and that there are

no legal or institutional barriers to the participation by women. Some tasks may require long or irregular hours; e.g. the treatment of mangoes for exports can run for several days straight when supply is available and regulators are required to monitor the process entirely before issuing the phytosanitary clearance for export. This poses some constraints as women are still expected to be the manager of the household. Some female quarantine officers tell stories of how they need to board and inspect a ship at nighttime in the sea before it docks, which again poses challenges as women are expected to be in the house by nightfall. However, there has been a growing recognition of the importance of making working conditions hospitable for women. NMIS, for example, adjusted the standard design for slaughterhouses, typically areas frequented and used by men, to include facilities for women.

RECOMMENDATIONS

Impact: High
Feasibility: Medium
Affordability: Medium

1. Transform SPS regulatory systems to become more risk-targeted, subjecting selected burdensome processes like inspection of goods with selectivity rules: All SPS regulations, including the most expensive and burdensome inspection of products at borders, are uniformly implemented across all players. However, risk varies by player and agencies can use risk management strategies to lessen the regulatory burden where there is less risk (for example, for those who have demonstrated a history of compliance) and focus regulatory effort where risk is unknown (for example, for those who have yet to establish a history of compliance). Transforming the SPS systems will require new skills to properly assess risks across players and to craft rules on selectivity that remain transparent, fit, efficient and proportionate to risks.

Impact: Medium
Feasibility: Medium
Affordability: High

2. Support legislation that will provide the DA with a cohesive policy framework for the SPS functions undertaken by its agencies: This will trigger the streamlining of regulations towards a common focus, correct overlapping, eliminate unfit processes, and provide an updated legal basis of the agencies' performance of SPS functions. This will also serve to repeal legal issuances that would be contrary or not consistent with the cohesive policy.

Impact: High
Feasibility: Medium
Affordability: Medium

3. Assist the FDA, DA and LGUs to fully implement the Food Safety Law: Support efforts to fully implement the Food Safety Law by assisting the implementing agencies, namely the FDA, the DA and the LGUs to acquire the requisite capacities and resources. The FDA has a broad mandate that will require considerable human and technical resources (e.g. laboratories) and streamlined systems, supported with information technology applications for facilities. Interviewed business entities consistently reported how merely applying for licenses to operate and product registration from the FDA takes too long. An improved FDA system that is linked with those of DA and LGUs will make it easier to pursue integrated strategies that can help address the requirements of traceability in a farm to table approach to food safety.

4. Hasten the establishment of a National Single Window by assisting DICT, DOST, BOC, and other relevant regulatory agencies to fully implement interoperability of import/export processing systems: The processes at the port of exit and entry require coordination and exchange of information and documents among the agencies involved in the process. The efforts to institutionalize a National Single Window have been stopped but the benefits of having such a system remain recognized. Automating the exchange of information and documents will greatly (a) reduce the handling of papers that increases the opportunity for fraud and (b) improve the response time of the agencies.

Impact: High
Feasibility: Low
Affordability: Medium

COMPETING FAIRLY

Competition is at the heart of any successful market economy. Effective competition is necessary to advance economic efficiency, consumer choice and welfare, and overall economic growth and development. Competition forces producers to improve their efficiency and to offer the most attractive array of price and quality options in response to consumer demand. However, free markets do not automatically create a competitive environment. Left unchecked, firms may engage in practices that undermine competition. Firms may also seek the assistance of the government to shield them from the harsh realities of competition. As such, an array of enforceable laws, competition advocacy and consumer protection measures are necessary to ensure an efficient and well-functioning competitive environment. In agriculture, the competitive environment can be of heightened concern because it produces essential products purchased by all consumers, including the poor who are disproportionately affected by anticompetitive activities.

The context for fair competition in the Philippines is complex. Much political and economic power remains concentrated in well-established networks of wealthy families, as it has for generations. A recent Organization for Economic Coordination and Development (OECD) Investment Climate Review, for example, described the Philippines as: "an economy characterized by private conglomerates with strong ties to the political elite and a weak competition culture."[104] The State engages deeply in the economy, especially in agriculture. Regulatory barriers are common for agricultural products and price controls for key commodities remain in place, with rice, sugar and corn especially controlled. Decades of agrarian reform have left the country with millions of very small farms, thousands of cooperatives of widely varying capacity, often poorly run, and an unclear status for the remaining farms measuring over five hectares.

The country's patchwork legal framework against collusive behavior and unfair trade has only very recently received the possibility of cohesive leadership, with the 2015 passage of the Philippines Competition Act and the creation of the Philippines Competition Commission (PCC). The Commission will have its work cut out for it, and will need strong support from both the Executive Branch and the judiciary. It is uncertain if this support will be forthcoming. As the OECD noted: "The effectiveness of the new Act will come down to its implementation and the ability of the new Competition Commission to take-on the anti-competitive practices of incumbents that are considered the norm in the Philippines."[105] Changing norms is always an uphill battle, and this should be expected to be a long-term reform process.

The Philippines Compact Team has made clear that they are especially interested in how MCC funding could help increase commercialization, productivity and income for smallholder farmers.

[104] OECD, 2015, Investment Policy Review Philippines, p. 194.

[105] Ibid.

This focus is hardly new[106], but remains a government priority. This chapter, and the chapter on Enforcing Contracts, will thus be largely framed through this smallholder "doing business" lens, especially that of ARB's, who represent millions of smallholders. It will look at competing fairly from the viewpoint of how smallholders may be harmed by abrupt, and perhaps collusive and illegal, practices up and down respective value chains. It is hoped that this more "bottom up" lens will yield a useful perspective, and highlight issues that might not be evident from the more standard formal law approach.

LEGAL FRAMEWORK

After over 20 years of legislative discussion, the Philippines adopted the **Philippine Competition Act** in July 2015 (the Competition Act), establishing the PCC and granting it broad oversight responsibility. The PCC was formed and passed its initial enabling regulation in 2016. This fulfilled the Philippines' 2010 commitment to develop competition law and policies under the **ASEAN Regional Guidelines on Competition Policy** by the end of 2015, leaving Cambodia as the only ASEAN state without a competition law. While ASEAN does not have formal enforcement powers against members, the timing of the passage of the Competition Act, after so many years of delay, clearly demonstrates ASEAN's soft power. It also demonstrates President Aquino's strong advocacy for the new act.

Key Laws and Regulations

Act No. 3815 - Revised Penal Code (1930)

ASEAN Regional Guidelines on Competition Policy

RA No. 386 - Civil Code of the Philippines (1949)

RA No. 7581 - The Price Act (1991)

RA No. 10667 - Philippine Competition Act (2015)

Rules and Regulations to Implement the Competition Act

While the Competition Act started off looking much like United States anti-trust law, over time it became more based on the European Union model, particularly in terms of the anti-competitive agreements and abuse of dominant power provisions. This approach is in line with regimes adopted in other ASEAN countries, as well as more broadly across the wider Asia Pacific region.[107]

However, while the Competition Act promises the potential for real progress, it was weakened by non-standard clauses, reportedly inserted by vested interests seeking to protect their positions. The OECD, for example, noted a highly discretionary clause exempting "good faith" predatory pricing as highly worrisome, as well as a clause granting the PCC overly broad and vague powers to exempt entities from the Act.[108] The OECD also raised concerns about the distortive impacts of government-set pricing for basic commodities, under the **Price Act (1991)** designed for emergencies, which has now become the norm.[109] While the Philippines has had waves of liberalization and privatization, the new Competition Act rests on an old and rather uneven pre-existing basis of law, including the **Penal Code (1930)**, the **Civil Code (1949)** and

[106] For instance, over 53 years ago, the Agricultural Land Reform Code, Republic Act 3844 stated the clear policy goal "To create a truly viable social and economic structure in agriculture conducive to greater productivity and higher farm income." Section 2 (3).

[107] Change, Clifford. 2015. A Guide to the Philippine Competition Act.

[108] OECD. 2015. Investment Policy Review Philippines.

[109] Ibid.

sector specific legislation. It also reflects existing practice and cultural norms, where large state influence in many aspects of the agriculture sector is still very common, and family firms dominate.

Both law and administrative practices have closed off key segments of local markets for rice, corn and sugar. This has, predictably, led to high prices and high profitability for the large domestic players who are protected by DA, typically with very active participation from well-organized industry associations. Experts interviewed noted domestic sugar prices as currently pegged around 30 percent higher than excluded Thai imports. Other price-regulated and legally blocked markets for key agricultural inputs also show distortions, and are highly resistant to reform.[110] The PCC is very aware of government-caused market distortions, and of the need for it to work actively to decrease their anti-competitive results. Some of the most important and difficult fights for the new PCC, with the greatest possible impact on smallholder farmers and consumers, may well be with State-protected key crop value chains in the agriculture sector. Both regulators and their protected producers will likely protect their privileges.

While the Competition Act did draw together some disparate powers under the PCC, and provided the PCC with authority to set overall policy and coordinate, some potentially strong legal enforcement tools remain scattered throughout various agencies. The **Price Act of 1992**, for example, can impose between five and 15-year prison sentences and modest fines for cartel behavior in its list of covered commodities and basic products. The Act imposes an automatic price control in periods of calamity or emergency. This power appears to have been imposed extensively. It also allows the President to impose controls upon findings evidence of price manipulation. This part has been used less frequently. As of late 2015, this prison power had never been used, although the price setting power has been used extensively.[111] While the Price Act nominally only applies in emergencies, it provides a widely stretched loophole permitting price controls "whenever the prevailing price of any necessity or prime commodity has risen to unreasonable levels."[112]

Executive Order 45 in 2011 created a devoted Office for Competition (OFC) under the Ministry of Justice. Prior to this, competition was governed largely by sectoral regulators or industry specific laws, which left substantial gaps in coverage of anti-competitive practices. Eventually, with a modest staff and development partner support, the OFC was able to do some of the important analytical work needed to highlight competition problems, begin prosecutions and start to change the discussion around competition in the Philippines. The OFC's analysis of the onion and garlic cartels led to prosecution, and a roll back of consumer prices when collusive import restrictions were lifted. The OFC's careful and well publicized analysis of suggested retail pricing raised important questions about the use of law and regulations by the State to maintain market distortions. Although the OFC had strong backing from President Aquino, and accomplished a great deal with a small staff, the lack of an overall enabling framework hampered its enforcement capacity. With the passage of the Competition Act and formation of

[110] See for, example, a 2015 Article in which the protected Philippine Flour Millers Association defends flour prices that are between 29-41% higher than in other ASEAN countries. (Accessed November 17, 2016). http://www.philstar.com/business/2015/07/05/1473259/pafmil-says-local-flour-good-quality.

[111] OECD. 2015. Investment Policy Review Philippines.

[112] Government of the Philippines. 1992. Price Act, Section 7, Paragraph 5.

the PCC, the OFC has passed much of its work over to this permanent and independent agency.

The PCC's first set of **IRR for the Competition Act** just came into force in late June 2016, focused mostly on mergers and acquisitions. The IRR largely repeat the Competition Act provisions regarding abuse of dominant position and anti-competitive agreements, and provide more detailed information regarding notification of mergers, expressly including joint ventures. The IRR replaced transitory PCC rules issued in an earlier circular.

PCC staff noted that they are also working on a procedural fairness circular, which should at least, in part, address concerns mentioned by the OECD, about the wide PCC discretion to grant and withdraw exemptions from coverage under the Act. PCC staff is working on another rule to provide more detailed enforcement guidance. Further PCC guidance in the form of circulars and clarifying notes will doubtless be issued by the PCC as need arises and the PCC comes up to full staffing (see below, Implementing Agencies). Completing, and then defending and implementing the regulations around the new Competition Act will take more time, further rulemaking and political will.

The Competition Act provides for a two-year safe harbor grace period, during which companies can bring their "pricing strategies, market approaches, contractual arrangements, and commercial transactions (into)… compliance with the provisions of the Competition Act."[113] PCC staff is devoting substantial attention to answering questions about this grace period, and providing compliance guidance to enquirers.

There is, of course, an on-going discussion about whether competition authorities should consider the distributional fairness issues of cartel behavior at all, or whether they should only focus on efficiency. The Competition Act does contain a clause permitting the PCC to consider effects on the less fortunate members of society. Experience will show how, or if the PCC chooses to use this in practice, or to keep its focus on the more standard efficiency concerns.

Key Implementing Institutions

Congress
Courts of Appeal
Development Agencies
Department of Agrarian Reform (DAR)
Department of Agriculture (DA)
National Economic Development Agency (NEDA)
National Economic Philippines Competition Commission (PCC)
National Food Authority (NFA)
Office for Competition in the Department of Justice (OFC)
President's Office
Philippines Competition Commission (PCC)
Philippines Port Authority (PPA)
"Whole of Government"

IMPLEMENTING INSTITUTIONS

The key institution governing competition policy is the **PCC**, which was formed in February 2016. The PCC currently has a staff of 75, with 25 job offers pending and an active ongoing recruitment for another 100 as of November 2016. PCC staff see their current funding as adequate for their expected operations for 2016, and start up is more constrained by the government recruiting processes than funding. The PCC is in full start up mode, with many new hires (a high percentage of which are from the private sector), has a great deal of enthusiasm and much to learn about how to define and implement

[113] Change, Clifford. 2015. A Guide to the Philippine Competition Act.

effective competition policy.

The PCC has a chairperson and three full time commissioners (who currently include an economist, an attorney and a businessperson). One additional commissioner position is vacant. The PCC has quasi-judicial, policymaking and coordinating functions under the Competition Act.

As noted, immediately prior to the creation of the Commission, responsibility for researching and pursuing anti-competitive behavior was vested in the **OFC**. Under the new Competition Act, the OFC's role now is limited to prosecuting criminal cases, after investigation by the PCC. The PCC has recruited several OFC staff members.

PCC staff members are currently working with **NEDA** staff and consultants to develop the competition chapter to the National Economic Plan for the new administration. This Plan will provide the outline of how the government hopes to address competition issues during this term. Strong Presidential support was essential for the creation of the PCC under the last administration, and will likely be essential for its success under this one. This plan, once accepted, should provide a basis for the PCC's work during the balance of the Duterte government.

While the Competition Act provides the PCC substantial independence, it is a very new and untested agency, operating in a political environment where truly independent agencies are a rarity. As the former head of the OFC noted in a co-authored 2014 article: "Regulatory practice in the Philippines has shown that whenever controversial issues arise, the regulatory agency usually adopts a hands-off policy and leaves the final decision to the President. This has made the President a powerful interventionist element in resolving conflicts and has made the President and not the regulatory agency as the final regulator."[114]

Even if the PCC can establish and defend more independence than is the norm, it will need the support of other main implementing institutions of government and strong public support to be effective in working against wealthy and powerful entrenched interests. Thus, a "whole of government" approach is key. The **NFA**, for example, may come under PCC scrutiny for its distortive market behavior. The **PPA**, which has long tolerated and benefitted from allowing high prices and poor service from its few permitted, coddled carriers, is another obvious example of an agency that could be threatened by a strong PCC. The **DA**, with its large subsidies and heavy involvement with providing and regulating key pieces of the country's agricultural infrastructure, may fall short of fostering fair, open and efficient competition. Similarly, the **DAR**, is far more mandated to protect smallholders and cooperatives, than to focus on how to make them compete in open markets.

The PCC does not have power to strike down the laws and regulations that provide such rich soil for anti-competitive practices to thrive. If the branch regulators resist reforms that the PCC finds necessary, as they most likely will, Presidential pressure may help, but may also need to be backed by Congressional action to revise such flawed underlying laws. The PCC can easily make wealthy and powerful enemies who have much to lose from the loss of their privileges. PCC's energy can be sapped with Congressionally mandated budget cuts, heavy lobbying from

[114] Aldaba, Rafaelita M. and Geronimo S. Sy. 2014. Designing a Cooperation Framework for Philippine Competition and Regulatory Agencies, Philippine Institute for Development Studies Discussion Paper.

protected industry, intra-governmental turf wars and protracted litigation in the clogged court system of the Philippines. PCC is particularly vulnerable, as no judges have yet been trained to understand and defend the PCC in its work.

Much of the PCC's work over the next few years will likely concentrate on conducting targeted research, on educating and convincing the other government agencies to back PCC's suggested approaches and to build public support. In conversations with experts about competition policy, as in multiple other areas, uncertainty was expressed about the position **the Duterte administration** would take. While the new President's law and order positions are well known, key economic policies remain rudimentary. As the PCC and Competition Act were very much products of the Aquino administration, and deal with highly complex, technical and politically sensitive issues, only time will tell how much support is given by the current administration.

The general impression conveyed is of a new government that favors very active state involvement with markets, direct and visible state investments, is straightforward, and takes charge of solutions. The style is more the clenched fist of Duterte campaign ads, than the invisible hand of a government, analyzing carefully to ensure fair rules of market play. For example, the DA website gives high profile visibility to an 80 page PowerPoint presentation about the future of agriculture by the new Secretary.[115] The approach strongly emphasizes the need for food self-sufficiency in key crops and seems to adopt a state-driven production model to achieve it, with state-led marketing initiatives to access export markets, strict border controls to stop smuggling and planting of 600,000 hectare of coconuts in an effort to ensure that the Philippines regains its number position in coconut exports. While the approach promises looser credit for smallholders, at least in its general outline, it does not address systemic issues of incentives, cartel behavior, regulatory capture or the DA's role as a market player. The new government is currently defining its approaches, and more will be known as plans are given more detail, and actions are taken.

It will take hard work and patience for those fostering the market-focused, technocratic approach of the PCC to win the needed backing from across the whole of government. The PCC will need to pick its battles carefully, and align them well with Administration priorities and approach. In so far as the new Administration is willing to take on vested interests and experiment with prying open closed markets to achieve food security and fairness goals, the PCC may find the support it needs, probably by showing success in niche areas first.

The PCC is currently mostly focused on improving competition in the telecoms and energy sectors. When staff was asked where the focus would be in agriculture, they named the key crops of rice, sugar and corn. They also expressed interest in looking at possible monopsony behavior in the often vertically integrated supermarket chains. They are considering value chain approaches to studying possible market distortions in other key agricultural products, but these are not on the immediate agenda. The regulation of ports has also been cited by multiple sources as highly problematic from a competition standpoint, especially with the PPA acting as

[115]Department of Agriculture. The Philippine Agriculture Today and the Future. http://www.da.gov.ph/images/PDFFiles/otherspdf/2016/jul14_2016/The_Philippine_Agriculture_Today_and_the_Future.pdf.

regulator, port developer and beneficiary of high rates through percentage of carriage cost payments. It would not be surprising if this also comes under PCC scrutiny.

The PCC has its sights set on some of the most important, sensitive and well-funded anti-competitive areas in the economy, where major battles can and should be expected. None of these are “low hanging fruit”, though PCC staff expressed some interest in trying to build some initial knowledge and successes with somewhat easier cases.

The PCC recently lost a case against a merger in the telecoms duopoly on a technicality, when the company pushed through a last-minute merger before the IRR came into place. This might not be a good sign of the willingness of the judiciary to foster competition, when it means standing up to pressure from the country’s largest companies. Again, the PCC has work to do with the judiciary to develop knowledgeable and honest allies who can weigh fairly the complex analyses needed to decide competition law cases.

SUPPORTING INSTITUTIONS

In multiple interviews, knowledgeable local sources seemed to take for granted that many markets were dominated by cartels, with **trade associations** often serving to maintain cartel discipline. Under the OFC, onion and garlic cartels (organized through trade associations) were broken, and government officials prosecuted for helping cartel members with restrictive import licensing. That seems to have been one of the first cartel prosecutions in decades. Trade associations are a particularly important group of supporting institutions, not because it is expected that they will eagerly support the PCC in its work, but because they are likely to play a major role in PCC’s success or failure. Trade associations doubtless contribute a great deal by helping improve quality, training members, sharing best practices and supporting each other. However, trade associations are also often made up of private sector entities, which can take regulators captive and foster collusive practices to their shared benefit. The PCC needs to understand these associations, their members and their inner dynamics and motivations as possible.

Key Supporting Institutions

- Academia and research institutions
- Association of South East Asian Nations (ASEAN)
- Bar associations
- Development partners
- Excluded competitors
- Infrastructure owners
- Media
- Trade associations
- Political parties
- United States Federal Trade

Timing of implementation and prosecution may be equally important, as there have been so few prosecutions that it is possible that association members engaging in cartel behavior might still think they are doing nothing wrong and have nothing to hide. This openness in their behavior, even if prevalent now, will not last long once more awareness spreads that practices once accepted as normal are, in fact, illegal or unlawful. After 20 years of discussion about the Competition Act, this innocence may be long gone, but if it is not, it might provide a window to gather needed evidence for possible cases.

It was beyond the scope of this study to consider ownership of key infrastructure that can affect various agricultural value chains, and what role that might play in exercising market control. Regional cases of cartels in specific agricultural products might provide good testing ground for

the PCC to develop skills, build support and show successes. As the PCC researches possible anti-competitive behavior in the agriculture sector, special attention should be paid to infrastructure "choke points" where undue market power can be abused. Large, centralized processing facilities, rice mills, obligatory quarantines, logistics centers, port areas, and packaging facilities can all be places where smallholder income can be squeezed, market access limited and rents extracted. If the facilities are state-owned, these can be places where preferential treatment to insiders or the powerful can distort markets. Again, just as trade associations, these elements of key infrastructure can be supporters of improved competition, or key impediments to progress. Effort should thus, be spent to understand very clearly whether and how this infrastructure could be used by vested interests to create market choke points or to strengthen existing market dominance.

The PCC's work could be greatly helped by **academia and research institutions** oriented towards fostering better understanding of markets, possible cartel behavior and its impact on smallholder farmers and poorer consumers in general. Research into gender impact of cartels should also be conducted, as poorer women can be disproportionately harmed by distorted markets. Economists, sociologists, legal scholars and other academics can provide invaluable, detailed and, if needed discreet, background analyses that can form the basis for PCC decisions and actions. Experts from within state institutions, such as PIDS and state universities, should be encouraged to research and publish on competition topics. While the Philippines is blessed with a very large and sophisticated professional class, the Competition Act is new, enforcement of prior laws was virtually unheard of until 2011, and there is likely much work to be done to develop the Philippines cadre of knowledgeable experts in competition theory and practice.

The PCC will also need to conduct outreach to **the media**, **bar associations**, **political parties** and others about its mission and the new Act. There is a public affairs office in the PCC and their work in educating these supporting institutions will be important and ongoing.

Several **development partners**, including the World Bank, the ADB and GIZ have all aided the OFC, and now the PCC. Development partners report that they have been approached by the PCC for further technical assistance. When PCC staff was asked about whether the PCC has had any exchanges with other country competition regulatory authorities, they noted that the **United States Federal Trade Commission** provided substantial technical assistance in drafting both the Competition Law and implementing regulations. The PCC staff also noted that a Federal Trade Commission staff member spent a month at the PCC during start up. Other international exchanges with more established competition agencies would be useful.

Given the importance of **ASEAN** commitments in nudging the Philippine Congress to act in 2015, ASEAN and the Economic Research Institute for ASEAN and East Asia (ERIA) should also be considered as valuable supporting institutions to the PCC. Their strong convening power and evolving good practices in ASEAN and beyond can help bolster the PCC's case for reform.

SOCIAL DYNAMICS

Despite decades of efforts at land reform and work devoted to making smallholder farmers prosperous and efficient, agricultural productivity is stagnant and rural poverty remains stubbornly high. While there are many reasons for this, lack of free and fair competition may be partly to blame. Some countries manifest blatant and concentrated state-sanctioned anti-competitive problems, the removal of which could have a direct positive impact on farmer income and productivity. In the Philippines, at least on first impression, competition issues seem to have multiple causes, such as unfair contracts, limited access to market alternatives, informal networks, regulatory capture by powerful associations, and overpriced transport. The playing field is not level and elites prosper tremendously.

The social dynamics of competing fairly in the Philippines agriculture sector thus need to be seen against the backdrop of the country's ongoing experiments with land reform. The desire to foster a country of economically competitive and independent farmer entrepreneurs, finds itself in conflict with multiple realities. These include the quasi-feudal relationships that still exist between individual farm workers and larger holders, the rapidly growing population, the increasing market demands for quality and consistent products, and the Philippines' own transition from an agricultural to an industrial and service based economy. Where the romance and reality clash, practicality tends to win and the quick and privileged move in to fill the gaps.

Thus, for crops grown most efficiently at plantation scale, former large holders and commercial plantations including multi-nationals, have aggregated user rights from smallholders and cooperatives into economically efficient tracts. The fairness and legality of some of these aggregation contracts, especially the older ones with low payments to ARB's, have been questioned – both in court and in frequent demonstrations at DAR offices. Women have often benefitted less from agrarian reform than their husbands, because of titling that puts them at a disadvantage (see Registering Property chapter).

The Philippines has developed work-around compromises that permit efficient, larger scale agriculture to continue to grow and prosper within the legal context of agrarian land reform, and a stated social purpose to break up all large holdings and make every small farmer the manager of his or her own agribusiness. These compromises have kept the "golden goose" alive, laying rice, sugar, pineapples, bananas and other large scale plantation crops in professionally managed tracts, some fully globally competitive. As discussed in more detail in the Enforcing Contracts, it is not inconceivable that the new government might find legal ways to squeeze these compromises to give more back to the ARB's – a move that could make many poor farmers happy, upset large investor expectations and have unpredictable results.

RECOMMENDATIONS

Impact: Low
Feasibility: High
Affordability: Medium

1. Fund research targeting areas of anti-competitive behavior in agriculture, and conduct public outreach to inform the cost to the economy: The newly formed PCC is just starting its long-term assignment to reduce anti-competitive behavior in the country's economy. To be effective in this task, it will need to be able to draw on detailed research into possible violations of the Competition Act and their impacts on the economy. This

research should be focused on establishing the cost to the economy and consumers to build political consensus around the issue. Once the research is conducted, the public awareness campaigns around the change should be conducted by PCC. The point of these campaigns would be to act as change agents for better legislation or for court action.

Impact: Low
Feasibility: High
Affordability: Medium

2. Fund staff training and capacity development to strengthen the PCC's ability to build political consensus and enforce the PCC's mandate: The PCC is very new and currently staffing up. The MCC has the advantage of developing a Compact that is concurrent with this effort. The point of the technical capacity development is two-fold. First, it allows all the newly hired staff to gain immediate insights into the broader role of a commission. Second, it allows staff to learn first-hand how other commissions deal with political interference and political pressure.

SOCIAL AND GENDER DYNAMICS

Women in the Philippines make essential contributions to agricultural growth, often managing complex households and pursuing multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in rural enterprises, engaging in trade and marketing, and maintaining their homes. In engaging in these tasks, women often face enabling environment constraints distinct from those of men, such as limited access to land tenure or credit, which limit their productivity, income and the overall potential of the agriculture sector. Within the AgCLIR diagnostic, gender is treated as a cross-cutting issue that is examined within the context of each of the other AgCLIR chapters. In parallel with that analysis, this chapter specifically focuses on the governing legal and institutional characteristics that promote and protect the rights of women in the Philippines.

The Philippines presents an interesting study in the promotion of gender. It is among the top ten countries in the world for limiting gender based disparities, and the top country within ASEAN and East Asia. In 2016, it was ranked seventh in the world in the World Economic Forum Global Gender Gap Index.[116] Across the four scoring criteria, it ranked first in the world for educational attainment, first in health and survival, seventeenth in political empowerment, and twenty-first in economic participation and opportunity. The laws and policies of the Philippines that promote gender equality are some of the most forward-thinking. Likewise, successive Filipino administrations have continued to support these policies at the national level. In the business sector, the Philippines ranks fourth for the share of women in management positions (48 percent), and fifth for the share of women in senior management positions (41 percent).[117]

However, traveling to rural areas in the provinces, another side of the story starts to emerge. Despite a strong legal framework and proactive government leadership, a patriarchal ideology is still firmly ingrained in Philippine culture. This ideology is particularly entrenched in the agriculture sector, given its importance as a livelihood activity.

As the largest sector of employment in the country, agriculture is also the largest source of employment for Filipino women with about 8.3 million women working in the sector.[118] Women are involved in all stages of production and across all crops, from subsistence farms to cooperatives to large plantation agribusinesses. At the subsistence level, agricultural activities augment family income and contribute to the family's self-sustenance. Likewise, as laborers, women contribute to the overall family income on a wage basis. Gender differences often play a role in what women do on a farm.

[116] World Economic Forum. 2015. Global Gender Gap Index; http://reports.weforum.org/global-gender-gap-report-2016/results-and-analysis/.

[117] International Labor Organization. 2015. Women in Business and Management: Gaining Momentum (Abridged Version of the Global Report). Latest available country data were used in the survey. 2012 data used for Philippines.

[118] Philippine Statistics Authority. 2015. Total Number of Persons Employed by Sex, Region and Major Industry Group.

At the banana plantation level, for example, women play a disproportionate role in packaging houses. Women are generally preferred as they tend to employ a greater attention to detail and accordingly, do not bruise the fruit. Similarly, in small-scale coffee production, women are often preferred to men as hand harvesters because it is believed that they cause less damage to the coffee cherries.[119] The added value of women's attention for detail, patience, and careful handling can also be illustrated in the mango for export field packing chain. Mangoes for export must meet size and average weight specifications per piece so that certain numbers of mangoes will fit into the different sizes of boxes. Mango is highly perishable compared to other crops and prone to negative physical condition effects due to rough handling. Hence, field packing must be done as carefully as possible to prevent deterioration of quality during transport.

However, despite the key role of women in many value chains, women trail behind men in terms of employment and wage rates. While 60.4 percent of the employed workforce in the Philippines are women[120], only 35.8 percent of those employed in agriculture are women.[121] In terms of wage rates in the sector, between 2010 and 2014, men received an average daily rate of $3.43, while women received $2.98.[122]

Part of the employment disparity can be explained by the time spent caring for children. Traditionally, in rural areas, women often have large families. In one instance, the AgCLIR assessment team met three executives of a cooperative that had 29 children between them. However, since the 1970s, the average child per family has shrunk from over six children per family to just over three. The younger generation of cooperative members had smaller families more in line with the national average of over three children per family. This shift has important implications for the agriculture sector, as family size and poverty are interrelated. The shift to smaller families in rural areas allows women to take a great economic and leadership role. It also allows them more time to pursue economic activities outside of the family. While this shift was initially observed in urban areas, it is also starting to be noticeable at the rural village level.

In addition to caring for children, the tradition and expectation of Filipino households to care for aging, senior family members are other considerations that can disadvantage women from engaging in additional economic activities outside of the household. Most of the care work falls upon women and girls and can be looked at as an "obligation and entitlement trap."[123] This can contribute to the inequalities found both in the household as well as outside it; affecting the level of participation of women in the labor force as well as the level of participation of girls attending school.

This disparity is also driven by women's limited access to land and other productive resources. While women are legally allowed to own land, in practice this is discouraged through inheritance norms, land titling systems, and their ability to purchase land (see the Registering Property

[119] Although labor intensive, hand picking limits waste and contributes to quality processed beans compared to stripping off all the cherries of the branch at one time.

[120] Philippine Statistics Authority. 2015. Average Daily Basic Pay of Wage and Salary Workers by Major Industry Group and Sex: 2010-2014.

[121] Ibid.

[122] Ibid.

[123] World Bank and the Philippine Commission on Women. 2012. Country Gender Assessment Philippines.

chapter). Thus, women only represent about 11 percent of landholders and only 33 percent of the beneficiaries under CARP. Filipino women also have less access to agriculture support services, including extension services, inputs, capital, and infrastructure compared to men.[124] As women are less likely to be targeted by extension services, they are also more likely to become marginalized as the government promotes more diversified cropping systems and cash crops for export.

LEGAL FRAMEWORK[125]

Equality between men and women is enshrined in the **Philippine Constitution (Article II, Sec. 14, 1987)**, which declares that "the State recognizes the role of women in nation-building and shall ensure the fundamental equality before the law of women and men." The Philippines is also a signatory to several international laws and conventions promoting gender equality, including the **UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)**, the **Beijing Platform for Action (BPfA)**, and the **Millennium Development Goals (MDGs).**

Key Laws and Regulations

Beijing Platform for Action (BPfA)

Constitution of the Philippines (1987)

Executive Order No. 273 – Approving and Adopting the Philippine Plan for Gender-Responsive Development (1995 – 2015)

General Appropriations Act (1995)

Millennium Development Goals

Philippines Plan for Gender Responsive Development (1995 to 2025)

RA No. 7192 - Women in Development and Nation Building (2002)

RA No. 9710 – Magna Carta of Women (2009)

UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)

The **Women in Development and Nation Building Act (1991)** served as the first major piece of domestic legislation to promote gender equality and was the initial implementing piece of legislation for the post-transition constitution. The central tenet of this act was the concept of Gender in Development (GAD). GAD promotes gender equality as a fundamental value to be reflected in all development choices. The act had three primarily goals: 1) to ensure that a substantial portion of official development assistance funding is set aside to support programs and activities for women, 2) to ensure that women benefit equally and participate directly in development programs and projects of all government departments, and 3) to mandate that all government departments and agencies shall review and revise all their regulations, circulars, and procedures to remove gender bias therein.

[124] Food and Agriculture Organization. 2008. Fact Sheet: Philippine Women in Agriculture, Environment and Rural Production.

[125] The 2001 Act Providing for the Autonomous Region in Muslim Mindanao defines the relationship between the Autonomous Region of Muslim Mindanao (ARMM) and the Philippine government. This is a unique relationship where the national Government has devolved certain powers to an independent regional assembly. This assembly is bound by the constitution, but in consultation with the Supreme Court of the Philippines, can enact Sharia Law for individuals who are Muslim or profess the Islamic faith. The courts are granted a wide range of jurisdiction for these individuals in criminal, civil, commercial and property matters. Section 10 of the Act specifically demands that the ARMM protect the rights of women and children, especially a women's right to be employed. In all cases in ARMM, a dual system of courts is set up where National law is supreme. A distinct study of the enabling environment for women in ARMM was beyond the scope of this assessment.

To support GAD, the Implementing Rules and Regulations of the Act mandated that at least five percent of foreign development assistance received by the Philippines should be allocated to gender issues. In 1993, President Fidel Ramos decreed that the entire Philippine Government should target five percent of its funding at GAD and the **General Appropriation Act (GAA)** of 1995 enshrined into law this practice. The GAA continues to this day as a yearly legislation that institutionalize gender-responsive budgeting.[126]

The Women in Development and Nation Building Act was operationalized through **Executive Order No. 273 (Approving and Adopting the Philippine Plan for Gender-Responsive Development, 1995 – 2015).** This Executive Order serves as a 30-year framework to operationalize the act and promote gender-based development, and mandates agencies to incorporate and reflect GAD concerns in their agency performance commitment contracts, annual budget proposals, and work and financial plans.

The **Magna Carta of Women (2009)** provided the second major piece of gender legislation, and put in place broad provisions to limit discrimination against women. It affirms the role of the state to: 1) refrain from discriminating against women and violating their rights, 2) protect women against discrimination and from violation of their rights by private companies and individuals, and 3) promote and fulfil the rights of women in all spheres, including their rights to substantive equality and non-discrimination. The Manga Carta of Women also requires the creation of mechanisms for the integration of gender issues into all government agencies' policy frameworks, strategies, programs activities and projects. It is operationalized through its Implementing Rules and Regulations, which set out: 1) the requirements for planning, budgeting, monitoring and evaluation for GAD, 2) the creation of GAD Focal Point System (GFPS) in each agency (discussed in the Implementing Institutions section below), and 3) the development and maintenance of gender statistics and sex-disaggregated data to aid in planning, programming and policy formulation.

The rules and regulations governing GAD have been subsequently refined through several Joint Circulars and Memorandums, including the PCW Memorandum Circular 2011-01 (**Guidelines for the Creation, Strengthening and Institutionalization of the GAD Focal Point System)** and **Joint Circular No. 2012-01 (Guidelines for the Preparation of Annual GAD Plans and Budgets and Accomplishment Reports to Implement the Magna Carta of Women).** The implementation of the Magna Carta of Woman and these corresponding rules and regulations is discussed in detail in the next section.

[126] Senate Economic Planning Office. 2010. Engendering a Gender Responsive Budget: A Look at the GAD Budget Policy.

IMPLEMENTING INSTITUTIONS

With the GAD as its foundation and support from an impressive array of legislation, implementing institutions in the Philippines have two things that are often lacking elsewhere regarding gender equality: political will and economic resources. Gender equality has been the successful focus of multiple administrations spanning decades, and the political constituency continues to push reforms year after year. This is in direct contradiction to other developing countries where gender is often relegated to a small stakeholder community or tasked to outside donor agencies. Additionally, the Philippine Government has committed substantial resources to implementing this policy, setting it apart from other neighboring countries.

Key Implementing Institutions

- Commission on Audit (COA)
- Department of Agriculture (DA)
- Department of Budget & Management (DBM)
- Department of the Interior and Local Government (DILG)
- Gender and Development Focal Point System (GFPS)
- Local Government Unit (LGU)
- National Economic Development Authority (NEDA)
- Philippine Commission on Women (PCW)

THE GAD FOCAL POINT SYSTEM

The central institutional mechanism for the implementation of GAD in the Philippines is the **GAD Focal Point System (GFPS).** GFPS have been created in all government agencies and LGUs to lead gender mainstreaming in planning and budgeting. GFPS are responsible for leading the mainstreaming gender in agency programs and activities, as well as for providing technical assistance to offices or units within their agency on gender mainstreaming. The GFPS should be comprised of an **Executive Committee**, chaired by either the head of the agency or a designated undersecretary, as well as a **Technical Working Group (TWG)**. The TWG should be composed of representatives from various divisions, including planning, finance, human resources, technical departments, and statistics and information management. The TWG may designate a secretariat, or handle those responsibilities itself.[127] GAD planning is to be conducted annually as part of all programming and budgeting exercises GFPS are required to submit two reports annually: a GAD Plan and Budget (GPB) and a GAD Accomplishment Report (AR).[128]

OVERSIGHT OF GAD

There are five primary GAD oversight agencies: the Philippines Commission on Women (PCW), NEDA, DBM, DILG, and the Commission on Audit (COA).

PCW: The PCW is the primary policy-making and coordinating body on women and gender equality concerns. The PCW was formerly known as the National Commission on the Role of Filipino Women, and was renamed in 2009, when its mandate was expanded into the Magna

[127] PCW Memorandum Circular 2011-01: Guidelines for the Creation, Strengthening and Institutionalization of the GAD Focal Point System.

[128] Joint Circular No. 2012-01: Guidelines for the Preparation of Annual GAD Plans and Budgets and Accomplishment Reports to Implement the Magna Carta of Women).

Carta of Women. PCW is located under the Office of the President, which is indicative of the government's high-level commitment to gender equality. The primary functions of the PCW are:

1. Spearheading the provision of technical assistance related to existing guidelines and tools on gender-responsive planning and budgeting, gender analysis, gender mainstreaming, and gender auditing / gender assessments for both national agencies and LGUs;
2. Advocating for the use of the Harmonized Gender and Development Guidelines and the Enhanced Gender Mainstreaming Evaluation Framework (GMEF). GMEF is a tool released in 2016 by PCW designed to measure the extent of gender mainstreaming efforts of both national agencies and LGUs. It is also designed to assist GFPS in measuring progress and identifying areas for improvement.[129] ;
3. Developing and implementing a monitoring and evaluation system to determine progress in implementing the Magna Carta of Women across PCW, DILG, NEDA, DBM, and other relevant agencies;
4. Providing technical assistance to DILG, NEDA, DBM, national agencies and LGUs to enable them to perform their GAD roles and responsibilities.

PCW is regarded by stakeholders as a highly functioning institution and has been the recipient of multiple institutional strengthening activities since 2009. It is responsible for reviewing and approving agency GPBs and AR. Traditionally, agencies would collect GPBs and ARs from their component divisions, collate and send to PCW for submission. However, as the central agencies were often serving as a bottleneck in this process, in 2015 PCW started accepting submissions directly from divisions and bureaus through an online submission system. For LGUs, DILG first collates submissions from LGUs before it submits to PCW.

The **PCW Technical Services Division** is responsible for providing training and technical assistance to agencies and LGUs. It has a team of seven full time staff and receives between 20 and 30 requests for assistance per month. Given its limited team size, the division manages and utilizes a **Gender Resource Pool** of skilled gender specialists who can conduct GAD training and provide technical assistance to agencies and LGUs to support gender mainstreaming. PCW provides these experts with training and an accompanying GAD accreditation. These GAD experts can then be utilized by agencies or LGUs through an online portal that matches technical assistance requests to the best qualified experts. There are currently 89 accredited GAD experts. Some stakeholders expressed concern that there are inconsistencies in the quality of these GAD experts. PCW, for its part, has built in an extensive feedback system (participant surveys, agency surveys, visits during trainings, follow-up phone calls as needed) and reports that it will not renew the contracts of some experts based on this system. PCW also hosts an annual review meeting with all GAD experts.

The greatest constraint at PCW is the geographical reach of its operations. PCW is a small agency and does not currently have any regional presence. It is responsible for overseeing gender mainstreaming for national agencies, but at the regional and local level, this

[129] http://pcw.gov.ph/publication/enhanced-gender-mainstreaming-evaluation-framework-gmef.

responsibility falls to DILG. As discussed below in more detail, DILG suffers from strong capacity constraints that limit its ability to support GAD at the LGU level. PCW is currently developing a proposal to expand its operations into five regional offices (which is discussed more in the recommendations section).

DILG[130]**:** DILG is responsible for reviewing, endorsing, and monitoring the LGU's GPBs and GAD ARs submissions, as well as providing training to LGUs to build their gender mainstreaming operations. Submissions by the LGUs are reviewed for the gender responsiveness of their content by Local Government Operations Officers (LGOOs) at the municipal level and the provincial level. Upon review, the DILG provides LGUs with a Certificate of Endorsement. LGOOs then prepare summary reports on LGU compliance with GAD, which is then sent to the DILG Central Office. The DILG Central Office then prepares a consolidated report on the LGUs' compliance with GAD for inclusion in the PCW's National Report on Implementation of the Magna Carta of Women and GAD Budget Report.

At the national level, DILG is an active proponent of gender mainstreaming and is a full supporter of GAD and the GFPS. At the implementation level, however, DILG suffers from significant capacity constraints. DILG scored relatively highly in the 2016 GMEF for conducting GAD training.[131] It lacks, however, a more systematic approach to sustainable learning and capacity building. The greatest challenge is that LGOOs, particularly in the smaller municipalities where there is just one LGOO, are required to serve multiple technical functions (gender, education, health, agriculture, etc.) and do not have the bandwidth to become a technical specialist in one area. Thus, LGOOs may be approving GAD plans without much understanding of what they are approving.

The PCW Technical Services Division currently works with DILG regional offices to provide limited coaching and mentoring on a pilot basis. However, the expansion of PCW into regional clusters (as discussed above) would greatly boost the capability of PCW to provide added capacity building.

COA: COA is responsible for conducting an annual audit on the use of the GAD budget to determine its judicious use, as well as the efficiency and effectiveness of interventions in addressing gender issues under GAD. If COA finds deficiencies in the audit of the GAD GPB and AR, it can issue an audit observation memorandum (AOM) to the agency. While an AOM does not have any legal enforcement power, it serves as an effective public shaming mechanism. In extreme cases, the DBM or a member of congress could use these AOMs as leverage to lobby to reduce the budget of the agency. Per stakeholder interviews, the capacity for COA to conduct its functions is high, but it took a while to get COA engaged in auditing GAD compliance. At present, COA is now actively auditing national agencies for GAD compliance, and accordingly, PCW notes it has seen increasing demand from national agencies for their support and technical assistance.

[130] The role and responsibilities of DILG in supporting the implementation of the Magna Carta of Women was outlined in the PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2013-01: Guidelines on the Localization of the Magna Carta of Women and amended by the PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2016-01: Amendments to PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2013-01.

[131] Report not yet public.

NEDA: NEDA is responsible for ensuring that GAD issues and concerns are mainstreamed and integrated across national indicators, including the Socio-Economic Report, Philippine Development Plan and the Medium-Term Public Investment Programs. It is also responsible for monitoring the amount of ODA loan allocation for gender-responsive programs and projects and ensuring that between five and 30 percent of ODA are for GAD.[132]

DBM: DBM is responsible for approving GPBs, along with the annual agency budget proposals. It will not approve any budget unless these are accompanied by a certification from PCW. DBM is also responsible for: 1) providing technical assistance to LGUs to ensure that they adopt a gender-responsive and performance-based approach to LGU budgeting; 2) assisting the PCW, DILG and NEDA in the enhancement and updating of existing guidelines and tools on gender-responsive planning and budgeting, 3) ensure that Major Final Outputs, indicators and targets of the LGUs under their Organizational Performance Indicator Framework (OPIF) are gender-responsive, and 4) assisting the PCW, DILG and NEDA in the development of a monitoring and evaluation system to monitor the GAD budget utilization of LGUs. Although a comprehensive review of the performance of DBM is beyond the scope of this assignment, stakeholders noted no significant constraints in their role in fulfilling their GAD mandate.

IMPLEMENTING THE GAD

DA: DA was one of the first national agencies to embark on mainstreaming GAD and it formed it GFPS in 1989. In the succeeding years, the DA suffered from several constraints in implementing GAD, most notably: 1) lack of capacity and unclear roles in the GFPS and GAD coordinators, 2) lack of capacity and competencies of DA staff to apply gender concepts and tools, 3) low appreciation of gender-related concerns within the agency, and 4) the inability of DA agencies to consolidate existing databases along specific gender-based indicators.[133] In response, the DA issued several policy statements that reorganized the GAD structure, defined the roles of officers, and created GFPS at three levels of the organization: 1) the Office of the Secretary, 2) bureaus, attached agencies and corporations, and 3) regional field units.

One ongoing constraint with the DA has been its inability to utilize its five percent GAD allocation, which led to their receipt of AOMs in 2014 and 2015. Several factors have been cited for this, including the attitude that GAD responsibilities are additional workload rather than part of regular activities, and constant changes in membership of the GFPS.[134] Another challenge with the DA is its decentralized structure, which gives LGUs the authority to set budgets, and thus limits DA's ability to manage GAD budgeting at the beneficiaries' level.

[132] Joint Circular No. 2012-01: Guidelines for the Preparation of Annual GAD Plans and Budgets and Accomplishment Reports to Implement the Magna Carta of Women).

[133] Miriam College – Women and Gender Institute. 2010. Accounting for Gender Results: A Review of the Philippines GAD Budget Policy.

[134] Ibid.

Implementation of GAD by DA attached agencies

Three offices of the DA are showing a keen understanding of gender issues in agriculture and have made notable progress on implementing GAD. The **Philippine Rice Research Institute (PhilRice)** has developed gender-friendly machines and equipment for rice farming, since traditionally most farm equipment is designed for men. The ease of operation for these machines has been lessened so that women can use these machines without being physically burdened. The plastic drum seeder, for example, is a piece of equipment for direct seeding and straight row planting that is portable and efficient and can save on labor costs. Similarly, the Super Curyat is a PhilRice brand name for a micro tiller that is lightweight, portable, and can easily be dismantled for transport.

The **Philippine Center for Postharvest Development and Mechanization (PhilMECH)** developed a gender-friendly brown rice huller, which was designed for ease of mobility and operation, low maintenance and low power requirement. This effort is consistent with PhilMECH's GAD mandate of designing and promoting improved postharvest facilities and equipment for commercial use of women and men, farmers' organizations, processors and smallholder entrepreneurs to reduce postharvest losses and increase income from value added processing efforts.

Similarly, **BFAR** has set up women-managed marine and coastal areas and has conducted capacity building based on gender-based effectiveness skills and enterprise development. BFAR also set up a Fisherfolk Registry System to establish reliable information to aid in the effective and efficient delivery of government programs, including the protection of the preferential rights of subsistence women and men fisherfolk.

Local Government Units (LGUs)[135]: To support the implementation of the Magna Carta of Women, LGUs are required to pursue gender mainstreaming in their respective localities. As with national agencies, these GFPS are required to have an Executive Committee (to be chaired by the Local Chief Executive) and a TWG.[136] All LGUs are required to ensure that all members of the GFPS undergo capacity building programs on GAD. The LGU GFPS is responsible for direction-setting, advocacy, planning, monitoring and evaluation in mainstreaming GAD perspectives in LGU programs, projects, and activities, specifically 1) the establishment and maintenance of a GAD database, 2) the completion of annual GPB and GAD ARs, 3) the mainstreaming of gender perspectives in local development plans, 4) the formulation / enhancement of the LGU GAD Code, and 5) monitoring and evaluation of the implementation of the Magna Carta of Women.

The devolution of powers to the LGUs means that no coherent national strategy at the LGU level exists. Like other LGU focused laws, the actual local implementation of GAD is left up to each LGU individually. The inherent problem with this type of approach is that all LGUs are not created equally from a population and resource base. Those LGUs with large populations, located in regional capitals or urban areas that have larger tax bases can apply gender equality more uniformly. In Davao, for example, most of the staff, including the director and the deputy director in the business registration department, were women. The size of Davao allows it to attract highly skilled and capable staff. In more remote regions, the LGU's ability to attract competent administrators is constrained by location. In this case, staffing of the LGU is dictated more by who is able, willing, and qualified versus a specific gender component of the hiring process. Accordingly, the capacity of some LGUs to implement its GAD commitments remains limited.

SUPPORTING INSTITUTIONS

The progress made in promoting gender equality has been massively supported by a vibrant civil society and strong collaboration with development partners and international NGOs.[137] Among them is the **PhilDHRRA** consisting of a network of 65 NGOs integrating gender in their various community-based development activities. Another coalition of organizations is the **Pambansang Koalisyon ng Kababaihan sa Kanayunan (PKKK)**, a national rural women's coalition that advances rural women's issues and advocates for rural women's property rights. The PKKK serves as a resource of the DA in analyzing gender-related issues and developing GAD

Key Supporting Institutions

- National Rural Women Coalition
- Pambansang Koalisyon ng Kababaihan sa Kanayunan (PKKK)
- Philippine Commission on Women
- Philippine Partnership for the Development of Human Resources in Rural Areas (PhilDHRRA)
- Women's Business Council Philippines

[135] The role and responsibilities of LILG in supporting the implementation of the Magna Carta of Women was outlined in the PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2013-01: Guidelines on the Localization of the Magna Carta of Women and amended by the PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2016-01: Amendments to PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2013-01.

[136] The composition of both groups is very clearly defined in PCW-DILG-DBM-NEDA Joint Memorandum Circular No. 2013-01: Guidelines on the Localization of the Magna Carta of Women.

[137] Thongsame, Araya. 2016. Gender Equality in ASEAN: Lesson from the Philippines and the Road Ahead. Editorial from the Warwick ASEAN Conference.

plans. In 1997, the **Women's Business Council Philippines** was established to focus on women in business. Since that time, it has provided training, access to markets, credit and technology as well as lobbying to improve the status of women workers, entrepreneurs, and executives.

To support the coordination of GAD, the **Official Development Assistance – Gender and Development Network (ODA-GAD)** was established in 2001. ODA-GAD meets every two months to share lessons learned and harmonize gender approaches across the government, development partners, and NGOs. There are 19 development partners, two international NGOs, and representatives on the government side from PCW and NEDA. One of the major successes of the ODA-GAD was the development of the Harmonized GAD Guidelines, which provided the analytical concepts and tools for integrating gender concerns in development programs and projects. The guidelines have also included a gender-based checklist and sex disaggregated indicators to assess compliance to mainstream gender into project activities. Separate checklists were developed for 21 key subsectors, including agriculture and agrarian reform.

Philippine Statistics Authority (PSA) is the highest policy-making body on statistical matters and provides the official statistics of the government. PSA is primarily responsible for all national censuses and surveys, sectoral statistics, consolidation of selected administrative recording systems and compilation of the national accounts. PSA promotes gender concerns in the generation of statistics, approves statistical frameworks on gender and development indicator systems. It has made efforts in advancing gender concerns through its sex disaggregated wage rates statistics in the agricultural sector and average labor utilization statistics by farm activity and by source. However, there is still a demand for the availability of relevant, timely, disaggregated and better quality statistics for better informed policy decisions, in targeting and monitoring project/program beneficiaries.[138] In order for PSA to respond to the demand, it has to resolve a number of challenges, including: 1) ensuring that data collected are processed, 2) increasing use of information technology for wider utilization and improved dissemination of indicators, 3) capturing data from programs and projects implemented by the private sector, 4) building technical and financial support to better generating data to conform to statistical standards and methodology, and 5) building capability to collect data at the local level.

[138] Bulan, Joseph. 2016. Presentation on "The Experience and Challenges in Producing Disaggregated Data in the Philippines" at the International Seminar on SDGs Data Disaggregation, Session 3, 3 – 4th November 2016, Seoul, Republic of Korea.

Youth in Agriculture

The importance of youth participation has been expressed in the **Philippine Constitution (Article II, Section 13)**, which affirms the vital role of youth in nation building and encourages their involvement in public and civic affairs. The **Local Government Code (1991)** provides for people's participation in local development with the establishment of a Sangguniang Kabataan (A youth council, commonly known as SK) for every barangay as a mechanism for youth's participation in governance.

The **Youth in Nation-Building Act** (1995) encourages the participation of youth in industrial and agriculture productivity. It established the National Youth Commission for the coordination of a national comprehensive and coordinated program on youth development and budget appropriations. The **Philippine Youth Development Plan (2011-2016**) focuses on: 1) improving the enabling conditions for youth participation in governance, society and development, 2) increasing the contribution of and benefit for youth in the attainment of the Millennium Development Goals, and 3) improving access to quality basic services and social protection through enabling policies. The plan is a broad guide for action and underscores the very important role of Filipino youth in ensuring that the recommended policies, programs and courses of actions are carried out.

There are several government agencies tasked with implementing the Philippine Youth Program. The **National Youth Commission** is the main support mechanism to implement the Philippine Youth Development Plan. The **Department of Education, Culture and Sports** is responsible for planning and implementation, coordination policies and programs related to formal and non-formal education at several levels. The **Department of Social Welfare and Development** is tasked for protecting and rehabilitating the physically and mentally handicapped and the socially disabled youth. For instance, the Department launched a conditional cash transfer program (called the Pantawid Pamilyang Pilipino Program) in 2008 providing cash transfers to poor households on condition that they make investments in child education and health. The long-run objective of the program is to help break the intergenerational cycle of poverty, while providing immediate financial support to the household. The **National Manpower and Youth Council** of the Department of Labor and Employment provides technical and vocational education services to youth, with a focus on out-of-school youth. The Department of Labor and Employment is the main agency that plans and implements programs and services for the working youth. For NGOs, like the **Ayala Foundation, it** develops youth leadership activities to address specific community needs. Faith based organizations also have programs benefitting the youth. The Don Bosco parish church, for example offer vocational courses for out of school youth.

SOCIAL DYNAMICS

Gender equality in the Philippines remains a paradox. The country has progressive enabling laws and policies that allow and facilitate participation of women in government and the private sector in management. This means that the Philippines ranks 7th on the global gender gap index. Despite this, there are entrenched disparities in economic opportunities and access to productive resources between men and women in the rural areas. These disparities are the result of a social structure where patriarchal ideology is still firmly entrenched in Philippine culture. Gender stereotyping and traditional Filipino expectations have differentiated the roles of women from men. In rural households, women are primarily responsible for household chores and childcare. Paradoxically, women also manage the household budget and perform other

economic tasks. In rice growing regions, for example, women decide the amount of rice that will kept for consumption and for sale.

In rural areas, women are active economic actors but seem tied to specific parts of the rural economy. This can be due to several factors like land title, access to agriculture support services, availability of gender friendly machines and equipment, childcare and access to finance. In many cases, women's economic activities are primarily for the augmentation of household income to meet basic and emergency needs. Traditionally, the rural practice and custom was to treat the male household head as the breadwinner, automatically lessening the women's ability to take on the primary economic role. Likewise, it does not allow for monetary value to be placed upon a women's economic activities to smallholder and cooperative agriculture, leading to an underreporting of women's contributions in official agriculture growth statistics. Beyond underreporting, the gains made at the national level and urban levels in women's equality have not been replicated at the small holder farmer level. Likewise, at the smallholder cooperative level, the economic gains made through organization are minimal when compared to urban government or professional jobs.

Targeted and focused national and local programs are needed to redress this imbalance, and a massive step in this direction needs to be made in smaller households. With the legislative framework existing for women partaking in economic activities, women now need more opportunities for participation, brought about by programs that focus on things like better credit and the mechanization of farming activities.

RECOMMENDATIONS

Impact: High
Feasibility: High
Affordability: Low

1. Provide financial support for the proposal by the PCW to reform its institutional structure and establish five regional clusters: The PCW has proven itself to be a highly functioning institution capable of efficiently and effective carrying out its mandate to support the implementation of the Magna Carta of Women and the GAD framework. While the PCW has the structures and capacity to support national agencies, it does not have the institutional resources or size to effectively support DILG, which is where the greatest capacity gaps are located. There is a strong need to localize the Magna Carta of Women and pilot programs with DILG has demonstrated the value of closer coordination.

Impact: Medium
Feasibility: Medium
Affordability: Medium

2. Build the capacity of the DA GFPS to meet GAP compliance requirements: The DA GFPS, particularly that TWG, does not have sufficient capacity to effectively carry out its GAD functions. Thus, the DA has received two AOMs from the COA for non-compliance. It is very important for the GFPS to be provided with support and resources so they can fulful their role of empowering key stakeholders (officers and staff, farmers, fisherfolk), generating sex-disaggregated data, and monitor the compliance to laws and requirements. A needs assessment should be conducted to identify the capacity gaps within the system. Once gaps and required expertise have been identified, the DA and PCW should be consulted to identify where existing staff can meet this need, or whether additional staff are required to be brought on.

3. Improve the timeliness and relevance of gender disaggregated data: Improved timeliness and relevant disaggregated data is important input to an informed policy decision/reform to be able to provide timely and appropriate interventions to the issues being address by the policy decision/reform. Gender disaggregated data is also important to determine effects of policy measures on men and women, and to evaluate and monitor the contribution of women in development. The PSA has been trying its best to come up with timely relevant gender statistics. However, per the PSA interviewees, there are data challenges that have yet to be overcome, namely: 1) the need to refine methodologies on the measurement of economic activities of women, 2) harmonization of data from different sources within the national statistical system, and 3) capacity building for data producers, users and providers.

Impact: Medium
Feasibility: High
Affordability: Medium

ACTIONABLE AND PRIORITIZED RECOMMENDATIONS

Based on the extensive knowledge and analysis set forth in this report, this section presents a series of recommendations for reform. These are drawn from the key findings in each chapter and reflect current reform capacities, opportunities, and evidence of will to reform. Some of the recommendations within the chapters may overlap—that is, some may be consolidated into a single reform initiative covering two or more topics.

For ease of reference, recommendations are presented in detailed recommendations tables and analyzed based on three criteria:

1. **Impact of the reform:** While it is generally difficult to quantify the impact of policy reform, let alone to quantify the possible impact of policy recommendations *a priori*, this report sets out to provide an estimate of the relative impact of proposed recommendations. In addition to providing a summary of the constraint and an outline of expected benefits of reform, three key development goals (economic growth, poverty reduction, and gender equality) are scored on a one to ten scale. An overall impact score of out 30 is provided, with one to ten signifying low impact, 11 to 20 signifying medium impact, and 21 to 30 signifying high impact.
2. **Feasibility of reform:** To assess the feasibility of reform, three factors are analyzed. First, how well does the reform fit with a country's stated policies and priorities? Second, what are the likely obstacles to reform? Third, what regional, national, or international best practices exist and could be replicated? Based on these factors, an overall feasibility score is presented, again with one to ten signifying low feasibility, 11 to 20 signifying medium feasibility, and 21 to 30 signifying high feasibility.
3. **Resources required for reform:** To assess the resources required for reform, two factors are analyzed. First, detailed actions steps are presented that outline the steps required to complete the reform action. Secondly, a time frame for reform is presented, based on what is achievable within a five-year period. Based on these factors, an overall affordability score is presented, again with one to ten signifying low affordability, 11 to 20 signifying medium affordability, and 21 to 30 signifying high affordability.

Based on these three criteria, the recommendations are prioritized into high priority, medium priority, or low priority.

Figure 14: Matrix of AgCLIR Recommendations

AgCLIR Chapter	Recommendations	Impact	Feasibility	Affordability	Prioritization
BAP	**Support the President's Joint Memorandum to reduce steps in LGU business registration.**	**High**	**High**	**Medium**	**High (61)**
BAP	**Work with the DA, DoH, and FPA to ensure a streamlined process for product approval in key value chains.**	**High**	**High**	**Medium**	**High (61)**
RP	**Establish a single land administration agency, consolidating the functions of land titling, surveying, and adjudication.**	**High**	**Medium**	**Medium**	**High (61)**
RP	Adopt tax reforms towards reducing the cost of transferring real property.	Medium	Medium	High	Medium (59)
RP	Encourage as many LGUs as possible to adopt systematic titling programs.	Medium	Medium	Low	Low (40)
EC	Support the expansion of commercial arbitration to agriculture export hub cities.	Medium	High	High	Medium (59)
EC	**Create clear, simple, and uniform contract templates and standards for smallholder farmers and cooperatives to promote usability and fairness.**	**High**	**High**	**High**	**High (74)**
EC	Conduct technical analysis to better understand informal and formal agreements under which smallholders are bound, with a focus on the Unifrutti Transformational Partnership Model.	Low	High	High	Medium (59)
GC	**Provide technical support to financial and non-financial institutions to develop creative and alternative products, partnerships and delivery channels to finance "effective demand" of MSMEs in value chains.**	**High**	**High**	**Low**	**High (60)**
GC	Provide support to the government in the provision of holistic risk mitigation tools for the agribusiness sector.	High	Low	Medium	Medium (58)
AMI	Enact legislation for the PPA to be either a regulator or a funder of port infrastructure, but not both.	High	Medium	Medium	Medium (55)
AMI	Conduct a gaps analysis of all agricultural market systems in the Philippines, as well as a technology needs assessment of what	High	Low	Low	Medium (56)

AgCLIR Chapter	Recommendations	Impact	Feasibility	Affordability	Prioritization
	smallholders require to access these systems				
AMI	**Invest in Ro-Ro Corridors in new areas based upon selection of priority commodities.**	**High**	**High**	**Low**	**High (60)**
TAB	**Transform SPS regulatory systems to become more risk-targeted, subjecting selected burdensome processes like inspection of goods with selectivity rules.**	**High**	**Medium**	**Medium**	**High (63)**
TAB	**Support legislation that will provide the DA with a cohesive policy framework for the SPS functions undertaken by its agencies**	**Medium**	**Medium**	**High**	**High (60)**
TAB	Assist the FDA, DA and LGUs to fully implement the Food Safety Law.	High	Medium	Medium	Medium (54)
TAB	Hasten the establishment of a National Single Window by assisting DICT, DOST, BOC, and regulatory agencies to fully implement interoperability of import / export processing systems.	High	Low	Medium	Low (42)
CF	Fund research targeting the areas of anti-competitive behavior in agriculture and conduct public outreach to inform the cost to the economy.	Low	High	Medium	Medium (52)
CF	Fund staff training and capacity development to strengthen the PCC's ability to build political consensus and enforce the PCC's mandate.	Low	High	Medium	Medium (46)
G	**Provide financial support for the proposal by the PCW to reform its institutional structures and establish five regional clusters**	**High**	**High**	**Low**	**High (60)**
G	Build the capacity of the DA GFPS to meet GAD compliance requirements	Medium	Medium	Medium	Low (47)
G	Improve the timeliness and relevance of disaggregated gender-related data.	Medium	High	Medium	Medium (50)

BUSINESS ADMINISTRATIVE PROCEDURES

<table>
<tr><th colspan="3">Support the President's Joint Memorandum to reduce steps in LGU business registration.</th><th>Priority score: 61 / 90</th></tr>
<tr><td>AgCLIR Chapter</td><td colspan="3">Business Administration Procedures</td></tr>
<tr><td colspan="4">WHAT IS THE IMPACT OF THE REFORM?</td></tr>
<tr><td>Summary of constraints</td><td colspan="3">The LGU registration process and the national level registration processes are a dual system of registration. The national level processes, while not simple, are certainly standard across the country. The LGU process is different based upon where one is registering and the steps are not clear. This arbitrary process causes undue delays at both levels and causes undue costs in time and money.</td></tr>
<tr><td>Benefits of reform</td><td colspan="3">Standardizing and shortening the LGU registration and renewal process means that businesses could save significant amounts of time and money. Government could collect a higher level of registration and renewal fees as well as bring more businesses into the registration process and renewal process if made easier.</td></tr>
<tr><td rowspan="5">Impact score (out of 30)</td><td>Goal</td><td>Impact</td><td>Justification</td></tr>
<tr><td>Economic Growth</td><td>10</td><td>The current environment is the worst in the region and a constant complaint of the private sector. Franklin Baker alone, for example, processes over a million coconuts per day. Their ability to supply a new product into the market is dependent on product approval and thus streamlining can have dramatic impact on economic growth.</td></tr>
<tr><td>Poverty Reduction</td><td>8</td><td>More registered businesses should translate into more jobs.</td></tr>
<tr><td>Gender Equality</td><td>3</td><td>It does not necessarily translate that registering a business more easily helps or promotes gender specifically.</td></tr>
<tr><td>Total Impact</td><td colspan="2">21 - High</td></tr>
<tr><td colspan="4">WHAT IS THE FEASIBILITY OF THE REFORM?</td></tr>
<tr><td>Fit with country's stated policies and priorities</td><td colspan="3">There is high-level political commitment to reform. The President through the JMC is pushing reform in this sector.</td></tr>
<tr><td>Obstacles to reform</td><td colspan="3">Bureaucracies are resistant to reform. Likewise, a standard process might expose corruption in various departments of LGUs. A clear coherent set of steps across all LGUs will also affect staffing of various agencies or bodies at the LGU level.</td></tr>
<tr><td>Best practices</td><td colspan="3">Davao City has built an IT system to link departments within its structures and accelerate the flow of documents.</td></tr>
<tr><td>Feasibility score (out of 30)</td><td colspan="3">25 – High</td></tr>
</table>

WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Place resources at the disposal of the Repeal Project through DTI allowing the reforms to be nationwide and funded. 2. Expand the scope of Project Repeal to build one entire system that all LGUs must use through the force of law by an Executive Order. 3. Expand team of lawyers who are reviewing contradictory regulations so that it can occur at a faster pace. 4. Pilot systems in ten municipalities for 1 year to roll out kinks and streamline the system. 5. Develop a simple LGU IT system that will speed up the local process and allow data to be accessed. 6. Take the system nation-wide with a massive public education campaign to let people know the system has changed. 7. Conduct a massive LGU training program to inform them of the new system, certify them in it and ensure that it is followed.
Time frame for reform	3 years
Affordability of reform (out of 30)	15 – Medium

Work with the DA, DoH, and FPA to ensure a streamlined process for product approval in key value chains.			**Priority score:** 61 / 90
AgCLIR Chapter	Business Administration Procedures		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	There is no fast process to approve new products specifically focused on the export market from either the DA, DH or FPA. The small staff of the FDA under the DH means that lag times are high. Likewise, the DA's process to approve new plant and animal specimen diminishes the ability to rapidly introduce new products to match market requirements. The FPA has a multistep approval process that often delays the approval of products already in use in other ASEAN countries.		
Benefits of reform	A quicker process could save production losses, increase yields, and bring new products to market faster to meet demand. Streamlining processes or highlighting specific export industries could also serve as a trial to expand it nation-wide as agencies become accustomed to the new process.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	9	Getting new products to market quicker or increasing yields based upon new methods allows industries to stay competitive. Getting new products to market quicker or increasing yields based upon new methods allows industries to stay competitive. Franklin Baker alone, for example, processes over a million coconuts per day. Their ability to supply a new product into the market is dependent on product approval and thus streamlining can have dramatic impact on economic growth.

	Poverty Reduction	9	Depending on the value chain, small holder farmers will be large beneficiaries
	Gender Equality	6	Depending on the value chain, small holder farmers will be large beneficiaries and women play a large role in those processes
	Total Impact	24 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	The Government is focused on supporting several key processing industries to stem rural poverty. Streamlining a process to better match inputs with production and processed products to market opportunities will massively increase the competitiveness the industries highlighted.		
Obstacles to reform	The domestic industry focused producers and input providers would object to being sidelined or slowed in their approval process. Likewise, the bureaucracies might object to tightened timeframes or a larger workload.		
Best practices	At present, agencies approve inputs or products to international certification standards. The issue is the speed at which these are done.		
Feasibility score (out of 30)	22 – High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Select the commodities and the products that will be the focus. 2. Work with DA, DH and FPA to identify the steps to speed this process and prioritize the steps that need changed. 3. Develop a series of pilot programs for each agency to test and identify a key set of steps that will allow a faster process. 4. Run a series of pilots to ensure all the kinks are effectively worked out before going live. 5. Start the entire process of approving new products for inputs and processing as quickly as possible. 6. Measure how quickly the processes are taking. 7. Conduct a public education campaign highlighting the new reforms for the public. 8. Develop models to expand into other products. 9. Roll out a new product as quickly as possible towards end of the MCC support so that the reform processes because self-perpetuating.		
Time frame for reform	2 years		
Affordability of reform (out of 30)	15 – Medium		

REGISTERING PROPERTY

<table>
<tr><th colspan="3">Establish a single land administration agency, consolidating the functions of land titling, surveying, and adjudication.</th><th>Priority score:
61 / 90</th></tr>
<tr><td>AgCLIR Chapter</td><td colspan="3">Registering Property</td></tr>
<tr><td colspan="4">WHAT IS THE IMPACT OF THE REFORM?</td></tr>
<tr><td>Summary of constraints</td><td colspan="3">Overlapping mandates of at least three agencies have led to inconsistencies in documentation of land titles. The separate judicial process for adjudicating titles raises cost and delays dispute settlement.</td></tr>
<tr><td>Benefits of reform</td><td colspan="3">A single agency will make possible a program of enforcing consistency and harmonization of land records at least within the national government. This removes a key constraint in the integrity of formal system and maintaining security of tenure.</td></tr>
<tr><td rowspan="5">Impact score (out of 30)</td><td>Goal</td><td>Impact</td><td>Justification</td></tr>
<tr><td>Economic Growth</td><td>10</td><td>The basis of secure tenure of land is critical to drive large foreign and international investment.</td></tr>
<tr><td>Poverty Reduction</td><td>10</td><td>The basis of secure tenure allows land to be used as collateral to access finance.</td></tr>
<tr><td>Gender Equality</td><td>5</td><td>Genders role around title disputes is not necessarily related to the administration of titles per se but to other issues.</td></tr>
<tr><td>Total Impact</td><td colspan="2">25 - High</td></tr>
<tr><td colspan="4">WHAT IS THE FEASIBILITY OF THE REFORM?</td></tr>
<tr><td>Fit with country's stated policies and priorities</td><td colspan="3">This reform is consistent with one of ten priority items in the new government's socioeconomic agenda.</td></tr>
<tr><td>Obstacles to reform</td><td colspan="3">This reform would require legislation. The previous versions of the Land Administration Reform Act (LARA) had been blocked, especially in the Senate, due to an extensive lobbying effort by LRA.</td></tr>
<tr><td>Best practices</td><td colspan="3">The reform package must ensure parties with affected interests are properly compensated or their concerns allayed. One proposal is generous benefits packages for retrenched personnel at various ministries. Likewise, there needs to be proper representation in management for affected parties (LRA, DENR, NCIP, DAR).</td></tr>
<tr><td>Feasibility score (out of 30)</td><td colspan="3">18 - Medium – LMB of DENR and other stakeholders have been supportive of the bill. However, previous LARA reform efforts underestimated the opposition of LRA. If this reform effort can mobilize sufficient political support, reform is much more likely to pass.</td></tr>
<tr><td colspan="4">WHAT ARE THE RESOURCES REQUIRED FOR REFORM?</td></tr>
<tr><td>Action Steps</td><td colspan="3">1. Study previous versions of LARA and re-vet with key stakeholders to understand obstacles to passage.
2. Based on this analysis amend LARA to address some of the concerns and reasons of failure in the past.</td></tr>
</table>

	3. Develop the necessary political support and build a lobbying campaign inclusive of Representatives and Senators to re-file satisfactory version of LARA Bill. 4. Provide support to committee hearings to educate members on the legislation. The assistance needs to last through the plenary vote for endorsement to the President for signature. 5. Provide drafting support to regulatory process. 6. Following approval of Bill, provide a swift roll out of transition details and strategy for harmonizing land records. 7. Provide sufficient financial resources and technical support to ensure new regulations are in place and new agency gets established. 8. Develop and launch one-stop shops to register land.
Time frame for reform	5 Years (including passage through Congress)
Affordability of reform (out of 30)	18 – Medium: While the reform itself is legislative, organizational restructuring will involve the cost of compensation packages

Adopt tax reforms towards reducing the cost of transferring real property.			**Priority score: 59 / 90**
AgCLIR Chapter	Registering Property		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The process of land sales or subdivision is not registered owing to high costs of taxation. The capital gains tax for sales and estate tax for subdivisions amongst heirs are too high so the legal process is often sidestepped or avoided all together.		
Benefits of reform	The reduction of tax will encourage registration of property transfers.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	6	Security of title through a legitimate transfer process will allow the land to be used as collateral and to hold infrastructure versus just being farmland for production.
	Poverty Reduction	5	At present, the land is still being used for production purposes. The actual formal transfer does not mean the land will attract additional capital or be more productive.
	Gender Equality	4	Genders role around the transfer of title is not as critical as the lack of titles given to women due to issues like heredity property norms.
	Total Impact	15 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			

Fit with country's stated policies and priorities	Encouraging formality increases security of land tenure, which is one of the administration's priority items in its socioeconomic agenda.
Obstacles to reform	The fear of revenue loss may inhibit endorsement by Department of Finance
Best practices	N/A
Feasibility score (out of 30)	19 – Medium
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Conduct impact studies in conjunction with the Department of Finance and find alternatives if revenue is lost. Impact studies should also assess the potential impact of an amnesty (both cost and potential income) to encourage heirs to register their inherited properties. 2. Develop the necessary political support and build a lobbying campaign inclusive of Representatives and Senators. 3. Provide support to committee hearings to educate members on the legislation. The assistance needs to last through the plenary vote for endorsement to the President for signature. 4. Draft supporting regulations to implement the changes that will be made. 5. Conduct a public education campaign to inform the public and promote the idea of getting registered.
Time frame for reform	2 years
Affordability of reform (out of 30)	25 – High: Funding is needed for impact studies, but the bulk of the reform is legislative.

Encourage as many LGUs as possible to adopt systematic titling programs.			**Priority score: 40 / 90**
AgCLIR Chapter	Registering Property		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The LGUs were devolved land titling powers but the process is inconsistent across various LGUs. Any disputes that arise are protracted and expensive to settle.		
Benefits of reform	Harmonization of land records and settlement of disputes will increase security of tenure, encourage investments in agricultural land, and improve revenue generation at the local level		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	10	Security of title underpins all economic development that happens on land.
	Poverty	3	Land is now being informally used. Several other

	Reduction		factors beyond title would need to be unlocked to make the land more economically valuable
	Gender Equality	2	Again, the ability to get title would not alter other basis gender biases like formal lending or land as collateral at this stage.
	Total Impact	15 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	This reform is aligned with one of ten priority items in the new government's socioeconomic agenda.		
Obstacles to reform	The actual titling of land at the LGU level is costly. There will invariably be cases where the title process must be adjudicated. This carries the risk of arousing dormant land conflicts. The LGUs and other government agencies may not be interested in undertaking this process.		
Best practices	The systematic adjudication and titling approaches have demonstrated high acceptability and workability in diverse and often traditionally problematic settings. The systematic titling has now also won official endorsement in all the key agencies. The experiences of past adopting LGUs can be used to motivate others to scale up the adoption of systematic titling.		
Feasibility score (out of 30)	15 – Medium		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Assess LGUs that have adopted best practices in land titling, such as Moncada, to identify replicability. 2. Coordinate with DILG and regional development councils to determine impact on land use and internal revenue allotment. 3. Mobilize the community to understand what is occurring and the steps they need to take with their titles through an education campaign. 4. Develop training program to increase capacity of LGUs to undertake this reform. 5. Conduct training with LGUs at pilot level so that training can later be nationalized around the country. 6. Develop initial pilot for LGUs and run trials. 7. Conduct the systematic adjudication of all titles so that each LGU understands what processes must be undertaken as next steps. 8. Conduct real property appraisals to value each piece of land for taxation purposes. 9. Conduct lot surveys in those cases where information is conflicting or lost to get the physical size and location of each lot. 10. Process Public Land Applications (PLAs) and Field Appraisal and Assessment Sheets (FAAS) to enter the new data into the LGU records and to ensure data accuracy. 11. Register the titles and distribute the title to the owners of the land. 12. Assess taxes based upon the corresponding tax rates and collect taxes from the owners. 13. Once the initial trial works then nationalize the entire process and conduct training with all LGUs		

Time frame for reform	3 years (includes information and education campaign)
Affordability of reform (out of 30)	10 – Low

ENFORCING CONTRACTS

Support the expansion of commercial arbitration to agriculture export hub cities.			**Priority score: 59 / 90**
AgCLIR Chapter	Enforcing Contracts		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	Other than in construction, commercial arbitration in the Philippines has not penetrated much beyond Manila. There is no formalized support or capacity building for arbitrators outside of Manila.		
Benefits of reform	Assistance to expand knowledge of arbitration and perhaps to train arbitrators regionally in agricultural hub cities could support use of this alternative dispute resolution mechanism for commercial contracts. The primary beneficiaries would be parties engaged in larger commercial contracts.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	8	The ability to settle legal disputes quickly and efficiently is a key to the smooth running of businesses.
	Poverty Reduction	2	Small holder farmers and the disadvantaged do not necessary enter the formal legal system.
	Gender Equality	2	The most disadvantaged do not necessarily enter the formal legal system.
	Total Impact	12 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Supports ongoing efforts to encourage ADS.		
Obstacles to reform	None.		
Best practices	The Rules would follow international practice. The PDRC is a small, volunteer non-profit, with the regulations and procedures in place for conducting internationally recognized commercial arbitration and could be a potential champion in expanding the practice across the country.		
Feasibility score (out of 30)	25 - High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			

Action Steps	1. Conduct study to define to scope of commercial arbitration (i.e. volume of crop, types of crops, types of contracts, land size, number of arbitrators and steps in the process). 2. Develop and implement training program for attorneys in provincial capitals in the benefits of including arbitration clauses in contracts and the basics of new arbitration procedures. 3. Educate civil society, but especially business associations, legal associations and other professionals to the benefits of arbitration. 4. Train regional arbitrators as demand arises for this service. 5. Provide resources to PDRC to ensure that the process flows smoothly and there is a review of cases and compilation of best practices.
Time frame for reform	2 years
Affordability of reform (out of 30)	22 – High

Develop clear, simple and uniform fairer contract templates for smallholders and cooperatives to promote usability and ensure fairness.			**Priority score:** 74 / 90
AgCLIR Chapter	Enforcing Contracts		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	Smallholders and cooperatives are too often asked by investors and banks to sign very complex, one sided, English language commercial contracts that they cannot understand. This leads to confusion, unfairness and many defaults. The contracting process disadvantages the uneducated. Insofar as women and youth have had lower levels of education, they can be put at an increased disadvantage.		
Benefits of reform	Providing clear, simplified, balanced template agreements in Tagalog and other local dialects for small holders and cooperatives would increase their ability to understand what they are signing, increase their likelihood of compliance and increase the mutual trust needed for long-term success.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	6	The contracts for financing need changing but new financial products need to be developed first to serve this community.
	Poverty Reduction	10	The contract is not necessarily going to ensure the success of the venture. It will make it fair and may even in the long term, generate more interest in programs that are working.
	Gender Equality	8	This would benefit disadvantaged communities the most because the unfair contracts are directed at them.
	Total Impact	24 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			

Fit with country's stated policies and priorities	There are existing efforts to prepare various template agreements, and this should build on those.
Obstacles to reform	The investors and lenders may have very set ideas about what must be in contracts – even if many terms are never used or enforced – and might see this as a threat to their core business.
Best practices	The FAO has a short, clear document entitled 'FAO Guiding Principles on Responsible Contract Farming Operations', that provides a strong, well thought out set of ideas to use in preparing contracts, whether as a template or as one-off agreements.[139] UNIDROIT, the FAO and IFAD have also jointly prepared a far lengthier 'Legal Guide on Contract Farming', which provides detailed discussions of how a wide range of issues related to contract farming can be addressed.[140] The FAO also maintains an on-line library of actual contracts entered in many countries,[141] while the World Bank has also undertaken substantive work around contract farming, including detailed cross country analyses.[142]
Feasibility score (out of 30)	25 – High
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Build on FAO research of existing AVAs and LANDBANK standard documents to do analysis of main terms. 2. Work with business associations, lenders and larger agribusiness sponsors about standards and templates to understand their key needs and get their buy-in on using simplified templates. 3. Based on review, develop standard, simple template contracts or, where they exist, reviewed and tested with actual farmers and cooperative members. 4. Prepare training materials for farmers and cooperatives. 5. Conduct public outreach to get discussion going about simplification needs. 6. Set up mechanisms wherever possible to fast track standard templates for approvals.
Time frame for reform	5 years, in line with the timeframe of the Second Compact.
Affordability of reform (out of 30)	25 - High

[139] FAO Guiding Principles for Responsible Contract Farming Operations, Rural Infrastructure and Agro-Industries Division, 2012

[140] Legal Guide on Contract Farming, FAO/UNIDROIT/IFAD, 2015

[141] As of July, 2015 the FAO planned to revamp and update its contract farming resource center to include the library and community of practice, see http://www.fao.org/news/story/en/item/317904/icode/. The links to the resource center do not work, but it is possible to find many individual contracts on the FAO site.

[142] See for example, An Analytical Tool Kit for Support to Contract Farming, World Bank Group, Agricultural and Environmental Services, May, 2014

<table>
<tr><th colspan="3">Conduct technical analysis to better understand informal and formal agreements under which smallholders are bound, with a focus on the Unifrutti Transformational Partnership Model.</th><th>Priority score: 58 / 90</th></tr>
<tr><td>AgCLIR Chapter</td><td colspan="3">Enforcing Contracts</td></tr>
<tr><td colspan="4">WHAT IS THE IMPACT OF THE REFORM?</td></tr>
<tr><td>Summary of constraints</td><td colspan="3">Small farmers and coops often enter informal or minimally documented agreements with various traders, suppliers, lenders, warehouses, transport providers and others. These largely trust and relationship based agreements are basic to the functioning of the agriculture economy, but comparatively little is known about how they are structured, how the parties understand them, what makes them work and how they are enforced.</td></tr>
<tr><td>Benefits of reform</td><td colspan="3">Primary, field level research and analysis can provide those working with small farmers and cooperatives to assist them more effectively to help build more formal agreements from the bottom up that align with long standing existing practices, help farmers and coops negotiate better deals, increasing farmer income, by decreasing their costs of production and help improve enforcement for those dealing with farmers and coops.</td></tr>
<tr><td rowspan="5">Impact score (out of 30)</td><td>Goal</td><td>Impact</td><td>Justification</td></tr>
<tr><td>Economic Growth</td><td>2</td><td>The informal economy might not be fair but it is working to some regard. Understanding the informal arrangements is one step in a multistep process to change the value proposition of these programs</td></tr>
<tr><td>Poverty Reduction</td><td>2</td><td>Overall understanding what is happening now is not as critical to getting new products to address short falls or resolving land issues.</td></tr>
<tr><td>Gender Equality</td><td>5</td><td>Women use the informal system more so understanding it will aid them more if new programs are designed around the intervention. Unifrutti model directly targets women.</td></tr>
<tr><td>Total Impact</td><td colspan="2">9 – Low</td></tr>
<tr><td colspan="4">WHAT IS THE FEASIBILITY OF THE REFORM?</td></tr>
<tr><td>Fit with country’s stated policies and priorities</td><td colspan="3">Reform will directly impact smallholder farmers, a key national priority.</td></tr>
<tr><td>Obstacles to reform</td><td colspan="3">The investors and lenders may not want to share their modalities surrounding informal agreements. Farmers and coops may feel that their informal agreements will be threatened by sharing information.</td></tr>
<tr><td>Best practices</td><td colspan="3">N/A</td></tr>
<tr><td>Feasibility score (out of 30)</td><td colspan="3">22 – High</td></tr>
<tr><td colspan="4">WHAT ARE THE RESOURCES REQUIRED FOR REFORM?</td></tr>
</table>

Action Steps	1. Conduct field interviews. 2. Prepare study. 3. Hold public outreach on study, focused on distributing information to NGOs and government officials working with coops and farmers.
Time frame for reform	9 months.
Required resources score (out of 30)	26 – High

ACCESSING FINANCE

Provide technical support to financial and non-financial institutions to develop creative and alternative products, partnerships, and delivery channels to finance "effective demand" of MSMEs in value chains.	**Priority score:** 60 / 90

AgCLIR Chapter	Getting Credit		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The major assumption of this recommendation is the development of an "effective demand" which will impact the ultimate success of this technical assistance. Financial institutions have limited interest in financing due to lack of "effective demand", limited knowledge of the sector and risk appetite. Value chain actors have limited understanding of credit, and the creation of partnerships with financial sector.		
Benefits of reform	The reform will provide stakeholders with a deeper understanding of the value chains, a better assessment of the risks associated with them, a greater ability to develop risk and cost reduction mechanisms within the financial institution and the value chains themselves. MSMEs will more likely access finance for investments in productivity by obtaining support from lead firms involved in financing. This will impact cooperatives, producers and others in the value chain.		
Impact score (out of 30)		**Impact**	**Justification**
	Economic Growth	5	Overall this is targeted at small MSMEs so its overall economic impact will be small
	Poverty Reduction	10	Due to a focus on MSMEs this will be the vehicle through which they access finance and expand
	Gender Equality	10	The most vulnerable categories of people will fall under this category.
	Total Impact	25 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	This type of activity would parallel government's interest and policies related to value chain financing. It is critical for supporting private sector development that has remained small and weak. It will help the financial and non-financial institutions to cooperate and develop more innovative		

	products that avoid issues related to traditional collateral, sidestep traditional predatory finance, but still address their concerns related to risk.
Obstacles to reform	A significant weather event will have the impact of deterring value chain finance to this sector. Appropriate risk mitigation activities must be sought out: including supporting climate friendly farming practices, diversification strategies, and financial guarantees. The absence of parallel, market driven productivity gains by smallholders will stymie interest in financing them.
Best practices	• Technical assistance and training should support interested financial institutions and other credit delivery institutions in developing better agribusiness assessment, credit analysis and delivery. It should support the use of value chain finance mechanisms for enhanced risk and cost mitigation, and facilitate partnerships between internal value chain actors and external financers. • 'Tighter' value chains in which there is less room for side selling and other non-cooperative behaviors would be the most likely initial candidates for value chain finance. These types of relationships are more likely to be able to enforce agreements (formal or otherwise). • Value chain actors delivering finance should also be supported in their delivery and management of credit. This may include financing purchases of vegetables, to provide enhanced seed on credit to smallholders, or trade credit funneled through cooperatives to purchase in cash the product or finance in advance inputs. • The provision of this service should support new product development with a focus on viable agribusinesses including: above noted value chain partnerships, development of leasing and factoring products, appropriate equipment finance and other products that are currently absent or little used. • Payment mechanisms such as mobile money or POS may also be supported under this arrangement especially as they act to minimize risk and decrease costs of credit facilitation in this sector, especially when used in a closed value chain circuit (in which all value chain actors use payment systems in lieu of cash). • Asset accumulation and management should also be supported under this provision. • The technical assistance providers may also act as a liaison between demanders of credit and suppliers but should neither be instrumental in making specific credit decisions, nor advocate for specific agribusinesses.
Feasibility score (out of 30)	25 - High
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Design technical assistance and training function for a program to be built that will work with communities and lenders. 2. Create innovation fund to ensure that the program can access funds. 3. Launch the program in a pilot phase to build best practices to later launch nationally. 4. Educate the public and select group through a campaign to explain new products. 5. Monitor impact and evaluate mechanisms and formats designed so improvements can be made.

	6. Launch nationally after the kinks have been worked out.
Time frame for reform	4 years
Affordability of reform (out of 30)	10 – Low

Provide support to the government in the provision of holistic risk mitigation tools for the agribusiness sector.			**Priority score:** 58 / 90
AgCLIR Chapter	Getting Credit		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	Through the establishment of government supported guarantees and implementing institutions, the government has taken on considerable risk. Yet, due to the lack of scale of the risk mitigation mechanisms and implementation challenges, these are not sufficient to generate viable products or options for stakeholders. Most of these implementers work in their own silos, albeit "owned" by the same government institutions.		
Benefits of reform	The creation of affordable risk mitigation products, provided by viable, sustainable institutions, will assist all agribusinesses, especially producers.		
Impact score (out of 30)		**Impact**	**Justification**
	Economic Growth	10	The overall risk within the economy that can be mitigated and insured allows the overall economy to grow and diversify.
	Poverty Reduction	10	This will allow new financial products to target the poorest of the poor.
	Gender Equality	10	The most vulnerably categories of people will fall under this category.
	Total Impact	30	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	This type of activity would parallel the government's interest and policies related to the development of risk mitigation products. Continued provision of risk mitigation tools and services by the government requires an overall strategy in the face of serious and increasing climate risks to increase and sustain capitalization and risk coverage. It can help the government develop a businesslike approach where the risk tools/products are consistently available, affordable, and any government subsidy and policy does not impact the business "footing".		
Obstacles to reform	Current implementing institutions could slow the reform attempts as it would impact their structures, funding, policies and others.		
Best practices	The development of a coordinated risk management approach to natural disaster is usually seen in developed countries such as the US or Canada.		

Feasibility score (out of 30)	10 - Low
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Create buy in from government departments, implementers such as BSP, DA, PCIC and others. 2. Develop a holistic risk management strategy which treats and anticipates the role of government and private insurance providers, insurance regulations, guarantee funds, taxation, government backstopping. 3. Cost out the strategy and work with the government to develop the initial policy documents necessary to vet the ideas. 4. Work with Government to draft necessary legislation that would be utilized to support these activities. 5. Develop the necessary political support and build a lobbying campaign inclusive of Representatives and Senators. 6. Provide support to committee hearings to educate members on the legislation. The assistance needs to last through the plenary vote for endorsement to the President for signature. 7. Provide drafting support to regulatory process. 8. Provide sufficient financial resources and technical support to ensure new regulations are in place and new agency gets established.
Time frame for reform	5 years
Affordability of reform (out of 30)	18 – Medium: Activities are largely legislative in nature, but some support will need to be provided for building institutional capacity.

ACCESSING MARKETING INFRASTRUCTURE

Enact legislation for the PPA to be either a regulator or funder of port infrastructure, but not both.			**Priority score:** 55 / 90
AgCLIR Chapter	Accessing Marketing Infrastructure		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	PPA serves a dual function of regulator and operator of ports. This has led to poor service from the private sectors point of view and high costs. From the PPA's point of view operations are good as its ROI is high and money flows back to the Government		
Benefits of reform	Lower freight costs, better infrastructure at ports and more internationally competitive.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	10	Better functioning ports will drive continuesd competitiveness.
	Poverty Reduction	10	As transport costs are a major marketing barrier for smallholders, this is likely to have a huge input on poverty reduction.
	Gender	5	The entire process is unlikely to have a disproportionate net benefit, but will benefit

	Equality		equally to men.
	Total Impact	25 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Fits with the mandate of the Competitiveness Commission and the government for overall economic development.		
Obstacles to reform	PPA will likely resist the loose of revenue and status. Monopoly shippers and contractors also will resist change. Government will resist losing revenue. Private sector shipping industry will be changed fundamentally.		
Best practices	Look to other ASEAN port authorities.		
Feasibility score (out of 30)	15 - Medium		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Set up a process of understanding best practices and drafting legislation with the Competitiveness Commission. 2. Development a stakeholder process to feed into legislation. 3. Draft legislation and work with stakeholders to vet it and make better. 4. Find legislative sponsor and take them through the process to get passed. 5. Implement new system of Port supervision. 6. Developing training programs to support this as necessary.		
Time frame for reform	3 years		
Affordability of reform (out of 30)	15 – Medium: Legislative changes will be cheap, but the introduction of a new system of port supervision may be costly.		

Conduct a gaps analysis of all agricultural marketing information systems in the Philippines, as well as a technology needs assessment of what smallholders require to access these systems.	**Priority score:** 56 / 90		
AgCLIR Chapter	Accessing Marketing Infrastructure		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	Government provision of market information has historically been of poor quality and the private sector has had limited engagement. The DA-ICTS has been a major step forward in improving the system, but there is currently a lack of understanding of all current and future market information systems.		
Benefits of reform	A better understanding of the market information ecosystem and gaps will inform improved evidence-based policy making.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	2	A functioning market information system will benefit both large and small value chain actors. Large commercial enterprising using

			agriculture products as raw materials would have better information on where and how to source their raw materials. However, as this is just a study, impact on economic growth will be minimal.
	Poverty Reduction	2	This will target this sector specifically.
	Gender Equality	2	Market information systems leave women less vulnerable to exploitative pricing.
	Total Impact	6 - Low	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Fits with the government mandate of improving the provision of market information to support smallholder farmers.		
Obstacles to reform	DA-ICTS has shown a strong willingness to reform. As this recommendation is to conduct a study, no obstacles to reform are foreseen.		
Best practices	The FAO's AFMIS has several best practices that can be replicated.		
Feasibility score (out of 30)	25 – High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Develop terms of reference for the study; 2. Identify service provider to conduct analysis; 3. Based on findings of the study, convene workshop with DA to identity a roadmap to address gaps.		
Time frame for reform	6 months		
Affordability of reform (out of 30)	25 – High		

Invest in Ro-Ro Corridors in new areas based upon commodity selections.			**Priority score:** 60 / 90
AgCLIR Chapter	Accessing Marketing Infrastructure		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	Transport services have been underfunded and fragmented especially in rural areas. The private sector has funded ports on an as needed basis. Processors have never paid for infrastructure.		
Benefits of reform	Lower freight costs, better infrastructure at ports and more internationally competitive.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	10	This is a proven remedy for the infrastructure challenges.

	Poverty Reduction	10	This allows for a decrease in poverty along corridors.
	Gender Equality	5	This is a secondary function of the infrastructure.
	Total Impact	25 – High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Fits with the mandate of rural development, national competitiveness and transportation development. Strong political commitment currently being demonstrated.		
Obstacles to reform	Politicians in districts that do not get infrastructure will have no incentive to support. The private sector winners will be chosen by the commodities and location of corridors selected and there will be resistance to not being selected.		
Best practices	Use current Ro-Ro as case studies for what worked then incorporate in PPP activities and financing.		
Feasibility score (out of 30)	30 - High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	Set up an implementation unit through the Office of the President. 1. Development a stakeholder process to feed into proposals for the commodities and location. 2. Develop clear process of Government commitments, private sector commitments and risk sharing. From there, President appoints an administrator with total control over the project and agencies that need to implement. 3. Processors provide market guarantees and financing assistance to smallholder farmers. 4. DA provides extension services to farmers. 5. Evaluation project along the design and build out process to develop best practices for other commodities. 6. Build corridor from beginning to end.		
Time frame for reform	7 years		
Affordability of reform (out of 30)	5 – Low: Large scale investment needed		

TRADING ACROSS BORDERS

Transform SPS regulatory systems to become more risk-targeted, subjecting selected burdensome processes like inspection of goods with selectivity rules.	**Priority score:** 63 / 90
AgCLIR Chapter	Trading Across Borders
WHAT IS THE IMPACT OF THE REFORM?	
Summary of	SPS processes, like inspection, are costly and time consuming to

<table>
<tr><td>constraints</td><td colspan="3">producers, trader and the agency. Such regulations are implemented uniformly without consideration of the risk profile of the trader.</td></tr>
<tr><td>Benefits of reform</td><td colspan="3">If inspection can be selectively imposed, agency resources can be freed up for other tasks. Business can save on regulation costs and time. Those who pass selectivity rules, e.g. established producers / traders, will immediately benefit from faster processing. Those who do not will be incentivized to invest in passing the selectivity rules to benefit.</td></tr>
<tr><td rowspan="5">Impact score (out of 30)</td><td>Goal</td><td>Impact</td><td>Justification</td></tr>
<tr><td>Economic Growth</td><td>10</td><td>More trade generally directly relates to greater economic growth and will drive more job creation.</td></tr>
<tr><td>Poverty Reduction</td><td>8</td><td>More efficient and affordable SPS processes can open greater markets for smallholder farmers and cooperatives.</td></tr>
<tr><td>Gender Equality</td><td>5</td><td>This reform will not necessarily target gender, but women are likely to benefit.</td></tr>
<tr><td>Total Impact</td><td colspan="2">23 – High</td></tr>
<tr><td colspan="4">WHAT IS THE FEASIBILITY OF THE REFORM?</td></tr>
<tr><td>Fit with country’s stated policies and priorities</td><td colspan="3">IFC was proposing a similar project and the DA administration was receptive. MCC could potentially partner with IFC to push targeted SPS regulatory systems forward.</td></tr>
<tr><td>Obstacles to reform</td><td colspan="3">Agencies always resist reform. Adjustment in resources, especially staff tasks, placement and skills, is resisted.</td></tr>
<tr><td>Best practices</td><td colspan="3">The BOC already has selectivity in the inspection process for imports, which could be used as a model for selective SPS systems.</td></tr>
<tr><td>Feasibility score (out of 30)</td><td colspan="3">20 - Medium</td></tr>
<tr><td colspan="4">WHAT ARE THE RESOURCES REQUIRED FOR REFORM?</td></tr>
<tr><td>Action Steps</td><td colspan="3">1. Organize reform team.
2. Undertake preliminary studies on regulations/commodities that may be subject to selectivity.
3. Conduct studies and develop recommended modes for adopting selectivity.
4. Convene reform team and agency reps to decide on modes to adopt
5. Develop specific selectivity rules.
6. Conduct public hearings.
7. Draft AO to implement reform on pilot.
8. Train agency staff on new rules.
9. Train agency staff on developing rules for other commodities/processes.</td></tr>
<tr><td>Time frame for reform</td><td colspan="3">2 years.</td></tr>
<tr><td>Affordability of reform (out of 30)</td><td colspan="3">20 – Medium</td></tr>
</table>

Support legislation that will provide the DA with a cohesive policy framework for the SPS functions undertaken by its agencies.			**Priority score:** 60 / 90
AgCLIR Chapter	Trading Across Borders		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The current legal basis for SPS work outside of the Food Safety Law is a patchwork of many laws issued from the 1930's to date. The mix of laws has many gaps and overlaps.		
Benefits of reform	A comprehensive approach to SPS will reduce confusion and promote efficiencies by clarifying policy, ensuring consistency, providing sufficient legal cover for required regulations, and clearly identifying responsibilities and accountabilities.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	7	This law will allow easier trade if it focuses in building off international norms.
	Poverty Reduction	7	This law would allow more small enterprises to access trade or higher end domestic markets.
	Gender Equality	5	This not the target of the law but they will be beneficiaries.
	Total Impact	19 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	The reform is consistent with the goals of Project Repeal, which seeks to streamline the regulatory system for industries, including agribusiness, by reviewing the legal basis of regulations and working to delist, amend, consolidate or repeal those that have become irrelevant and unnecessary.		
Obstacles to reform	Getting legislation passed is a difficult process that may extend through several Congress changes.		
Best practices	Biosecurity laws in Australia, New Zealand provides a strong model that the Philippines could follow.		
Feasibility score (out of 30)	15 – Medium		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Create task force for reform. 2. Undertake assessment of existing issuances. 3. Draft comprehensive bill. 4. Conduct public hearings. 5. Identify key champions of bill. 6. Conduct information campaign with participation of key champions. 7. Identify sponsors in both houses of Congress. 8. Provide sponsors with technical assistance to get bill through the legislative process.		
Time frame for reform	5 years		

Affordability of reform (out of 30)	26 - High

Assist the FDA, DA and LGUs to fully implement the Food Safety Law			**Priority score:** 54 / 90
AgCLIR Chapter	Trading Across Borders		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The new Food Safety Law gives the FDA a huge mandate, which it is hard pressed to achieve given its present resources. Business enterprises report waiting six months to get a license to operate and longer to get a product registered.		
Benefits of reform	Easing and speeding up the registration of food products and processing enterprises will reduce costs for business, allow for faster response to market demands and opportunities, and encourage innovation streams. Current impacts would depend on the location of business, for those in Metro Manila vs. those outside Metro Manila. This can be reduced if the FDA, DA and LGUs are given proper capacity building on the Food Safety Law.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	10	The law is now a constraint to business growth.
	Poverty Reduction	5	At the lower end processing level for domestic consumption it places burdens on these producers so changing it should benefit them.
	Gender Equality	5	This law does not specifically target gender but applies more evenly should assist this subsector especially in the field of processing.
	Total Impact	20 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	This is consistent with the current administration's efforts to reduce red tape and unnecessary bureaucracy.		
Obstacles to reform	Cooperation among agencies is challenging. While they can share a common objective, each agency has its own priorities and interests. Additionally, LGUs all have different capacities to participate in this.		
Best practices	N/A		
Feasibility score (out of 30)	19 – Medium		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			

Action Steps	1. Create interagency task force for capacity building. 2. Undertake studies to identify major gaps for better service and recommend strategies to address gaps, including possible stop-gap measures that can be acted on immediately. 3. Undertake consultations with stakeholders. 4. Implement stop gap measures and prepare capacity building plan. 5. Implement capacity building plan.
Time frame for reform	5 years.
Affordability of reform (out of 30)	15 – Medium

Hasten the establishment of a National Single Window by assisting DICT, DOST, BOC, and regulatory agencies to fully implement interoperability of import/export processing systems.			**Priority score:** 42 / 90
AgCLIR Chapter	Trading Across Borders		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The processes at the port of exit and entry require coordination and exchange of information and documents among the agencies involved in the process. The efforts to institutionalize a National Single Window have been stopped but the benefits of having such a system remains recognized.		
Benefits of reform	Automating the exchange of information and documents will greatly (a) reduce the handling of papers that increases the opportunity for fraud and (b) improve response time of the agencies.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	10	A better operating customs system will be a benefit to logistics and shipping.
	Poverty Reduction	5	This is not a poverty related issue but will lower costs of some inputs.
	Gender Equality	5	This is not targeted at gender but will lower overall costs on items.
	Total Impact	20 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	This is consistent with the current administration's efforts to reduce red tape and the objectives of the Customs Modernization Act. However, this has not been a priority of the previous administration, and there has been little indication of any change under the new administration. In fact, the team had difficulty getting any information on the status of reform. In addition, there are entrenched interests at the port that are likely to oppose any change.		

Obstacles to reform	Different capacities of participating agencies for computerization of systems and resistance to greater transparency.
Best practices	National Single Window projects in other ASEAN countries are a good model for this.
Feasibility score (out of 30)	8 – Low
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Review the status of electronic systems of agencies dealing with imports/exports. 2. Identify areas for expansion/improvement specifically to cover transactions dealing with exports. 3. Prepare action plan to undertake system upgrading/expansion, prioritizing those, which cover important export products. 4. Implement action plan.
Time frame for reform	2 years.
Affordability of reform (out of 30)	14 - Medium

COMPETING FAIRLY

Fund research targeting the areas of anti-competitive behavior in agriculture, and conduct public outreach to inform the cost to the economy.			**Priority score:** 52 / 90
AgCLIR Chapter	Competing fairly		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The newly formed PCC is just starting its long-term assignment to reduce anti-competitive behavior in the country's economy. To be effective in this task, it will need to be able to conduct and to draw on detailed research into possible violations of the Competition Act, and their impacts on the economy. To build its case for possible investigations, the PCC will also need to build public awareness of the problems, and how Competition Act enforcement could address them.		
Benefits of reform	The research will be agriculture specific as it tries to build on the focus of the current administration to expand this segment of the economy. This will allow the PCC to build political goodwill before it needs to tackle other entrenched interests like telecommunication and electricity. Likewise, it will allow the PCC to learn to build political support around "low hanging fruit" and conduct stakeholder and public education campaigns to support reform.		
Impact score (out of 30)		**Impact**	**Justification**
	Economic Growth	6	Identifying areas where anti-competitive behavior is rampant is a key step in removing the barriers to economic growth.
	Poverty	2	A more competitive agriculture sector benefits

	Reduction		smallholders, who are often vulnerable to exploitation.
	Gender Equality	2	A more competitive agriculture sector benefits women, who are often vulnerable to exploitation.
	Total Impact	10 – Low	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Aligns with current efforts to strengthen PCC capacity.		
Obstacles to reform	The research and public information campaigns will be taking on entrenched interests. These interests will not like either court case or the threat of court cases to their economic activities. The PCC will be cutting its political teeth in agriculture and this is not the stated desire of PCC so it might resist the program.		
Best practices	None exists in the Philippines at present.		
Feasibility score (out of 30)	25 – High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Establish six priority areas across the economy. 2. Conduct technical analysis of identified priority areas. 3. Based on identified priority areas, provide technical support to the PCC to design policy reform campaigns, which include policy advocacy and stakeholder outreach.		
Time frame for reform	2 years		
Affordability of reform (out of 30)	17 – medium		

Fund staff training and capacity development to strengthen the PCC's ability to build political consensus and enforce the PCC's mandate.	**Priority score:** 46 / 90
AgCLIR Chapter	Competing fairly
WHAT IS THE IMPACT OF THE REFORM?	
Summary of constraints	The PCC is very new and staffing up currently. This is a major constraint because it is an entirely new institution for the Philippines. The staff are not coming from reshuffled or overlapping agencies. Instead, the Philippines has a chance to build an entirely new agency built upon the lessons learned of the region and internationally. The lack of staff capacity and the pressing nature of its role is the golden hour for the new agency. It can either take advantage of this critical opportunity or squander the chance with long-term repercussions. The point of the technical capacity development is two-fold. First, it allows all the new staff being hired to gain immediate insights into the broader role of a commission. Second, it allows staff to learn first-hand how other commissions deal with political interference and political

	pressure.		
Benefits of reform	PCC is a new institution. The ability to build an institution with a bedrock of international best practices and early wins will have lasting repercussions for the Commission and for the Philippine economy. The ability to react in the golden hour has been proven to be the key to success in public sector reform.		
Impact score (out of 30)		**Impact**	**Justification**
	Economic Growth	5	Over the long run this would make the economy more competitive and the staff more effective.
	Poverty Reduction	3	A more competitive agriculture sector benefits smallholders, who are often vulnerable to exploitation.
	Gender Equality	2	A more competitive agriculture sector benefits women, who are often vulnerable to exploitation.
	Total Impact	10 - Low	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Aligns with current efforts to strengthen PCC capacity.		
Obstacles to reform	This is a reform that initially does not negatively affect any constituency. Instead, it builds capacity of an agency that few people truly understand. The obstacle to the reform might be if the current administration does not view the commission as necessary. Likewise, the commission itself might not understand fully the need for the reform.		
Best practices	None exists in the Philippines at present.		
Feasibility score (out of 30)	24 – High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Establish a working group within the Commission to develop a tiered training program focusing on different levels of staff and the need for various types of training. 2. Develop initial focal areas and train the initial group of ten with a mix of study tours and in-country visits from international and regional practitioners. 3. Evaluate training program and make necessary changes. 4. Conduct next set of training for ten staff members following the renewed and improved information. 5. Evaluate the training program and make necessary changes; 6. Conduct next set of training for ten staff members following the renewed and improved information.		

Time frame for reform	2 years
Affordability of reform (out of 30)	12 – Medium

SOCIAL AND GENDER DYNAMICS

Provide financial support for the proposal by the PCW to reform its institutional structure and establish five regional clusters.	**Priority score:** 60 / 90

AgCLIR Chapter	Social and Gender Dynamics		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	DILG does not have the capacity to adequately fulfil its mandate of supporting LGUs implement the GAD framework. PCW is well placed to build the capacity of DILG, but currently does not have the structures or resources**.**		
Benefits of reform	There is a strong need to localize the Magna Carta of Women and pilot programs with DILG has demonstrated the value of closer coordination. Restructuring PCW offers the greatest impact in boosting GAD implementation at the local level.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	4	Gender equality is a key driver of economic growth
	Poverty Reduction	7	Poverty reduction is a central component of the GAD framework
	Gender Equality	10	Reform will substantially boost GAD implementation.
	Total Impact	21 - High	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	Implementation of the Magna Carta is a top priority of the government.		
Obstacles to reform	Primarily financial. PCW is itself strongly pushing for reform.		
Best practices	The Philippines already represents an international best practice in this regard.		
Feasibility score (out of 30)	26 - High		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Consult with PCW on their latest restructuring proposal. 2. Conduct analysis to identify the cost of the restructuring. 3. Consult with DPM and the Office of the President on possible joint-financing arrangements. 4. Develop funding proposal.		

Time frame for reform	3 years
Affordability of reform (out of 30)	13 – Medium (Cost of establishing five additional offices is high, but joint-funding arrangements with the government can lower the cost of reform).

Build the capacity of DA GFPS to meet GAD compliance requirements.			**Priority score: 47 / 90**
AgCLIR Chapter	Social and Gender Dynamics		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The DA GFPS, particularly TWG, does not have sufficient capacity to effectively carry out its GAD functions. Thus, the DA has received two AOMs from the COA for non-compliance.		
Benefits of reform	GFPS is a key mechanism for the implementation of GAD, a key requirement for all national agencies.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	2	Better informed policy making can contribute to economic growth.
	Poverty Reduction	2	Better informed policy making can contribute to poverty reduction.
	Gender Equality	7	Information on agency's programs will show the extent of an agency's promotion to gender mainstreaming and could be the basis for future programming of resources to effect gender equality.
	Total Impact	11 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			
Fit with country's stated policies and priorities	The effort fits with existing government and development partner reform efforts to hasten the implementation of gender equality and the closure of gender gaps.		
Obstacles to reform	The current under-resourcing of the GFPS shows that this may not be a priority for the DA.		
Best practices	Although a small agency, the Department of Energy is regarded as a best practice in terms of its GFPS.		
Feasibility score (out of 30)	18 - Medium		
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?			
Action Steps	1. Conduct needs assessment to identify the capacity gaps within the DA GFPS; 2. From the result of the assessment, determine the expertise needed; 3. Work with the DA to identify where existing staff can meet this need, or if additional staff need to be brought on; 4. Determine any budgetary implications;		

	5. If funds are available, advertise positions and start the recruitment process in accordance to the human resource policy of the agency. 6. Work with PCW to train these staff.
Time frame for reform	1 year
Affordability of reform (out of 30)	18 – Medium

Improve the timeliness and relevance of gender disaggregated data.			**Priority score:** 50 / 90
AgCLIR Chapter	Social and Gender Dynamics		
WHAT IS THE IMPACT OF THE REFORM?			
Summary of constraints	The PSA has been trying to come up with timely and relevant gender disaggregated statistics. However, per interviewees with the PSA, there are data challenges that have yet to be hurdled, namely: 1) the need to refine methodologies on the measurement of economic activities of women; 2) harmonization of data from different sources within the national statistical system, and 3) capacity building for data producers, users and providers.		
Benefits of reform	Improved timeliness and relevant disaggregated data is important input to an informed policy decision/reform. Gender disaggregated data helps assess of effects of policy measures on men and women and is also critical in evaluating and monitoring women's contribution in development.		
Impact score (out of 30)	**Goal**	**Impact**	**Justification**
	Economic Growth	3	While there is no direct correlation with economic growth, micro level gender disaggregated data could capture women's value contribution to economic growth and development and/or would provide a broader perspective on how the potential of women could be harnessed to maximize their contributions to development.
	Poverty Reduction	4	This will better inform policy making in determining priority areas for poverty reduction programs and the kind of interventions that will contribute in poverty reduction; will also provide basis on prioritization of interventions that will contribute to poverty reduction programs/projects.
	Gender Equality	7	This will better inform policy making the kind of interventions that must be provided to address the specific/differentiated needs of men and women and which ones to prioritize.
	Total Impact	14 - Medium	
WHAT IS THE FEASIBILITY OF THE REFORM?			

Fit with country's stated policies and priorities	The reform effort fits well with existing government and development partner reform efforts to close gender gaps. The PSA as the producer of statistics has recognized the importance of gender disaggregated data.
Obstacles to reform	Lack of capacity within LGUs and agencies to collect disaggregated gender-related data.
Best practices	Please see the 'Standards for Collecting Sex Disaggregated Data for Gender Analysis: A Guide for CGIAR Researchers.' This document spells out simple and achievable steps for collecting relevant sex-disaggregated data for five broad research areas.
Feasibility score (out of 30)	21 - High
WHAT ARE THE RESOURCES REQUIRED FOR REFORM?	
Action Steps	1. Conduct baseline assessment to determine the data gaps that need to be filled-in; 2. Develop the terms of reference that would respond to the needs identified. Through competitive bidding, identify the team that will undertake the assessment including assessment cost developed during the multi-sector/stakeholder workshop; 3. Determine the source of funding, and assign the government agency that will coordinate the assessment; 4. Undertake the study and have a multi-sector workshop to vet the recommendations contain in the study; 5. Develop an action plan to implement recommendations.
Time frame for reform	1 – 2 years
Affordability of reform (out of 30)	15 - Medium

ANNEX 1: VALUE CHAIN SUMMARIES

ABACA[143]

Abaca fiber, known worldwide as Manila hemp, is the strongest natural fiber (three times stronger than cotton). It comes from the stalk of the abaca plant that is endemic to the Philippines. The fiber is composed of long, slim cells that form part of the leaf's supporting structure. In addition to its strength, it is prized for its resilience to saltwater damage and its length, which often reaches up to three meters. The fiber was originally used for making twine and rope, but is now mostly pulped and processed into specialty papers such as tea and coffee bags, currency notes, cigarette filter papers, high-quality writing paper and vacuum bags. The Philippines is the largest abaca producer in the world, but other known producers of abaca are Ecuador and Costa Rica.

OVERVIEW OF SUPPLY

Abaca thrives in areas that are cool and shady during the dry season and are not waterlogged through the rainy season. It is usually grown in uplands and/or intercropped with trees for shade and protection from strong wind. In 2015, the Philippines grew 134,000 hectares of abaca, producing a total of 70,300 MT of fiber for the country (see Figure 16), accounting for over 80 percent of world production. While the total area planted has decreased over the past 5 years, the yield per hectare has increased from 0.49 MT/HA to 0.52 MT/HA. The regions with the largest production are the Bicol Region (42 percent), Eastern Visayas (18 percent), the Davao Region (10 percent) and Caraga (10 percent).

Figure 16: National domestic production of Abaca

Indicator	2011	2012	2013	2014	2015
Total Area ('000 Ha)	139.0	138.5	138.4	134.8	134.1
Total Yield (MT/Ha)	0.49	0.49	0.47	0.50	0.52
Total domestic production ('000 MT)	68.6	68.5	64.9	68.0	70.3
Estimated postharvest losses (MT)	NDA	NDA	NDA	NDA	NDA
Total supply ('000MT)	69.0	68.6	65.7	69.1	70.5

Source: Philippine Statistics Authority

[143] The chapter draws from the Philippines Rural Development Project. 2016. Value Chain Analysis and Competitiveness Strategy: Abaca Fiber, Mindanao

Figure 17: Abaca Production, by Region (in MT)

	2011	2012	2013	2014	2015
Philippines	68,613	68,510	64,952	68,053	70,356
CAR	13	13	13	11	..
Ilocos Region	..	..	..	..	..
Cagayan Valley	..	..	..	..	..
Central Luzon	111	126	113	95	102
CALABARZON	4	11	15	2	4
MIMAROPA	89	106	121	149	113
Bicol Region	22,645	23,086	24,078	28,951	29,561
Western Visayas	1,853	2,236	1,741	1,599	1,959
Central Visayas	397	414	415	493	555
Eastern Visayas	20,023	19,191	16,597	12,849	12,753
Zamboanga Peninsula	631	675	590	679	677
Northern Mindanao	1,825	2,043	2,244	3,120	3,199
Davao Region	9,226	8,839	7,269	8,127	8,300
..SOCCSKSARGEN	878	916	954	1,049	1,051
Caraga	6,031	5,965	5,828	6,031	7,180
..ARMM	4,886	4,888	4,974	4,897	4,903

Source: Philippine Statistics Authority

Among the many abaca varieties, the government recommends the use of the following: Musa Tex 51, Abuab and Tinawagan Puti (in Bicol), Linawaan, Inosa, and Laylay (in Visayas), and Maguindanao, Bongolanon, and Tangongon (in Mindanao).

Planting is usually done in the wet season using corms or suckers. Cleaning of the underbrush and some fertilization are recommended before the first harvest, which happen at 18 – 20 months. Subsequent harvests are done every 3 or 4 months. The harvested stalk is stripped on-farm to get the fiber.

One plant generates different qualities of fiber because the different layers of the leaf sheath yield different types of fiber. The other important determinants of product quality are the stripping process, which affects fiber width and color, and post-harvest management, which may cause discoloration, staining or soiling. [144]

The Philippines Fiber Industry Development Authority (PhilFIDA) has a set of standards for classifying and grading abaca fiber, considering fiber strand size, color, stripping process and quality, texture, and the part of the leaf sheath where fibers come from. There are three general grades (normal, residual, and wide strip), three stripping qualities (excellent, fail and good), and three kinds of texture (soft, medium soft, and medium). and three kinds of texture: (1) soft, (2) medium soft and (3) medium. Grades denoted by alpha numeric codes are combinations of these three parameters, plus color which can range from ivory white to yellowish to greenish to reddish to brownish and

[144] Philippines Rural Development Project. 2016. Value Chain Analysis and Competitiveness Strategy: Abaca Fiber, Mindanao.

their combinations. Alphanumeric codes also differ between hand stripped and spindle/machine stripped fiber across the specific grades. There are some 16 normal fiber grades, 8 residual fiber grades and 2 wide strip grades. The diseases that destroy abaca in the country are abaca mosaic, abaca bunchy-top and bract mosaic, all of which are caused by viruses.

OVERVIEW OF DEMAND

The Philippines produced 62 percent of all global abaca in 2013, controlling 82 percent of abaca exports (which totaled 54,600 MT of fiber equivalent). The country also produced about 62% or 64,830 MT of the estimated 103,455 MT total world production in the same year.[145] Pulp comprised most of the country's exports, but the Philippines also exports sizable amounts of cordage and fiber, as well as minimal amounts of fiber craft and yarn. Germany is the biggest market for pulp followed by the US and Japan. The UK and Japan dominates the import of raw fiber from the Philippines, while the United States is an important market in cordage (see Figures 18, 19, and 20).

Figure 18: Exports of Abaca Pulp, by Destination (in MT)

Year	Total	Japan	Germany	UK	France	China	US	Other Countries
2011	29,773	4,003	9,000	7,797	1,945	2,265	2,837	1,926
2012	21,525	3,179	6,000	5,992	1,222	1,686	1,414	2,032
2013	17,618	3,256	6,815	3,505	1,754	968	915	405
2014	20,916	3,522	7,556	4,751	1,241	1,406	1,437	1,003
2015	22,200	2,871	8,631	6,385	1,438	1,365	1,217	293
5-year Share	100%	15%	34%	25%	7%	7%	7%	5%

Source: PhilFIDA

Figure 19: Exports of Raw Fiber, by Destination (in MT)

Year	Total	UK	Japan	China	Other Countries
2011	9,792	3,579	3,866	2,093	254
2012	4,456	2,477	1,296	406	277
2013	3,345	1,936	960	78	371
2014	9,763	4,107	3,625	825	1,206
2015	12,010	5,817	4,847	412	934
5-year Share	100%	45.5%	37.1%	9.7%	7.7%

Source: PhilFIDA

[145] Statistics from PhilFIDA.

Figure 20: Exports of Cordage, by Destination (in MT)

Year	Total	US	UK	Canada	Singapore	Other Countries
2011	7524	4662	109	185	731	1837
2012	4987	2935	134	171	501	1246
2013	4240	2443	80	182	462	1073
2014	5093	3468	226	178	253	968
2015	4458	3028	202	218	211	799
5-year Share	100%	62.8%	2.9%	3.6%	8.2%	22.5%

Source: PhilFIDA

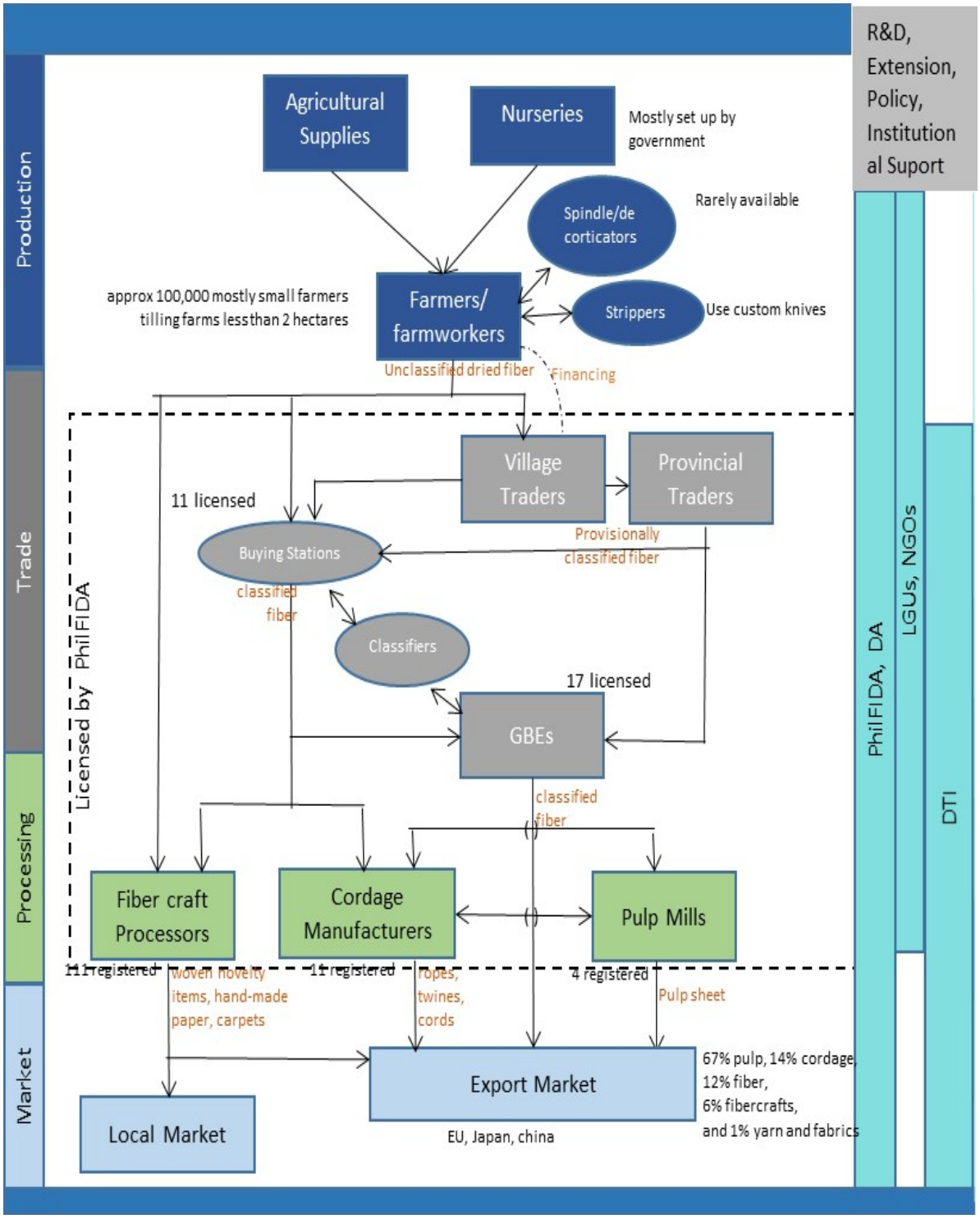
The global market for pulp is expected to continue to expand. Pulp is traditionally used for the manufacture of meat and sausage casings, tea bags, currency paper, cigarette paper and other specialty papers in Europe, US and Japan. China is requiring more pulp to feed its growing production of teabags and its waste paper recycling industry. With newer regulations in place which require car manufacturers to make automobile components more recyclable and end-of-life disposal friendly; and regulations that restrict dumping of synthetic materials in the open sea, the EU is finding new uses for natural materials like abaca in the automotive and ship-building industries. With the growing consciousness in general by consumer groups that synthetic materials ultimately harm the planet, the potential uses and demand for abaca fiber can only grow.

KEY VALUE CHAIN PLAYERS AND FUNCTIONS

The abaca value chain is quite simple, with farmers producing abaca and selling stripped dried fiber through multiple levels of traders until it gets to the grading and baling establishments (GBEs). The latter sorts and grades the fiber and passes these on to the export market or to three types of domestic abaca processors: the pulp mills, the cordage manufacturers and the fiber craft manufacturers. These processors also generally export their finished products.

There are currently an estimated 100,000 abaca farmers, 17 licensed GBEs, 11 abaca buying stations, 4 pulp mills, 11 cordage manufacturers and more than 100 fiber craft processors. Among the bigger players in the value chain are Manila Hemp Trading Corporation in Camarines Sur and Catanduanes, Specialty Pulp Manufacturing in Leyte, and Ching Bee Trading Corporation in Davao among the GBEs and Manila Cordage Company in Laguna, Albay Agro-industrial Development Corporation in Albay, Pulp Specialties Inc. in Leyte and Newtech Pulp Inc. in Lanao del Norte among the abaca processors.

Figure 21: Abaca Value Chain Map



Input Suppliers. Nursery operators provide quality planting materials to abaca farmers, while fertilizer and pesticide dealers are the source of chemical inputs.

Farmers. There are more than 100,000 small farmers cultivating abaca, mostly in uplands and interior areas of the country. Abaca farms are small, ranging in size from one to two hectares. Farmers carry out the entire range of functions that include preparing land, planting seedlings, maintaining the farm, harvesting, tuxy (explained later in this section) or stripping stalks, and finally drying and selling raw abaca fiber to traders. Farm laborers or strippers help the farmers in harvesting, hauling and stripping the stalks. They are generally paid in terms of a share of the harvest, which is observed to range from 50 percent to 70 percent, depending on the hauling distance.

For optimum productivity, farmers require access to good quality disease-free planting materials, fertilizer, pesticide as necessary, good strippers or stripping equipment, and a drying facility or a secure drying area. These are rarely available for most farmers. Corm and suckers, mostly sourced from other farms instead of from nurseries, are commonly used as planting material. Farmers do not use fertilizer as a norm, and use pesticides only when they see pests, not preventatively. Stripping or tuxy, the process of separating the outer layer from the inner layer of the leaf sheath, can be accomplished by hand using serrated knives or by machine like spindles and decorticators, though hand stripping using custom-made knives remains the prevalent practice. With respect to drying, most farmers spread the fiber under the sun where these may not dry properly or be exposed to various contaminants.

Traders. There are multiple layers of traders before the abaca fiber reaches the processors or the market. The village traders buy from farmers, the provincial traders buy directly from farmers and from village traders, while grading and baling establishments (GBEs) buy from provincial traders directly or through buying stations. GBEs supply the pulp mills and cordage manufacturers, both of which can also have buying stations receiving stocks from traders directly.

A few farmers' cooperatives are engaged in trading fiber. However, often these cooperatives are more inclined to sell to higher level traders to avoid the challenges in consolidating sufficient quantity of fiber due to lack of high quality and adequate storage facilities. Village and provincial traders usually buy stock at one price no matter what grades are mixed in. They then provisionally classify the fiber when they sell their stock to buying stations and GBEs.

Government-certified classifiers work with GBEs and buying stations to properly classify and grade the dried abaca fiber, also cleaning the fiber of debris and extraneous matter in the process. They are paid for the number of bales classified and weighed. After the correct grading, the GBEs use high-density presses to pack the fiber by grade into standard 100 cm x 55 cm x 60 cm bundles of 125 kilograms each. They, then send the fiber stocks to the appropriate processor or market based on the grades ordered. Given that one abaca plant can generate several grades of fiber, the producer area coverage of a GBE is necessarily wide to generate a significant volume for the grades specific to

the requirements of one market. The GBE also must have a broad market base to be able to dispose of all the grades it bales.[146]

Processors. There are three types of processors: the pulp mills, the cordage manufacturers and the fiber craft makers. Pulp mills transform the abaca fiber into pulp and pulp sheets, and export the same for use in making various specialty papers. Cordage manufacturers use dried fiber to make ropes, cords and twines. Fiber craft makers are mostly cottage industries that weave abaca into fabric, sometimes blended with other materials, printed or painted and made into novelty items. Fiber craft makers also include those engaged in handmade papermaking and carpet manufacturing using abaca. These processors get supplies from buying stations and GBEs, while fiber craft makers are known to also directly source inputs from farmers' groups.

VALUE CHAIN LINKAGES

Vertical linkages. There are no strong links between farmers and traders. Farmers go to traders based on price and distance considerations on a per transaction basis. It is common, however, for traders to give cash advances to farmers to receive assured and timely produce so that they (traders) can capture their target markets.

The strongest part of the chain is the small group of licensed GBEs. GBEs generally have a regular patron relationship with specific traders. This regular relationship allows the GBE to be familiar with the sorting capability of the trader and general quality of fiber in the trader's areas of operation. It also facilitates easier transactions because modes of doing business, including delivery and payment, are established. GBEs are also known to provide cash advances to partner traders to retain the business relationship and ensure market share. For the same reason, pulp mills and cordage manufacturers have a regular client relationship with the GBEs. This group of GBEs essentially set the prices in the chain, making all other players price takers. It profits from a system of double layers of small traders that keep price, grading, and quality preference information away from the next level of small traders and farmers. The GBEs are few and can operate in a monopolistic market.

Horizontal linkages: There is little organization in the various levels of the chain. Farmers' organizations that facilitate access to inputs and markets are few, perhaps because of past experiences where farmers failed to honor market commitments with their customer organizations when they fell to the lure of higher prices offered by other traders, or in cases where the operations of such farmers' organizations were mismanaged.

There is also no coordination and cooperation among traders. They basically compete with one another for stock. Even at the highest level, there is no active exporters association in the industry. It appears that exporting GBEs and processors can establish markets without too many issues that require government intervention, resulting in no perceived need to organize and advocate for support and coordination.

[146] This makes it difficult for a farmers' organization to become an abaca GBE. A few farmers' organizations are coco-coir GBEs but coco-coir does not have a complicated grading system.

Pulp mills and cordage manufacturers maintain friendly relations with each other so that they can easily exchange fiber of the specific grades available with other processors, as and when required.

SUPPORTING INSTITUTIONS

The PhilFIDA is the government agency charged with overseeing the development of the abaca industry. It has both developmental and regulatory functions. It undertakes RDE as well as production support (distribution of seedling) activities. It licenses all industry players, except the farmers. It also implements the standards in the fiber industry. The DA, with overall responsibility over the agriculture sector, supports the PhilFIDA in the planning and implementation of support programs. The LGUs, as the government front-liner, also support industry players within their jurisdiction, mainly in cooperation with the national government agencies. The DTI and DOST, concerned with overall trade and industry and technology development, respectively, also have programs that can support the industry, especially in marketing and enterprise development for the former and in upgrading post-harvest and primary processing technologies for the latter. The Board of Investments, which implements the incentives system for Philippine industries, can also provide incentives to new investments in the sector, within the scope of the Omnibus Investment Code and the Investments Priorities Plan.

PRICES AND MARGINS

Studies indicate the following prices and margins for the various abaca players. Note that the profit estimate for farmers/stripper are equally shared. Also, traders are multi-level so the margin per kilo per trader is lower. While profit per kilogram appears higher for farmers, their transaction volume is low. Exporters are expected to have the biggest transaction volume, receiving the biggest share of the revenues (Figure 22).

Figure 22: Abaca Value Chain Prices (USD$)

Area	Indicator	Players		
		Farmers/ Strippers	Traders	Exporters
Bicol	Selling price per kg	0.87	1.03	1.27
	Margin	-	0.16	0.24
Mindanao	Selling price per kg	0.91	1.01	1.21
	Margin	-	0.10	0.20
	Added Cost per kg	0.55	0.04	0.06
	Total Cost per kg	0.55	0.99	1.07
	Profit	0.36	0.06	0.14

Source: Philippines Rural Development Project

VALUE CHAIN CONSTRAINTS

Overall productivity in the chain is reduced by farmers' lack of access to key farm inputs and lack of premium pricing for good quality products.

- **Lack of commercial nurseries:** Nurseries are mostly non-commercial enterprises established by government and non-government organizations to support abaca growers after widespread damage to farms caused by weather disturbances and disease. The thin regular market discourages the growth of commercial nurseries because farmers do not appreciate the value of receiving planting materials from nurseries. They prefer instead to receive those from neighboring farms.
- **Poor stripping practices:** Fiber quality suffers because good stripping is not priced higher than average quality stripping and farmers rarely have access to drying facilities. Stripping affects the quality of the fiber but there is little incentive for strippers to do well. The practice among traders of buying dried fiber on an all-in basis encourages strippers to do their work as fast as they can to produce more fiber with no regard to quality. In addition, the lack of appropriate drying facilities results in improper drying, especially during the rainy season, which in turn leads to quality deterioration. Moreover, improper post-harvest handling allows debris and microorganisms to attach to the fiber.
- **Over-complication of grades and standards:** Smaller traders find it more profitable to buy mixed fiber using one price because the relatively small individual volumes of purchases they make renders it inefficient to make any extra effort to classify fibers. Also, the standardized grades are too complicated for farmers and traders to learn seriously.

VALUE CHAIN UPGRADING STRATEGIES

There are approximately 70,000 hectares of abaca farms that were recently damaged by pests and by El Niño which require rehabilitation. The government further aims to expand planting areas by another 72,000 hectares to meet the expected demand in export markets. For growth to occur, beyond expanding plantings, the industry needs to look at ways to increase productivity. The country's abaca yield was 0.52 MT/Ha, while Ecuador yields an average of 1.4 MT/Ha. Greater use of higher-yielding varieties (HYV), wider application of enhanced production/post-harvest technologies, and more access to spindle or decorticating machines, drying facilities and warehouses are needed. It is also important to ensure that price premiums for better quality product are made available to farmers.

The industry also needs to start paying serious attention to promoting greater environmental sustainability and social equity in the value chain. Retail consumers are attracted to abaca because it is a natural product, and the same consumers are also keen supporters of sustainability and equity. Partly because of this, institutional buyers in developed countries are now beginning to adhere to certification standards, offered by international certifying agencies, to reinforce and encourage compliance to sustainability and social equity standards. Such standards, in turn, need to percolate through the entire chain to the farmers and multiple layers of traders of abaca in the producing countries.

The following are the strategies prioritized in the value chain analysis of the commodity in Mindanao[147]:

- Create an adequate supply of disease resistant planting materials, which give higher yields of superior fiber.
- Improve soil nutrient management and fertilizer use.
- Enhance flow and quality of extension services to facilitate adoption of good agronomic practices and achievement of sustainability certification.
- Increase availability and access to mechanized and efficient postharvest technologies necessary for the consistent production of high quality fiber.
- Improve physical/infrastructure linkages to input, support, and product markets.
- Improve incentives to produce quality fiber and pricing transparency and consistency.
- Improve communication, coordination, and collaboration between and among value chain players.

A similar study in Bicol advocates the following strategies as priority[148]:

- Create nurseries in strategic areas using good quality, HYV planting materials preferably from Catanduanes.
- Improve access to support services to meet the upgrading needs of abaca farmers, particularly in improving their farm productivity.
- Replicate the Catanduanes Abaca Sustainability Initiative[149] model to foster interfirm cooperation in other provinces of Bicol and to take advantage of the growing market for sustainably produced abaca.
- Create postharvest facilities to improve the quality of abaca fiber.
- Provide marketing and promotional support for abaca fiber craft products.
- Organize the industry to coordinate private–led abaca industry development efforts.

[147] Philippines Rural Development Project. 2016. Value Chain Analysis for Abaca in Mindanao.

[148] Philippines Rural Development Project. 2016. Value Chain Analysis for Abaca in Region V.

[149] The “Catanduanes Abaca Sustainability Initiative” groups together abaca farmers, sub—traders and traders with the major goals of (1) Introducing and promoting sustainability awareness along the supply chain, (2) Establishing policies, procedures and standards and facilitating certification with GLATFELTER as group administrator, (3) Becoming an efficient group of abaca farms that plans, executes and achieves its goals and (4) Building up sustainability certified, regular abaca supply.

COCONUT

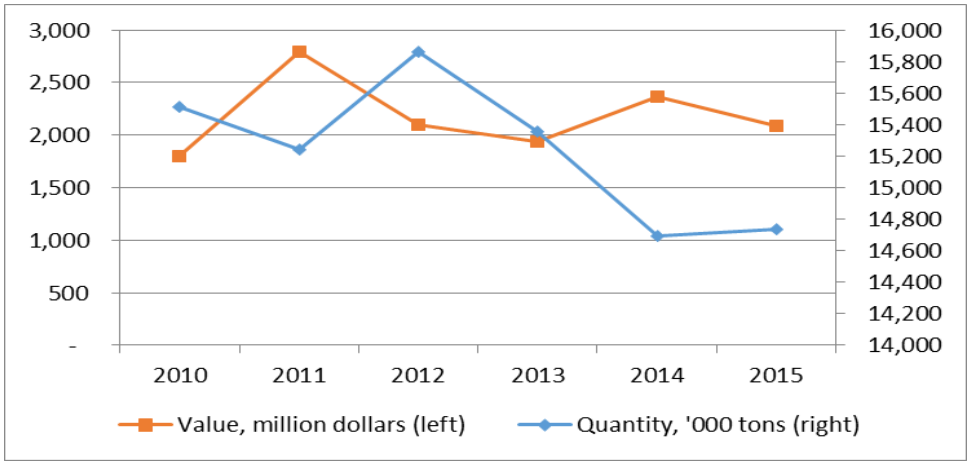
Coconut products continue to be a multi-billion-dollar industry across a wide range of products and uses. Coconuts were traditionally used to produce edible oil for export, but due to the overall versatility of the coconut and growing demand, a wide variety of products are now produced, including: coconut oil, desiccated coconut, copra meal, virgin coconut oil, coco sap sugar, coconut water, coconut flour, activated carbon, shell charcoal, coconut milk and coir products. Coconut trees are tropical trees that are grown in a narrow band of land that circles the middle longitudes. Three major countries produce 90 percent of the world's coconuts by volume: Indonesia, the Philippines and India. The bulk of products from these three countries are processed products.

OVERVIEW OF SUPPLY

The coconut is famous for its versatility. Dried kernel or copra is sent to the processing plant for extraction of crude coconut oil (CNO). The by-product of CNO extraction is copra meal used as feed; the husk is a source of coir for geonets, matting, filling material; the shell can be made into activated charcoal or as material in houseware. Coconut water and virgin coconut oil (VCO) can be extracted from young green coconuts (but not the mature coconuts used for copra and CNO). The trunk is used as lumber, the core as vegetable food, and the leaves as brooms or housing material. This listing by no means exhausts the possible uses of the coconut.

Coconut is grown in some 3.5 million hectares or about 26 percent of Philippine farmland. The industry involves of some 3 million farmers each tilling an average of 1.1 hectares spread across 68 of 81 Philippine provinces. The Philippines is the second largest producer of coconut in the world, with output peaking at 15.9 million tons (in-husk) in 2012 (Figure 23). Since this peak, output declined sharply in 2013, then turned basically flat in 2014 and 2015. Value of production continued to increase up to 2014 owing to rising coconut prices.

Figure 23: Domestic coconut production (USD Millions, Thousand MTs)



Source: Philippines CountrySTAT

Coconut is widely grown throughout the country; it is common in coastal areas (its original environment), as well as in uplands. In 2015, the biggest coconut producing regions in order of output are: Davao region, Northern Mindanao, Zamboanga Peninsula, ARMM, CALABARZON, and Eastern Visayas. In 2015,these six regions account for 65 percent of the country's total. Eastern Visayas used to be the 3rd–4th place among the regions, but output fell sharply in 2014 in the wake of typhoon Haiyan in late 2013.

Figure 24. Domestic coconut production (Thousand MTs)

	2011	2012	2013	2014	2015
PHILIPPINES	15,244,609	15,863,801	15,354,334	14,696,298	14,735,189
CAR	907	952	1,079	1,173	1,165
Ilocos Region	38,476	39,316	40,482	40,978	39,464
Cagayan Valley	59,761	66,233	71,561	74,372	77,118
Central Luzon	212,648	209,025	179,360	189,174	167,738
CALABARZON	1,390,854	1,417,439	1,434,804	1,380,491	1,379,298
MIMAROPA	712,900	745,489	779,135	806,929	818,146
Bicol Region	1,201,707	1,240,459	1,255,507	1,124,412	1,105,743
Western Visayas	459,784	477,953	470,653	359,826	410,888
Central Visayas	438,267	451,037	458,993	448,111	432,043
Eastern Visayas	1,769,952	1,771,459	1,623,586	1,191,923	1,165,867
Zamboanga Peninsula	1,557,621	1,730,428	1,743,792	1,659,014	1,682,121
Northern Mindanao	1,745,950	1,816,501	1,816,578	1,838,405	1,851,702
Davao Region	2,627,248	2,720,233	2,275,980	2,332,090	2,246,188
SOCCSKSARGEN	879,868	985,175	1,040,610	1,071,707	1,159,818
Caraga	879,400	880,883	834,917	821,513	804,723
ARMM	1,269,268	1,311,219	1,327,299	1,356,182	1,393,168

Source: Philippines CountrySTAT

While Philippine coconut total ouput is higher than those in neighboring ASEAN countries, except Indonesia, productivity per hectare is lower: Thailand's yield is 12 percent higher; Indonesia is 41 percent higher; Malaysia is 64 percent higher and Vietnam is 121 percent higher. Production is usually done by smallholders and productivity in the sector is low, with significant proportions of trees reported as beyond their productive lifespan (44 million or 14 percent of the total)[150], genetically inferior and/or planted in marginal areas. These conditions are compounded by lack of meaningful support for enhancing farm productivity, as well as gaps in addressing sporadic outbreaks of disease and pest infestation. The significant pests and diseases that gravely affect coconut production in the country are the brontispa, a beetle that feeds on soft tissue of fronds and can do enough damage to kill the tree; *cadang-*

[150] https://www.rnw.org/archive/senile-coconut-trees-threaten-philippines-exports.

cadang, a viroid that causes premature decline and death of the palm; and the coconut rhinoceros beetle.

Aside from typhoons, massive devastation on coconut trees was inflicted by the coconut scale insect. The earliest reported outbreak was in 2010; and the infestation was anticipated to spread to nearly 3 million trees out of the total 325 million trees in the country. Currently the infestation appears to have been contained.

OVERVIEW OF DEMAND

Existing capacity is not fully utilized in the traditional coconut processing sectors – oil milling, oil refinery, desiccated coconut plants and oleo chemical plants – consequent to low farm productivity. Exports in 2015 were about US$1.2 billion, compared to $1.9 billion in 2011. Around 70 percent of export receipts from coconut come from oil products. The leading market destinations for Philippine coconut oil are the U.S. and the Netherlands. The U.S. is also the leading importer of Philippine desiccated coconut, while South Korea leads in copra meal and cake. Japan and China import the most coco charcoal, while Japan, Germany and the U.S. buy the most activated carbon.

Capacity is growing in the manufacture of high value coconut fruit products, including virgin coconut oil (VCO) and coconut water. There is also growing interest in coir from coconut husk, discarded as waste in the traditional processing industries. Coco-coir, made from decortication of husks, has many uses as geotextile to stabilize soil, while allowing regeneration of vegetation, as healthy substitute to rubber, and as insulation because of its durability, bio-degradability, high water absorptive capacity, capacity to resist sunlight and retention, and capacity to facilitate seed germination. China is currently the biggest export market for coir, while the U.S is the biggest for VCO and coco water.

Figure 25: Exports of Major Coconut Products, 2011-2015 (US '000s)

Year	Copra	Coconut Oil	Copra Meal	Desiccated Coconut	Activated Carbon	Coco shell charcoal	Total
2011	281	1,399,344	58,796	286,806	9,839	36,686	1,791,752
2012	571	1,012,877	124,605	196,977	24,091	97,311	1,456,432
2013	305	811,644	211,256	198,699	45,684	83,962	1,351,550
2014	687	1,043,627	112,037	254,162	33,384	88,506	1,532,403
2015	571	843,340	70,404	160,051	32,343	81,527	1,188,236
5-year Share	0%	70%	8%	15%	2%	5%	100%

Source: PCA

Figure 26: Exports of Selected Products by Destination, 2011-2015 (US '000s)

Product	Total	Destination				
Coconut Oil	5,110,526	USA	Netherlands	Japan	China	Italy
		2,291,182	1,742,603	285,358	167,386	189,476
Desiccated Coconut	1,096,673	USA	China	Netherlands	Belgium	Australia
		312,658	39,759	78,059	69,934	72,183
Copra Meal/Cake	577,107	Korea	Vietnam	Japan	India	Taiwan
		263,218	126,120	16,176	17,957	15,332
Coco Chemicals	114,085	China	USA	Korea	Taiwan	Pakistan
		45,801	5,281	4,697	6,145	2,637
Refined Glycerin	109,640	Japan	China	Korea	Russia	Malaysia
		82,377	6,195	4,622	3,418	3,512
Fresh Matured Coconut	708,299	Hong Kong	Korea	USA	Canada	Saudi Arabia
		442,184	4,136	7,907	6,168	2,024
Grated Coconut Meat	753,239	USA	China	Canada	Hawaii	Australia
		381,128	48,000	237,769	22,118	21,057
Nata de Coco	33,468	Japan	USA	Canada	UAE	Netherlands
		14,224	2,023	12,613	1,608	239
Coconut Milk Powder	33,164	USA	Japan	France	Netherlands	Taiwan
		6,029	7,472	4,208	3,327	2,490
Coconut Milk Liquid	23,246	USA	UK	Japan	Netherlands	Portugal
		6,780	1,796	4,659	714	688
Coco water	152,298	USA	Brazil	Australia	Taiwan	Canada
		102,653	3,416	6,969	1,116	3,542
VCO	467,684	USA	Canada	Germany	Belgium	Australia
		194,968	49,149	21,151	5,349	3,781
Baled Coir	32,341	China	Taiwan	Singapore	Hong Kong	Japan
		18,837	614	655	547	2,698

Source: PCA

KEY VALUE CHAIN PLAYERS AND FUNCTIONS[151]

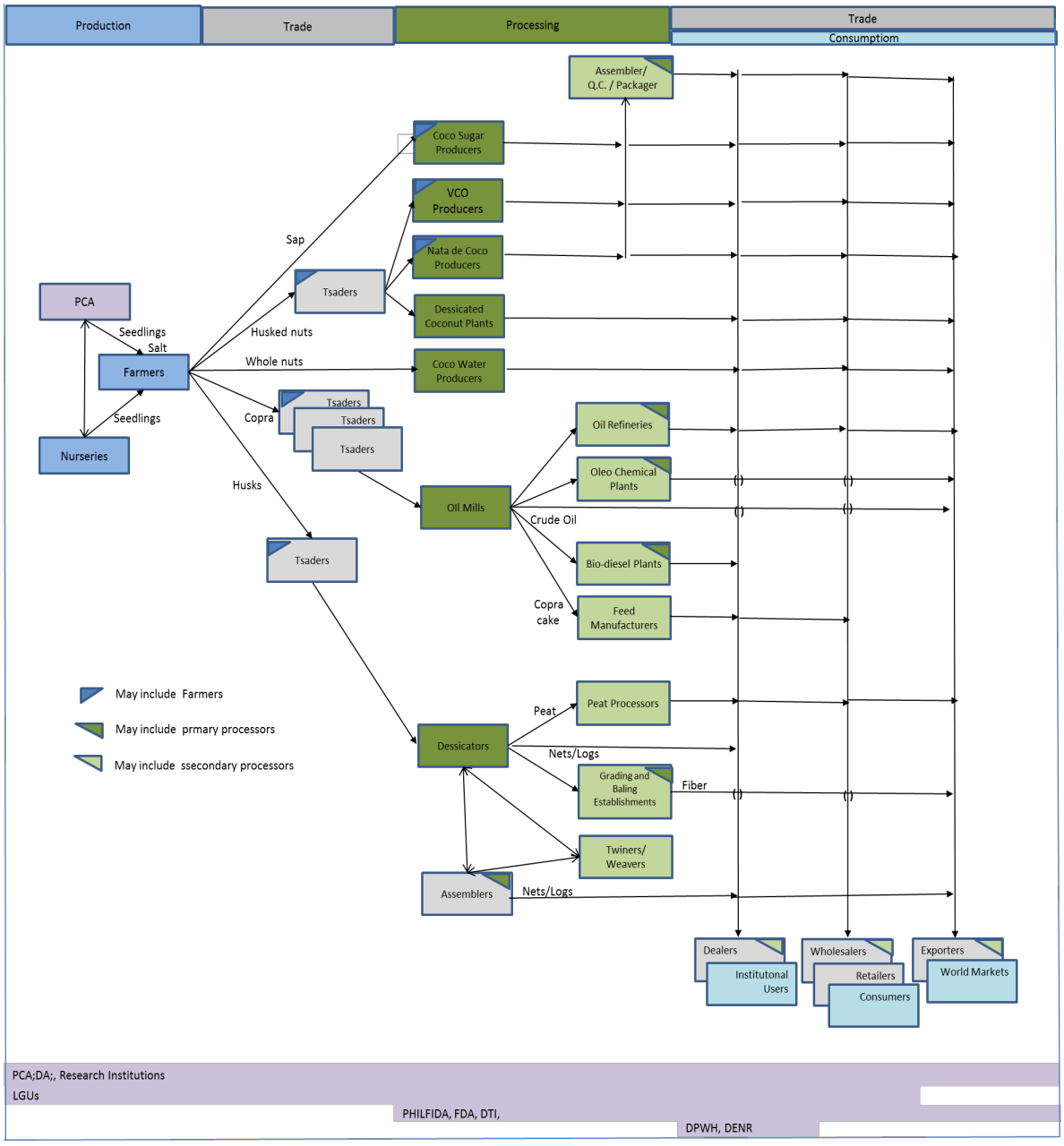
The coconut value chain is made up of several chains representing the various products from coconut, including oil and copra meal from the kernel, water from the nut, desiccated coconut from the meat, nata de coco from the water, fiber from the husk and sugar from the sap. Producers sell whole or husked nuts, husks, sap and/or mostly copra which they process from the coconut meat. The products generally pass through traders – several in the case of copra – before these are delivered to primary processors, which generally pass these on to secondary processors (see Figure 27).

There are around three million coconut farmers. Processing facilities include: 77 oil mills and refineries with combined capacity to mill 4.3 million MT of copra per year and produce 1.6 million MT of refined coconut oil, 12 desiccated coconut plants with total capacity to produce 253 million MT of desiccated coconut per year, 17 coco shell charcoal/activated carbon plants with annual capacity to produce 116 thousand MT of charcoal and 67 thousand MT of activated carbon, 15 oleo-chemical plants with annual capacity to produce 1.3 million MT of assorted oleo-chemicals, 12 bio-diesel manufacturers with production capacity of 54 thousand MT per year. In addition, the PCA reports the following numbers of other coconut processors registered in 2015: 8 milk, cream and powder; 10 coco-coir; 13 coconut flour; 20 VCO; 6 coco water; and 37 other coconut products not mentioned above.

The biggest millers, in terms of capacity are Gran Exports Manufacturing Corporation and Iligan Bay Milling and Trading Corp, both in Iligan City; Cargill Oil Mills Philippine Inc. in General Santos City; Davao Bay Coconut Oil Mills, International Copra Export Corp. and First Coconut Manufacturing Inc., all in Davao City; Wilmar Edible Oils in Zamboanga del Norte; Interco Manufacturing Corp in Zamboanga City; and Third Millennium Oil Mills in Misamis Occidental. In oleo chemicals, the biggest production capacities are with Pilipinas Kao Inc. in Misamis Oriental, JnJ Chemicals Inc. and Tantuco Enterprises Inc. in Quezon, United Coconut Chemicals Inc. in Batangas and Philippine International Development in Zamboanga City.

[151] Discussions in this chapter and in the next chapters on linkages and chain weakness are based on several studies: Pabuayon, Cabahug, Castillo and Mendoza. 2009. Key Actors, Prices, and Value Shares in the Philippine Coconut Market Chains; Briones and Israel. 2014. Enhancing Supply Chain Connectivity and Competitiveness of ASEAN Agricultural Products: Identifying Chokepoints and Opportunities for Improvements. PIDS; Maria Acela Katrina A. Padua. 2015. Small farmer access to premium prices for copra in the Philippines: A case study of the coconut oil chain in Camarines Sur province (Thesis).

Figure 27: Coconut Value Chain Map



Coconut Farmers. Harvesting nuts and making copra are the main activities of coconut farmers, which can be the landowner, tent-tillers, and/or farm laborers. Very few farmers plant trees or fertilize but cleaning the land under the coconut tree is generally practiced. The farm tasks are mostly done manually using simple farm implements, like bolos, scythes, and spikes; transport aids like carts, baskets and work animals (carabao or horse); a small structure to dry the coconut meat, and simple processes which are harvesting, piling, hauling, dehusking and splitting the nut, drying the meat in nut halves, separating the browned meat from the shell, cutting these meat into smaller squares,

and packing these in a sack for transport to where the copra dealers are. Farmers normally hire farm labor to help in harvesting and hauling.

Farmers use about half of the husks to dry the copra. Some of the remainder is used for household cooking and cleaning but most are generally left in the field to rot. The presence of decorticators allows the farmer to sell the husks instead.

With the growing popularity of new higher value coconut products, an increasing number of farmers sell young and mature nuts to traders for processing into coconut water, desiccated coconut, VCO, and nata de coco. Some also tap coconut blossoms for the sap, which is delivered to coco sugar producers. A few farmers can add value, processing the meat into virgin coconut oil or the sap into sugar before selling these to traders or secondary processors, in this case assemblers and packagers. Farmers closer to urban areas can also sell whole green coconut to traders for wholesale to food establishments and retail to consumers.

Traders. Copra from the farms generally passes through more than one trader to reach the oil processor. Smaller traders buy the copra directly from the farms and pass them on to bigger trader consolidators. Consolidators mostly have a warehouse to re-dry the copra and to put together enough volume to make transport to the mill cost-effective. Many consolidators are involved in other business like trading of feeds, rice, agriculture inputs, and hardware. Traders and consolidators traditionally shoulder the cost of transport the copra to the next player. They also assume responsibility for quality control with most discounting the buying price of copra based on quality, i.e. moisture content; determined by visual inspection.

Husked nut traders also buy directly from the farms. They add no value except taking care of transport to the next biggest trader or processor. Whole nut traders buy young nuts to sell to coco water processors or to retailers in markets. In the case of husks, agents collect these from farmers and deliver them to the decorticators, either as a trader, who bears the cost of transport and then sells the husks, or as an agent of the processor receiving a commission. To contain transportation costs, whole nuts and husks are normally sourced from farmers near the primary processors.

Processors. The processors can be broadly categorized as primary and secondary. Primary processors are smaller and located nearer to farms and therefore have the advantage of receiving the bulk of the nut or husk input from traders at a lesser transportation cost. Secondary processors are bigger and can further process products of the primary processor. Some establishments do both primary and secondary processing, limiting operations to its own outputs or buying additional inputs from other primary processors.

In the case of copra, the primary processors are the oil mills that produce crude oil and copra meal as by-products, through a process that essentially expels the oil from the meat. The millers test the copra when they buy and discount prices for deficiencies in quality. The crude oil goes to a secondary processor that further transforms the crude oil into a variety of oleo chemicals or refined oil. Crude oil needs to be neutralized, bleached, filtered, deodorized, washed and dried to become fit as food. Other secondary

processors transform the crude oil by chemical processes into fatty acids, methyl esters, glycerin and fatty alcohols for use in the manufacture of soaps, detergents and bio-fuel. The secondary processors may package and brand their products before passing them to dealers, wholesalers and exporters, or have the latter parties do the packaging and branding.

For husks, the primary processors are the decorticators, who extract the coir and separate the peat. The secondary processors are: GBEs that sort, bale and tag the coir; the bigger decorticators that also do grading, baling and tagging; twiners and weavers who produce geonets and cocologs; and peat consolidators who compress and package the peat. Decorticating requires a machine which uses power, drying pavements, storage areas, husk reception and preparation areas, and plenty of labor. Micro scale decorticators can process some 5,000 husks daily while bigger decorticators can absorb some 20,000 - 40,000 husks daily. Only 30percent of the coir extracted from the husk is long fibers which are of two kinds – the longer bristle fibers (at least five inches long) and the mattress fibers (less than five inches but at least 2.5 inches in length). The uses vary by type of fiber. A big portion -- 70 percent of the husk is peats; i.e. dusts and fiber less than 2.5 inches in length and not fit as regular coir. Coir to be exported as fiber is baled and tagged by a licensed GBE, which can also be the decorticator. Coir can also be sent to twiners and weavers to be made into nets. Twiners and weavers can be contracted directly by the decorticator or by assemblers. Among plants operated by cooperatives, the twiners and weavers are members of households near the facility. Twiners use a hand-powered twining machine while weavers use simple looms. The decorticator or assembler usually provides these implements. Assemblers manage pools of twiners and weavers. Arrangements with decorticators on sourcing of the fiber and disposition of final output vary. Many have direct links to the wholesaler/exporter or final local user.

For desiccated coconut, and nata de coco, there is no distinct line between primary and secondary processing, but there are bigger processors or assemblers that buy from the smaller manufacturers to package, brand and sell the products. The smaller primary processors are mostly cooperatives and single proprietor entrepreneurs. Secondary or bigger processors are generally corporations. Processing plants produce desiccated coconut, a traditional ingredient for baked goods, from coconut meat by washing, comminuting, and addition of preservative, drying and sifting. With respect to nata de coco, home-based producers and plants use fresh coconut water in a process that involves sterilization, addition of sugar, acetic acid, and a cellulose producing bacterium, fermentation, rinsing and pasteurization. Many bigger plants produce multiple products from the water and meat, expanding the product line from desiccated coconut to cream, milk and water.

Coco water manufacturers use young coconut that is carefully harvested and handled to prevent damage and contact with possible contaminants. Harvesting during the cooler time of the day and using baskets to lower the nut are recommended. In the plant, the coconut is cleaned and aseptically perforated to harvest the water which then undergoes

processes like filtration, centrifugation, pasteurization, sterilization, cooling and/or carbonation before being bottled, packed or canned.[152]

VCO is extracted from dried shredded coconut meat using "mechanical or natural means, with or without the use of heat, without undergoing chemical refining, bleaching or deodorizing." Most small-scale producers are individuals using natural fermentation of coconut milk for producing VCO because it entails very little capital, while bigger processors with more capital use centrifuges to extract the oil from the milk. Bigger VCO producers are also consolidators who buy the output of the smaller processors, undertake quality control and standardization processes, brand the VCO and bring these to markets.

Exporters and Assembler/Packagers. These are generally the bigger processors or traders who are familiar with the market and its processes and requirements. They get their merchandise from their own operations as processor or assembler and from other smaller processors and assemblers. They do the final quality control, packaging and branding, contract the logistics and transport providers, and process the papers necessary to trade.

Wholesalers and Dealers. These parties are also familiar with the markets but do not generally do quality control, branding and packaging.

VALUE CHAIN LINKAGES

Vertical linkages: Due to existing supply tightness, traders generally compete but also buy from each other. Transactions are generally done on a spot basis. It is common for traders to provide farmers or lower-level traders with cash advances to ensure access to supply.

In the case of husk decortication, traders and primary processors pursue arrangements with farmers by providing them training on efficient farm practices, financing, and better de-husking methods. They also provide families of nearby farmers with training and opportunities to work in the decorticating facility or become contracted twiners and weavers. Because insufficiency of husk input is a common issue among decorticators and husks are nothing but waste material for farmers, the relationship is equally advantageous to both parties. Twiners and weavers get skills training and access to twining machines and looms from decorticators or assemblers. While mostly beneficial, because twiners and weavers have little alternative income sources and no alternative markets for their products, they hold little power in the pricing of labor or output.

Specific to coir production, big decorticators who have market access and need additional output to meet market demand provide small processors with financing and technical assistance in using and maintaining machinery and in attaining desired quality standards. The marketing arrangements between these big and small decorticators vary but one can assume that the small decorticators have little leverage in determining the

[152] Some coco water plants also have other coconut products like oil, desiccated coconut VCO and milk/cream but it is not clear if the same coconut is used for all products as coco water is generally from young coconut while other products are from mature coconut.

parameters of the relationship. Wholesaler/exporters and big processors have strong links with domestic and export markets because they can offer the quality and volume needed. For small individual orders that add up, notably those from contractors of the DPWH, some decorticators/assemblers are known to do the actual installation of the geo-nets and bio-logs for the contractors. Small decorticators and assemblers have difficulty competing with them to gain market access.

The main attraction of VCO in the international market is its being natural and organic. Thus, big processors enter contract farming arrangements with farms and assist them in getting organic certification. Another arrangement in the VCO industry is the hub system, where farmers or VCO producers in one area are associated with a processor/consolidator which makes VCO, buys those made by other producers, and does the quality control, standardization and marketing. The consolidator encourages the association through guaranteed price or profit sharing arrangement with the farmers or VCO producers.

Horizontal linkages: Farmers cooperatives or associations facilitate farmers' access to technology, inputs, financing and markets. Most support for farmers from government and financial institutions are coursed through these associations, which act as intermediary and facilitator of the required equity contribution from farmers to participate in the support programs. Specific to coconut, the PCA's provision of planting materials and salt fertilizer to increase farm productivity is made available through cooperatives. Likewise, the market matching support of DTI and DA for farmers involves associations. Coconut associations have an umbrella organization, the United Coconut Association of the Philippines (UCAP), which provides its members, government entities, and international organizations with a variety of services pertinent to production, trade, processing, policy and markets. It is supposed to be a private institution but it has the PCA as a member along with various groups representing the different coconut industries. This arrangement weakens the influence of the PCA, the government institution charged with overseeing the sector, as it willingly cedes its roles to the UCAP.

SUPPORTING INSTITUTIONS

The lead government agency supporting the coconut industry is the PCA, a developmental and regulatory agency currently attached to the Office of the President.[153] The PCA licenses all coconut processors and implements industry standards. Its main production support activities are on replanting aged coconut trees and salt fertilization. It also has responsibility over coconut pest and disease control and gets support from state academic institutions in this regard. The DA supports the PCA, especially with respect to promoting the cultivation of other commodities under the coconut trees as a way of improving the income of farmers. The DTI provides market assistance and enterprise development services especially for new coconut products while the DOST provides technical assistance and financing support for small scale processing technologies. The LGUs are the front-liners for delivering government services and

[153] Formerly attached to the DA.

generally cooperate in implementing program initiatives of the NGAs. The FDA licenses all food processors and products to implement food safety standards.

PRICES AND MARGINS

Some studies indicate the prices and margins of the various players for refined coconut oil, VCO and coco sugar. It appears that the margins (not considering costs) for coconut oil are smaller compared to VCO and coco sugar. However, the volume currently makes up for the smaller margins.

Figure 28: Coconut prices and margins (USD)

Branded CNO - Quezon		Farmer	Agent	Town trader	Oil miller	Oil refiner	Source
Price per liter		0.52	0.54	0.56	0.57	0.62	Pabuayon, et.al
Margin			0.02	0.02	0.01	0.05	
Branded VCO Quezon		**Farmer**	**Processor**	**Trader/ wholesaler**	**Distributor**	**Retailer**	**Source**
VCO CALABARZON	Price per liter	1.16	2.22	2.53	7.38	10.55	Pabuayon, et.al
	Margin		1.04	0.31	4.85	3.17	
	Price per kg VCO/1 2.5 kg nuts	1.52	2.02	4.04			PRDP
	Margin		0.50	2.02			
	Price per kg VCO/1 3.3 kg nuts	1.61	2.83	4.04			
	Margin		1.22	1.21			
Coco Sugar Mindanao	Players	**Sap gatherer**	**Sugar producer**	**Consolidator/ distributor**	**Wholesaler /retailer**		PRDP
	Price per kg coco sugar/ 8 liters sap	1.62	5.05	6.06	8.08		
	Margin		3.43	1.01	2.02		

Source: Pabuayon, et. al, PRDP

VALUE CHAIN CONSTRAINTS

- The coconut farming sector is not able to satisfy the requirements of the coconut processing sector with a big proportion of trees reported to be senescent, low-yielding and in marginal areas. This is reflective of the fact that farmers have no

financial capacity and little incentive to replace the trees or even invest in better farming practices like using salt fertilizer.

- The oil milling industry suffers from low capacity utilization compounded by low oil yield due to poor quality and aflatoxin-contaminated copra. The latter is consequent to improper copra drying and handling as well as lack of incentive on the part of farmers to improve copra quality. In fact, farmers believe that they earn more from selling copra with higher moisture content because of the added weight, leading to a conclusion that the farmers do not benefit from any price differentials related to copra quality. Any share in price differentials is dissipated by the multi-level trading system, which nonetheless persists because farmers like dealing with the closest trader who buys whatever little volume is offered anytime and pays in cash and/or gives cash advance.
- High costs of collecting and delivery of nuts, copra and husks, mainly due to inaccessible farms, poor road conditions, and inefficient collection and transport modes, further depresses farmers' prices and discourages investments.
- In decortication, weaknesses are: inferior machinery resulting in low and inconsistent quality of fiber and hanks produced, lack of access to financing needed for investment in improved machinery; lack of expertise in producing hanks and geo-nets and low interest among twiners and weavers to develop skills that increase productivity due to unattractive labor rates and wages, and lack of access to skills training and information on best practices.
- In coco sugar, expansion is constrained by the limited number of nurseries for coconut varieties suited for coco sugar and limited number of skilled sap gatherers. Other limiting factors, which also hold true for VCO, are the lack of financial and technical capacity of home-based processors to upgrade technology, lack of links to markets, and inability to obtain organic certification. The PCA also notes a lack of knowledge on product and process quality standards[154] but this is understandable because the code of hygienic practice for coconut sap sugar was only issued in 2015 and that for chilled young coconut water is yet to be finalized.
- Burdensome and multiple registration regulations and attendant fees imposed on processors by the PCA, FDA, and PhilFIDA, discourage small processors from joining the formal sector.

VALUE CHAIN UPGRADING STRATEGIES

Demand for Philippines coconuts has skyrocketed because of the product's status as a new health food and the decline of the world's leading producer due to an aging stock of trees. Consequently, the Philippines produces the second largest volume of nuts in the world, is the largest exporter of desiccated coconuts, and second largest supplier of coconut oil. Collectively, the Philippines, India and Indonesia produce 90 percent of the

[154] Department of Agriculture. 2012. Coconut Sap Industry Roadmap.

world's coconuts. Coconut water and coconut oil fractions demand will continue to be driven by the United States and the EU, forcing a tightening in the market and a skewing of prices of traditional oil and desiccated products. Still, the Philippines is well positioned to capitalize on increased demand for value added coconut products.[155] The growing market demand for geotextiles and the abundance of husks indicate that there is much room to increase the domestic capacity for decorticating and twining and weaving, but more efficient machinery and mechanized looms are required to enhance the quality and consistency of output to meet the standards required by markets. The market for peat can be improved to enhance the profitability of decorticators. Peat has so many functions in agriculture that there is a need for greater awareness of its product uses, more investments in additional processing and stronger market matching.

With respect to products that use the nut, the challenge on the Philippine side is in two key areas. First, the ability to replenish stocks of coconut trees rapidly enough to ensure the ability to supply an ever-expanding market. The long lag time between planting and initial production means that a market tightening will likely happen. The danger may lie in the abandonment of new products like coconut water or virgin coconut oil or coconut sugar if supply is not able to keep up. Second, the Philippines needs to continue to create efficiencies in internal logistics both for small holder production as well as processing infrastructure. As the market tightens due to increased demand the prices of traditional oil, water and VCO cannot continue the massive increases. The prices must begin to rise at an acceptable level or level off in coming years.

The current replanting program where farmers are provided subsidies to undertake replanting should be strengthened and expanded. Agribusiness investors can be tapped to set up a network of commercial coconut hybrid seed producers, strategically spread out over coconut producing areas. Such a network is required both to facilitate transfer of seedlings to farmers and to come up with the seedlings required to replant an estimated one million hectares of old trees faster. The replanting program should be matched with aggressive programs to: (a) organize and link farmers directly to processors/exporters in an arrangement that incorporates incentives for quality so that they can share in the windfall of growing export markets and (b) to strengthen research, development, and extension on coconut farm technologies, including those on copra-making and controlling pests and diseases. The PCA's RDE program should be strengthened; its registration of industry players streamlined; and fee collection rationalized in line with actual services rendered. At the same time, small processors of coconut, like sugar producers, VCO manufacturers, and coir twiners and weavers, can be assisted by PCA and LGUs to organize and access technology support with the DOST, market matching/development assistance with the DTI and DA, and financing available in the various financing programs focused on micro and small industries.

[155] For example, coconut water is projected to have year over year 25 percent growth for the next decade.

SEAWEED

Seaweed is a type of algae that grows in water bodies. As of 2014, approximately 96 percent of global seaweed production by volume was commercially produced, with wild seaweed rounding out the remaining four percent share. Seaweed production is further divided into three distinct color groups of red, brown, and green. Of these, red seaweed is the most commercially important aquatic plant to the Philippines and is used to produce the widely consumed Japanese sushi nori seaweed, as well as the popular food additives carrageenan and agar.[156]

OVERVIEW OF SUPPLY

Global production of seaweed reached 23.8 million MT in 2012, up 50 percent over the previous five years. China is the biggest global producer of seaweed with 54 percent of supply. Indonesia has emerged as a major global competitor to China, growing 6.6 million MT in 2012. Indonesia overtook the Philippines as the second largest producer of seaweeds in 2007. In 2012, seaweed production in the Philippines was 1.8 million MT.[157] This figure declined to 1.6 million MT in 2013.

Figure 29. World Fresh Seaweed Production ('000 metric tons) from 2008 – 2012

Country	2008	2009	2010	2011	2012	% Share	Growth
World	15,879	17,357	19,010	20,979	23,776	-	50%
China	9,934	10,496	11,092	11,550	12,832	54%	29%
Indonesia	2,145	2,964	3,915	5,170	6,515	27%	204%
Philippines	1,667	1,740	1,801	1,841	1,751	7%	5%
S. Korea	921	859	902	992	1,022	4%	11%
Japan	456	456	433	350	441	2%	-3%
Malaysia	111	139	208	239	331	1%	198%

Source: FAO

The geographical areas with the largest production in the Philippines are ARMM, MIMAROPA and Zamboanga Peninsula, together accounting for 75 percent of total production. The other regions producing seaweed are Central and Western Visayas together contributing some 12 percent. The main variety planted in the country is Eucheuma or red seaweed, specifically cottonii (Kapphycus Alvarezii) and spinosum (Eucheuma denticulatum). These varieties contain mostly kappa carrageenan and iota carrageenan.

[156] MCC. 2016. Analysis of the Markets for Agricultural Raw and Processed Products from the Philippines.

[157] Philippines Rural Development Project. 2016. Value Chain Analysis for Seaweeds in Bohol, Cebu and Guimaras.

Figure 30: Philippine Seaweed Production, by Region (in MT)

Country	2012	2013	2014
Philippines	1,751,070	1,558,377	1,549,576
Ilocos Region	69	58	35
Cagayan Valley	1,139	2,424	527
Central Luzon	1,196	1,597	2,369
CALABARZON	45,131	41,413	32,618
MIMAROPA	458,528	340,691	361,353
Bicol Region	61,504	61,090	59,864
Western Visayas	71,712	65,173	77,467
Central Visayas	136,159	124,247	104,943
Eastern Visayas	34,172	27,885	17,926
Zamboanga Peninsula	246,304	218,790	206,161
Northern Mindanao	42,053	42,261	40,785
Davao Region	1,937	3,686	6,005
SOCCSKSARGEN	507	21	144
Caraga Region	21,297	19,877	16,384
Autonomous Region in Muslim Mindanao	629,363	609,165	622,996

Source: PSA, Fisheries Statistics of the Philippines

The main threats to productivity are strong winds during typhoons and siltation brought by flooding as well as diseases. The common seaweed diseases in the country are ice-ice which sees the whitening and hardening of the plant's branches and epiphytes infestation which stunt plant growth. Finally, armed conflict that continues to threaten ARMM and Zamboanga Peninsula affects investment in the sector.

OVERVIEW OF DEMAND

Philippine seaweed is mostly processed into carrageenan, a hydrocolloid (water soluble gel) used in the manufacture of various food, feed and personal care products. The country is the third biggest exporter of carrageenan in the world. There are 16 processors in the country producing a variety of carrageenan products, which are: 1) Alkali Treated Chips (ATC); 2) Semi-Refined Carrageenan (SRC) of food or feed grade; 3) Refined Carrageenan (RC); and Carrageenan Blended Products which are SRC and RC blended with other hydrocolloids and ingredients like sugar, salt, and gum, customized for the end-user.[158]

In 2014, 16 seaweed processors had the capacity to produce a total of 36,400 MT of carrageenan (representing around 40 percent of global capacity), while actual production

[158] MCC, 2016, Analysis of the Markets for Agricultural Raw and Processed Products from the Philippines.

was 20,200 MT (only a 55 percent utilization).[159] Some 13 percent of Philippine seaweed production was exported as raw dried seaweed, showing that other countries also have demand for raw dried seaweed as a primary product to process further. These indicate that there is potential for increasing seaweed production to sustain domestic carrageenan manufacturers and to take advantage of the demand for raw dried seaweed in international markets.

Philippine exports of seaweed and carrageenan products totaled some $185 million in 2014. The major markets are the US, China and European countries.

Figure 31: Exports of Major Seaweed Products, 2011-2015 (US '000s)

Year	2012	2013	2014
Total	6,143,011	7,059,428	9,203,176
1. Seaweeds and Other Algae	249,047	593,752	1,134,907
China, People's Rep. of	7,960	22,133	627,205
Hong Kong	10,415	17,654	
Vietnam		2,114	
USA	32,641	63,620	34,223
Spain	198,031	474,366	467,403
France		13,865	6,076
2. Carrageenan (Semi-Refined and Refined)	5,123,490	5,877,873	7,488,235
Denmark	504,484	432,627	468,538
United Kingdom	197,883	190,066	240,120
France	242,407	112,857	415,199
Canada	50,757	26,438	83,437
USA	1,510,717	1,866,109	2,335,319
Mexico	243,812	330,007	440,649
Belgium	445,488	959,075	514,088
Australia	172,365	177,826	293,553
Germany	252,883	204,523	509,361
China, People's Rep. of	106,982	126,121	110,541
New Zealand	56,387	52,702	68,666
Brazil	179,647	177,275	162,681
Chile	47,791	91,768	96,530
Japan	104,362	201,197	261,922
Thailand	200,025	230,244	496,839
Netherlands	51,215	83,700	91,739
Argentina	152,740	120,908	268,497
Russian Federation	251,765	195,514	292,081
Spain	205,332	143,322	174,177
Ukraine	58,394	13,749	
Poland	88,054	141,845	164,298
3. Seaweeds, Fresh, Chilled or Frozen, Dried	763,471	584,703	580,034
Japan	1,097	13,063	17,703

[159] Philippines Rural Development Project, 2016, Value Chain Analysis for Seaweeds in Bohol, Cebu and Guimaras.

USA	155,773	250,491	363,699
Hong Kong	1,389	805	1,490
France	48,047	16,986	41,472
China, People's Rep. of China	229,459	172,250	65,693
Spain	141,389	75,972	39,778
South Korea	24,126	16,299	21,941
Thailand	104,392	3,437	5,281
Indonesia	57,799		696
Canada		35,400	22,281
4. Kelp Powder	7,003	3,100	
Japan	6,498	3,100	
United Kingdom	505		

Source: PCA. Fisheries Statistics of the Philippines

KEY VALUE CHAIN PLAYERS AND FUNCTIONS

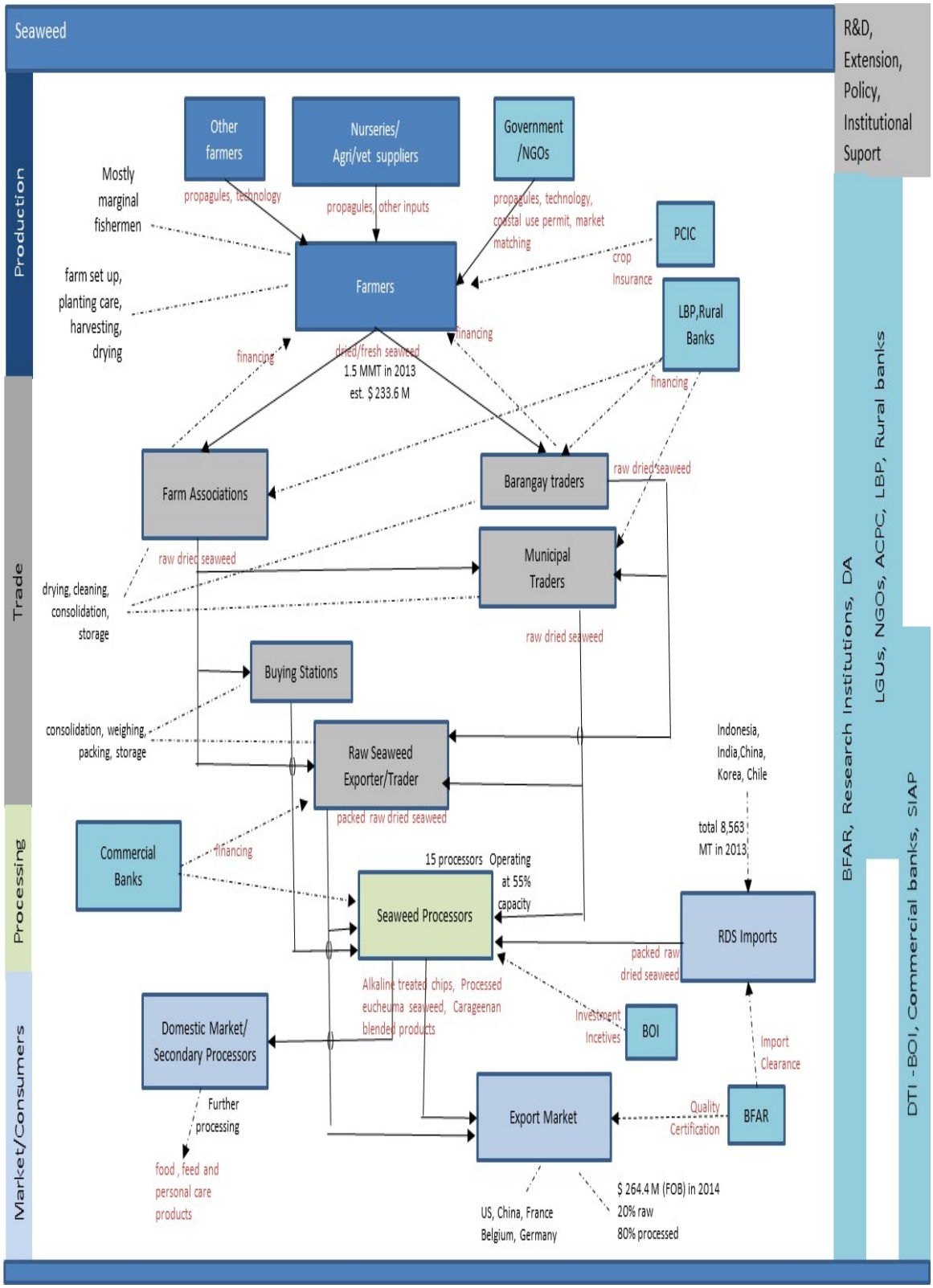
The seaweed value chain is simple: it is grown and harvested by farmers, sold to traders, and dried and cleaned before it goes to processors of carrageenan. Some raw dried seaweed is exported for processing abroad, some carrageenan is exported in semi-processed form – ATC and SRC – while the rest is processed into RC and carrageenan blended products before they are exported or sold to domestic food, feed, and personal care product manufacturers. The chain is made more complicated by multiple levels of traders, as the product makes its way from producer to processor by the export of raw dried seaweed and the import of the same product to augment supply for domestic carrageenan processors (see Figure 32).

Input Suppliers: The main material inputs for seaweed farming are stakes made of wood that can withstand water, nylon ropes, planting material or propagules, and soft ties. Propagules are: mostly bought from co-farmers, and are the best stocks from the previous harvest saved by farmers. Occasionally, propagules are provided by the BFAR. The wood used for stakes is commonly mangrove or bamboo. The rest of the inputs can be bought from village or provincial stores.

Farmers: Farmers prepare the farm, plant the seaweed, care for the plants, harvest, dry and then sell the raw dried seaweed. It is estimated that some 200,000 families grow seaweed. The majority are marginalized fisher folks who farm seaweed for additional income. The capital and technology requirements are relatively low. The production cycle lasts for 30 to 60 days and the planting season depends on the location. Seaweed productivity is dependent on water motion, salinity, temperature and sunlight.

Farms can be located near shore or in deep sea and can be as small as one-fourth of a hectare. A *banca* (boat), motorized if the farm is in deep sea, is needed to set up, maintain and harvest the farm. Farms setup near shore follows the traditional fixed off-bottom style where lines for propagules are attached to stakes pegged to the seabed. For deep sea farming, the setup has more options: (a) the floating style where long lines are used; (b) the raft system which uses a bamboo raft as a base for the lines; and (c) the spider web design.

Figure 32: Seaweed Value Chain Map



Depending on the location and farm size, labor can be sourced mainly from family members or hired externally. For farms relying solely on family for labor, female members participate in all the activities. Hired labor is commonly used to complete the most sensitive part of the production cycle, the tying of the propagules to the line, and in harvesting and transport of the produce. Daily maintenance – fixing wayward and broken lines, replacing displaced propagules, and removing unwanted parasites and microorganism that attach to the plant – is usually done solely by the farmer or his family.

Farmers also need some access to a drying platform or area as harvested seaweed needs to be dried immediately post-harvest and kept free from dirt, sand and other contaminants. Farmers commonly dry the seaweed: (1) on the shore; (2) spread out on a mat on the shore; (3) hanging on a line tied to poles; or (4) spread out on a slatted bamboo platform covered by fine mesh net.

Traders: Most of this raw dried seaweed passes through two or three traders before being exported, or sold to processors. Village traders buy directly from farmers; municipal or provincial traders buy from village traders; and exporter/traders get stocks from municipal and provincial traders for direct export or sale to domestic processors. Since it is important that raw dried seaweed is properly dried and free from contaminants, all traders have storage and drying facilities and routinely re-dry and clean the raw dried seaweed before these are passed on to the next layer in the value chain. Village traders sometimes allow farmers to use their drying facilities or buy the seaweed fresh to have more control on the quality of the raw dried seaweed. Traders use visual and manual inspection to judge the quality of the seaweed they buy. It is not clear if these traders use any system of price discounts to account for quality deficiencies, which are measured against a set of criteria issued by the BAFS.[160]

Exporter/traders are the most meticulous in checking quality and use a system of price discounting based on moisture content and cleanliness. Exporters/traders weigh and pack the raw dried seaweed and assume all logistics costs associated with exporting, as well as quality-related risks, including rejection by importers and price discounting by processors of entire shipments.

Processors: Processors transform the raw dried seaweed into ATC, SRC and RC. Processors directly export their output. Only one processor is known to export significant amounts of ATC. Most export semi-refined food-grade carrageenan known as Philippine Natural Grade (PNG) or Processed Eucheuma Seaweed (PES), because the use of farmed eucheuma seaweed and a simpler extraction method to generate carrageenan was a Philippine innovation in the 1980s. This particular processor and exporter has the capacity to do all the necessary laboratory tests and discounts prices based on quality.

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[160] Bureau of Agriculture and Fisheries Standards. 2016. PNS/BAFS 85:2010 Dried Raw Seaweed - Specification.
http://spsissuances.da.gov.ph/attachments/article/779/PNS%20BAFPS%2085_2010%20Dried%20raw%20seaweed.

VALUE CHAIN LINKAGES

Vertical linkages: Links in the chain are stronger downstream than upstream. The exporter/traders generally have a regular relationship with suppliers and domestic processors and international buyers. They want to maintain suppliers who can deliver quality seaweed by providing concessions like financing. For bigger players, reliability is important so longer term arrangements, both formal and informal, are pursued.

Traders try to build and maintain regular relationships with the producers by providing financing, allowing the use of drying facilities, buying the seaweed fresh, and picking up the seaweed from the farms directly.

Farm associations also try to maintain marketing arrangements with farmer members for supplies and trader/exporters as a market to ensure the sustainability of the organization. While deciding potential target buyers, farmers tend to consider more short term factors such as the location of trader, price, financing and ease of transaction. Such immediate factors usually take precedence over establishing long term trading relationships.

Horizontal linkages: Most seaweed farmers have associations that were initially organized to facilitate access to inputs and technical assistance from government and NGOs. The associations are sustained if farmers see these associations continue to serve the members' needs for technological assistance, financing, ready inputs and markets. From facilitating collective marketing and sharing of planting materials, labor, banca and drying facilities among members, some of these associations grow to become financing intermediaries between government lending facilities and members as well as business entities that undertake post-harvest and trading services. Exporters, both big traders and processors, are organized through the Seaweed Industry Association of the Philippines for cooperation in addressing supply and market concerns.

SUPPORTING INSTITUTIONS

The BFAR oversees the development of the fisheries and aquatic resources sector, including the seaweed industry. It undertakes developmental and regulatory functions, but mostly focuses on the provision of propagules, technology training and post-harvest facilities. The LGUs support the BFAR in its programs, while the DTI provides marketing and enterprise development training and assistance. Several academic and research institutions, among them the SEAFDEC and UP Marine Sciences College and Zamboanga State University support the industry through research and gene-banking.

PRICES AND MARGINS

Studies indicate the prices and margins of the various players in the seaweed chain. That the other costs of the trader are almost equal that of the SRC processor and that the same is true for margins is striking, implying an evenly matched relationship. It appears that the farmer has the biggest margin with a selling price at $0.89 and cost of materials of $0.20. However, the volume traded by the farmer is much smaller than those of the trader and processor.

Figure 33: Prices and Margins for Seaweed Products (USD)

Product	Players	Farmer	Trader	Consolidator
Dried Seaweed Mindanao	Price per kilo of dried (seaweed)	.80	.91	1.01
	Margin		.11	.1
Semi-Refined Carrageenan Bicol	Price per kilo (SRC)	.89	1.25	1.66
	Margin		.36	.41
	Cost of Materials	.20	.89	1.28
	Other Costs	.08	.16	.18

Source: PRDP

VALUE CHAIN CONSTRAINTS

Processors are unable to operate at full capacity due to insufficient supplies, which are largely constrained by the following factors:

- **Lack of research and development:** R&D to map the suitability of areas to specific eucheuma strains and cultivation methods is virtually absent. Producers choose seedlings and locations to farm based on their own and neighbors' experience and availability.
- **Access to finance:** Small farmers have very limited access to financing, constraining their ability to farm larger areas, regularly buy quality seedlings, and restart production when plantings and farms are destroyed by disease or weather.
- **Availability of planting materials:** The availability of commercially available planting materials is inconsistent. The BFAR sometimes sets up a temporary seaweed nursery when a calamity destroys all farms in a locality, leaving farmers with no access to planting materials.
- **Access to drying facilities:** Small farmers have limited access to drying facilities that protect their product from contamination.
- **Level of intermediaries:** Multiple levels of intermediaries are needed to consolidate raw dried seaweed to the volume that will make final sale to the processors and trader/exporters economically viable and to manage the logistics costs involved. The same multiple levels of traders also tend to push down farm gate prices and lower the incentive to invest and produce more.

VALUE CHAIN UPGRADING STRATEGIES

Despite public concern over its use as a food additive, carrageenan usage has been upheld as a safe food product by United States and European authorities, and should see increased growth due to its wide range of applications by the world's food

processing industry. The Philippines is the largest supplier of carrageenan globally and from 2011 to 2015, carrageenan exports from the Philippines increased by 33 percent. However, the cyclical nature of tropical storms which damage production, taken in conjunction with Indonesia's rising red seaweed output and stated policy goal of increased seaweed processing, may erode the Philippines' market share within the global carrageenan trade going forward. As such, it is important to focus on boosting the productivity and competitiveness of the industry.

As very little is known about the suitability of areas vis-à-vis the many varieties available beyond local farmer knowledge, a research and development program to match possible seaweed production areas with suitable varieties is likely to significantly improve productivity. To maintain productivity, a production support program would help support seaweed farmers in setting up nurseries and provide access to the recommended varieties specific to the area and the season. A production support program could also be created to increase farmers' access to drying facilities, supported by an extension program focused on standards and proper post-harvest handling of seaweed.

A market support program can be initiated on the demand side to link up processors with farming communities directly, building vertical integration in the value chain. One way to make such integration possible is by offering fiscal incentives to processor firms to take up lead roles in assisting partner farmers/farmer communities not only by ensuring a ready market over a longer term but also in promoting technical knowledge, providing some inputs and/or facilitating access to financing from LBP to improve farming, harvesting, drying and handling practices. Such partnership would help integrate hands-on farming experience and technical knowledge with market practices, formal borrowing and management processes.

SWINE

The livestock and poultry sector is the second largest contributor to agricultural output in the country. In 2015, it contributed 16.1 percent of the total agricultural output. The swine industry is the second largest provider to the country's agriculture sector next to rice. Its value chain is relatively longer compared to other commodity value chains because of more value adding activities.

The increasing demand for pork is propelling the growth of the swine industry. This trend is driven by rising population, improving economic growth and expansion of markets to export. Hog growers have responded to this development by expanding their capacities and vertically integrating their operations. The Government has responded by providing more infrastructures such as abattoirs or slaughterhouses, food safety and animal health monitoring maintenance services and support to the production of yellow corn, an important ingredient in animal feed formulation. However, there are several challenges constraining the swine value chain to achieve continuous industry growth. These include value chain's structural, technological, logistical and human resources limitations. Addressing these constraints will require an enabling environment conducive for change.

OVERVIEW OF SUPPLY

The supply of pork in the market is determined by the inventory of swine (number of heads), which consists of different varieties of pigs such as sow, gilt, fattener, grower, among other types. The sow and gilt are the parent stocks to produce piglets. The fatteners are marketable hogs two months old and over. The growers are hogs that are two months old to less than four months old. The other swine category includes piglets, weanlings and boars.

As of January 1, 2016, the country's total swine inventory was nearly 12.5 million heads (see Figure 34). This count is categorized between backyard and commercially grown stocks. The backyard stocks represent 64 percent of the inventory, while commercially grown stocks represented the remaining 36 percent. (A commercial farm has a capacity of at least 21 heads of adult swine or 10 adults and 22 heads of young swine)[161]

From 2012 to 2016, the growth of backyard grown swine has remained nearly constant. Stocks declined from 2011 to 2013, but recovered in 2014 and 2015. In contrast, commercial stocks increased at an annual average growth rate of 4 percent. 2015 was a bumper year for both backyard stocks and commercial stocks, increasing 2.27 percent and 7.15 percent respectively. Fattener and grower inventory in general climbed by 4 percent and 3 percent, while the inventory of commercial fattener swine stocks was 16 percent higher as backyard swine stocks inventory declined by 1 percent. The rising cost of feeds and other inputs in swine growing have caused some of the backyard growers to exit the industry.

[161] Philippine Statistics Authority. 2011. Swine Industry Performance Report.

Figure 34. Swine Inventory by Farm Type and Age Classification, 2011 - 2015 (No. of Heads)

Indicator	2011	2012	2013	2014	2015
Total	11,863,020	11,843,050	11,801,656	11,999,722	12,477,711
Backyard	7,981,670	7,750,240	7,656,825	7,782,290	7,958,930
Commercial	3,881,350	4,092,810	4,144,831	4,217,432	4,518,781
Sow	1,514,930	1,537,460	1,552,547	1,597,021	1,649,199
Backyard	1,034,670	1,017,870	1,016,434	1,023,141	1,052,847
Commercial	480,260	519,590	536,114	573,880	596,352
Gilt	584,890	586,830	581,643	580,777	616,438
Backyard	455,250	452,060	443,625	438,432	464,781
Commercial	129,640	134,770	138,018	142,345	151,657
Fattener	3,319,500	3,385,260	3,394,457	3,482,315	3,621,640
Backyard	2,347,860	2,377,500	2,375,774	2,426,596	2,397,048
Commercial	971,640	1,007,760	1,018,683	1,055,719	1,224,592
Grower	3,667,650	3,699,230	3,716,582	3,720,012	3,821,114
Backyard	2,573,830	2,562,940	2,546,077	2,510,399	2,529,707
Commercial	1,093,820	1,136,290	1,170,505	1,209,613	1,291,407
Others	2,776,050	2,634,280	2,556,427	2,619,597	2,769,320
Backyard	1,570,060	1,339,870	1,274,915	1,383,722	1,514,547
Commercial	1,205,990	1,294,400	1,281,512	1,235,875	1,254,773

Source: Swine Industry Performance Report

The regional distribution of stocks shows the concentration of inventory in six regions. They account for 88 percent of total inventory in 2015. In terms of type of swine stock inventory, the concentration of commercial stocks is in Central Luzon (42 percent), and CALABARZON (32 percent). For backyard stocks, Western Visayas has the largest stocks (15 percent), followed by Central Visayas (9 percent), Bicol Region (9 percent), and Davao Region (9 percent).

Figure 35: Swine Inventory of Top Producing Regions by Farm Type, 2016 (No. of Heads)

TOTAL		Backyard		Commercial	
Region	Inventory	Region	Inventory	Region	Inventory
Philippines	12,477,711	Philippines	7,958,930	Philippines	4,518,781
Central Luzon	2,237,244	Western Visayas	1,146,484	Central Luzon	1,678,199
CALABARZON	1,665,003	Central Visayas	746,312	CALABARZON	1,261,484
Western Visayas	1,293,661	Bicol Region	742,214	Northern Mindanao	347,789
Central Visayas	956,692	Davao Region	731,717	SOCKSARGEN	318,369
Northern Mindanao	914,639	Northern Mindanao	566,850	Central Visayas	210,380
Davao Region	879,102	Central Luzon	559,045	Western Visayas	147,177
Others	4,531,370	Others	3,466,308	Others	555,383
Total Top 6	7,946,341		4,492,622		3,963,398

Source: Swine Industry Performance Report 2014

The supply of pork products depends on the volume of the live weight of slaughtered fatteners. In 2015, the production volume increased by 9 percent compared to 2011 and was 4 percent higher than the past year. Domestic production supplies the requirement of fresh markets, households and institutional markets such as hotels, restaurants and fast food chains. The country's meat processing industry remains heavily reliant on import of pork despite the notable increase in local production. Per NMIS, an attached agency of the DA, locally produced pork caters more to the wet markets rather than to the meat processing markets due to processors standards.

The average annual import of frozen pork products from 2011 to 2015, was 173,214 metric tons, with an average annual growth rate of 11 percent. In 2015, the import volume dropped by 22 percent compared to the previous year as domestic production increased. Imports usually rise during the period of April to September when meat processors prepare for the Christmas season when demand is high. The Philippine Association of Meat Processors Inc. (PAMPI) has projected a continuous demand for processed food in the Philippines in 2016 amid increasing purchasing power of Filipinos.[162]

[162]Dagooc, Ehda. Philippine Star. 2016. Rising local demand buoys meat processing industry. http://www.philstar.com/cebu-business/2016/01/19/1544146/rising-local-demand-buoys-meat-processing-industry.

Figure 36: Pork Import Volume (MT), by Quarter, Philippines, 2011-2015

Quarter	2011	2012	2013	2014	2015
TOTAL	140,846.94	118,666.52	186,857.62	236,169.45	183,530.86
Jan - Mar	34,697.22	30,285.73	43,144.29	41,812.25	52,205.61
Apr - Jun	38,383.67	22,731.14	55,181.03	61,126.21	45,609.10
Jan - Jun	73,080.89	53,016.87	98,325.32	102,938.46	97,814.71
Jul - Sep	32,062.84	31,887.19	48,265.65	62,353.32	39,896.71
Oct - Dec	35,703.21	33,762.46	40,266.65	70,877.67	45,819.44
Jul - Dec	67,766.05	65,649.65	88,532.30	133,230.99	85,716.15

Source: Swine Industry Performance Report 2014 and 2016

OVERVIEW OF DEMAND

The increase in demand for hogs is driven by increasing population, expanding urbanization, increasing per capita income due to economic development and changing lifestyle of consumers in the Philippines. Consumers buy pork fresh and/or processed. Fresh pork includes meat cuts and minimally processed meat. Processed pork products are ready to eat meat products sold in cans and special packs. Based on consumer preferences, the market for pork can be classified as the fresh meat segment and the processed meat segment.

The fresh pork market segment is the larger of the two. The marketing outlet of this segment is the retailers who sell to household consumers, supermarkets, restaurants and other institutional markets either directly or indirectly. The retailers include sellers at the meat section of wet or public markets, supermarkets and meat specialty stores. The processed meat segment consists of small and medium scale meat processing enterprises and large commercial meat processing corporations that make processed meat packaged in cans and/or special packaging.

Fresh pork is the basic input in the production of meat cuts, minimally processed pork and processed pork. The starting product are live swine that are slaughtered in abattoirs to produce the carcass. The carcass is then cut into meat cuts such as pork cubes, pork chops, tenderloin cuts, pork ribs, shank cuts, and others. Some are used in making native processed meat (i.e., longanisa, tocino, hot dogs) and the rest are sold as fresh and/or frozen. Restaurants, hotels and other institutional buyers source their pork either from the wet market, supermarkets or directly from traders or grower-traders. Household and individual buyers procure pork from wet market, supermarkets and directly from backyard growers.

Processors prefer to procure their pork requirement through imports. They require standards that local growers are mostly unable to meet. Per PAMPI, local producers find it difficult to meet the specifications that the processors need. Processors prefer to use the meat from 100 days to 110 days old swine. The wet market segment on the other hand has preference for lean meat from 80 to 90 days old fatteners.

There are only a few companies that are into full vertically integrated operations. San Miguel Food Inc. (SMFI), the biggest food processing company in the country is one of them. Its operations extend from feed milling to marketing of both fresh cuts and processed meat.

From 2011 to 2015, the demand for pork has been increasing at an annual average growth rate (AAGR) of 5 percent as evident from the number of slaughtered swine. However, per capita pork consumption has been stagnant in the last 5 to ten years at 15 kg. This implies that the increase in demand was driven by population growth rather than by an increase in per capita consumption. Although GDP has been rising, this has not been translated to higher per capita consumption because of the supply constraint. Conversely the per capita consumption of offal has grown on the average by about 4 percent yearly. Estimated from the last three years, its AAGR was 7 percent.

Geographically, urban centers such as Metro Manila are the main markets of pork and other meat products. Metro Manila absorbs more than 80 percent of pork produced in the country, both for direct consumption and for processing. Per capita consumption is much higher in these market centers compared to rural areas. In Metro Manila, pork per capita consumption is 20 kg, which is higher than the national average. However, this is still below the average per capita pork consumption of 22 kg of Thailand and 25 kg of the US.

The selling price of pork depends on the price of live hogs. In 2015, the farm gate live weight price compared to 2011 increased by 9 percent from $1.78/kg to $1.95/kg. Price in 2015 however, dropped by 3 percent compared to the previous year because of oversupply. The decline in pork price was higher than live hogs at 7 percent. On average, the live weight price increased by 1 percent annually.

There are several factors that constrain the industry and its value chain from achieving growth. These include, among other things, the lack of capacity of the value chain to supply adequately the requirements of meat processors, limited accredited abattoirs and cold chain, relatively high cost of feed, as well a high logistics costs and smuggling.

Per PAMPI, the demand for processed food in the Philippines will continue this year onward amid increasing purchasing power of Filipinos.[163] However, the country's meat processing industry remains heavily reliant on imports despite the notable increase in the local production of meat. The meat and meat product imports for the period January to August 2016 rose by 12 percent to 418.6 million kilograms. 44 percent of this total import was pork, the largest imported meat product mainly from Germany and Spain, which posted a 16 percent increase to 185,200 metric tons. NMIS said the country's

[163] Dagooc, Ehda. Philippine Star. 2016. Rising local demand buoys meat processing industry. http://www.philstar.com/cebu-business/2016/01/19/1544146/rising-local-demand-buoys-meat-processing-industry.

meat production was not sufficient to meet the demand of meat processors due to their specific requirements[164].

Though the number of abattoirs in the country has been increasing at a rate of ten percent yearly, their combined capacity is still not sufficient to meet the requirements of the industry for slaughter houses. Industry stakeholders consider the inadequateness of abattoirs as one of the key bottlenecks in the supply side of the swine value chain. Slaughtering in house yards or in makeshift abattoirs is still a prevalent practice among backyard growers, which raises concerns about food safety compliance. Out of the 97 accredited abattoirs in the country as of October 2016, 68 percent are in Luzon, 25 percent in Mindanao and the rest in the Visayas. The National Capital Region (NCR) has 18 percent of the total, while Regions III and IVA have 13 percent and 23 percent, respectively.

Another concern is the rising cost of feeds due to the increasing cost of feed ingredients such as yellow corn, vitamins, and other feed additives. The average farm gate price of yellow corn, the feed ingredient with the greatest impact on the price of feed, was $0.25 per kg in April 2015, which is 11.14 percent higher than the $0.23 per kg recorded in the same period in the previous year.

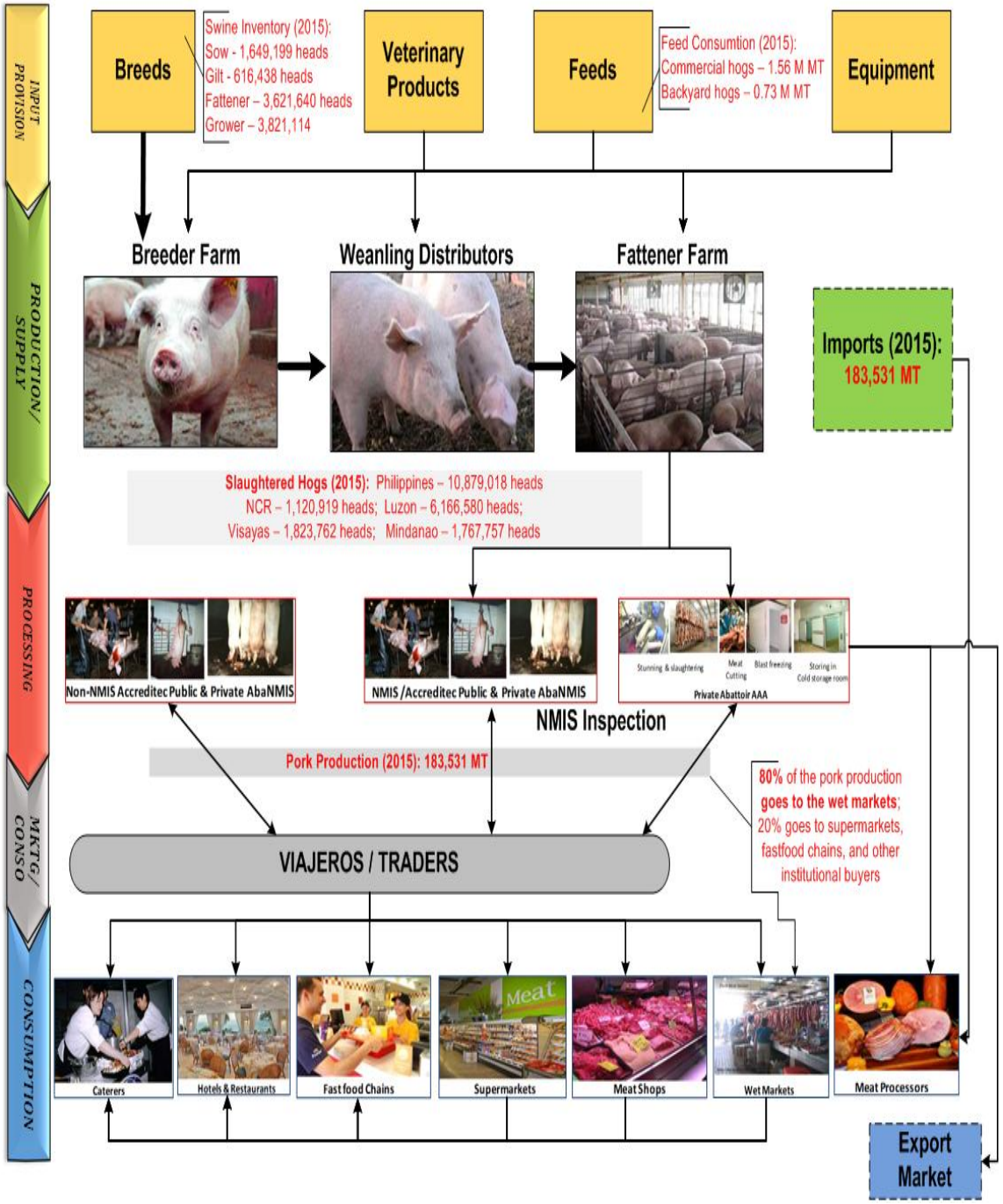
Despite these constraints, there are several opportunities for growth. Economic growth will continue to drive per capita consumption of meat, particularly pork in the country as people shift from low cash value food such as grains, to higher value food such as meat when per capita income increases. The 47 percent difference in per capita consumption between Thailand and the Philippines reflects a growth opportunity for the industry. Increasing population and expanding urbanization will further drive demand. The expansion of production to export due to regional demand and global economic integration is another factor that should drive the swine industry.

KEY VALUE CHAIN PLAYERS AND FUNCTIONS

The various processes in the chain are the procurement of inputs (i.e., growers, feeds, and veterinary medicines), growing of fatteners, marketing and distribution of live hogs, slaughtering, meat cutting and handling, processing and distribution and marketing. This set of processes varies with the various marketing channels in the value chain.

[164] Simeon, Louise Maureen. Philippine Star. Oct 2016. Philippines remains heavily dependent on meat imports. http://www.philstar.com/agriculture/2016/10/16/1633874/philippine-remains-heavily-dependent-meat-imports.

Figure 37: Swine value chain in the Philippines



As indicated in the previous section, there are two general market segments, the fresh meat market and the processed meat market, which are served by both the backyard and commercial growers. The fresh meat market segment consists of sub-branches of wet markets, supermarkets and restaurants, hotels and other institutional markets. The processed meat market segment involves the commercial meat processing plants and

SME processing enterprises. Commercial meat processing plants require meat standards different from that of the fresh market and SMEs.

Input Suppliers: There are three key inputs that are important in the growing of pigs. These are the piglets or weanlings for fattening, feeds and the animal health or veterinary medicine.

- **Breeders**: Independent breeders supply the hybrid piglets to commercial farms and growers. In large commercial farms, breeding is part of the vertically integrated operation. The top vertically integrated hog farms in the country are also the top breeders. The Creekview Stock Breeding Farm at Sta.Cruz, Laguna, International Farms Corporation (INFARMCO) at Cabuyao, Laguna, NORTHLINE FARMS at Arayat, Pampanga, V-4 FARMS at Valladolid, Negros Occidental, CECILIA STOCK FARMS, INC. (PIC PHILIPPINES, INC.) at Panabo City, Davao del Norte and DLL Farm LTD. At Central Surallah, South Cotabato are some of the prominent independent breeder farms. Some independent breeders have contract arrangement with meat processing companies to produce the piglets for breeding.
- **Feed millers**[165]: Feed millers supply the feeds for the various types of hogs along the value chain. These millers are categorized as small, medium and large in terms of capacity. Small and medium feed mills focus on small scale farms and often produce feed for their own production. Large commercial feed mills provide feeds for own use and/or for commercial sales. One such vertically integrated feed mill is BMeg Feed Inc. a subsidiary of San Miguel Corporation that supplies the feed requirements of its livestock and poultry businesses. KCC, one of the largest supermarkets in General Santos City has also vertically integrated to feed milling to support its poultry (i.e., layers and broilers) and livestock operation.
- **Veterinary Medicine and other animal health products Suppliers**: These inputs are important in maintaining the health of hogs and achieving the required sanitary conditions in hog growing facilities. These products are primarily imported. Veterinary and animal health products dealers and retailers market and distribute these to hog growers or farms. There are currently 107 veterinary companies in the country. Among them are multinational companies such as Syngenta, Bayer Philippines Inc., and Cargill Philippines Inc., which dominate the trade of veterinary and animal health products.
- **Native hog weanlings Suppliers**: These are small scale suppliers of native hogs for fattening targeting niche markets for fresh and processed meat from organically grown hogs. The use of native hogs for roasting is another growing market niche in the Visayas Region and some parts of Mindanao.

[165] A more extensive discussion of feeds is found in the Yellow Corn Value Chain Summary.

Hog Growers: Hog growers range from backyard to large commercial growers. The DA classifies small scale swine farms as commercial when it has a farm capacity of at least 21 adult swine or ten adults and 22 heads of young. Industry on the other hand, adopts a different standard and classifies commercial farms into three categories- small, medium and large. Capacities range from less than or equal to 100 adult hogs for small commercial growers, greater than 100 but less than 1000 for medium commercial growers and more than 1,000 heads for large commercial growers. The largest commercial hog farms in the country are Monterey Farms of San Miguel Corporation, Foremost Farms of Lucio Tan, Robina Farms of the Gokongwei family and the Tyson Agro-Ventures of the Lucio Tan family. Hog growing is part of the business portfolio of vertically integrated large commercial livestock companies. There are also medium and small scale integrators operating at the local and regional level. Some of these include Limcoma Multipurpose Cooperative and Soro-soro Ibaba Multipurpose Cooperative of Batangas, and Lizas Meat Shop and KCC Food Shop of Gen. Santos.

Backyard hog growers are split into three different categories based on which business enterprises in the value chain they primarily cater to: breeding or piglet production, fattening or breeding, and fattening. In breeding or piglet production the grower focuses on sow management and the litters or piglets that will be produced and sold as fatteners. Growers who are in fattening are mainly involved in managing the growth of piglets that later will be sold when attaining the marketable size (85kg to 90 kg) for about 4 months. Some growers go into the business of both breeding and fattening to internally provide their own and those of other growers' requirements of piglets for fattening.

Abattoirs/Slaughterhouse Operators: The operators of abattoirs or slaughter houses provide slaughtering and meat cutting services to grower-traders, traders, wholesalers and retailers. Since the industry consists predominantly of independent growers, government provides slaughterhouse services for a fee. There are some meat enterprises who operate and manage their own abattoirs and/or lease private abattoirs. Aside from the slaughtering facility, these companies also operate their own meat cutting and processing plants.

Government requires hogs to be slaughtered in accredited and certified abattoirs. NMIS is the government agency responsible for certifying and accrediting abattoirs. Currently there are 97 accredited abattoirs with 84 percent concentrated in just seven regions. The National Capital Region (18 percent), Region III (13 percent) and Region IVA (23 percent) account for over half of the total accredited abattoirs.

Retailers: Retailers sell fresh meat and processed meat products in wet markets (i.e., public markets and supermarkets), meat shops, and directly delivers to restaurants, fast food chains, hotels and other institutional buyers. They are independent traders or are part of a vertically integrated meat processing or hog growing operation such as the Monterey Foods Corporation (formerly Monterey Farms Corporation, one of the companies included in the business portfolio of San Miguel-Purefoods Co. Inc. which is a subsidiary of San Miguel Corporation, the Philippines' largest food, beverage, and

packaging conglomerate)[166], CDO Foodsphere Inc. and Century Pacific Food Inc. Vertically integrated meat firms operate both in the domestic and export markets. Independent retailers operate locally and others are part of a vertically integrated small and medium meat processing enterprises such as Lizas meat processing in Gen. Santos City, KJA Summit Food Corporation in Caloocan City and Joshuas meat processing enterprise in Laguna province.

Most of the small retailers sell at public markets directly to household consumers and deliver to small and medium scale institutional buyers such as restaurants, hotels and small eateries. They usually buy dressed carcasses from traders or buy live hogs which are then slaughtered in abattoirs. The carcasses are cut into various types of meat cuts such as pork chops, cubes, ribs, and choice cuts. Besides fresh cut meats, some retailers produce processed pork such as local and homemade sausages and other local processed pork products such as tocino, bagnet, chicharon and embutido.

There is a concentration of retailers in the wet markets and the supermarkets. The wet market accounts for about 70 to 80 percent of total pork sold in the domestic market. Practically all fresh pork and other types of meat are sold in this market segment. Stand-alone meat shops and meat shops in supermarkets, however, are gaining customers with the increasing acceptability of chilled/frozen pre-cut pork. The preference in this market segment is meat from hogs with an average weight of 80 to 85 kg/head. The meat quality meets consumers' preference for fat thickness, meat juiciness, and meat tenderness.

Vertically integrated large commercial meat processing companies such as Monterey produce both cut fresh pork and processed pork. The processed products include tocino, sausages, hotdogs, hams, bacons, cold cuts and marinades. The canned products are meat spread, luncheon meats, canned sausages, and canned ham. These are retailed in the company's meat shops and sold and distributed to wholesalers, retailers and exported.

Consumers. Consumers buy their meat requirements in various retail outlets such as the wet market, supermarkets meat shops and independent meat shops, and rolling meat stores. The general preference is for fresh meat. However, chilled and frozen meat is slowly gaining acceptance especially with the proliferation of supermarkets and meat shops that sell quality and safe meat, a variety of meat cuts and other minimally processed meat products. Consumers' changing demand patterns are the most important drivers of change in the industry. Price and quality consciousness, fast service needs and the increasing awareness for food safety have triggered this change. However, with a relatively weak purchasing power, most consumers are more price conscious rather than quality conscious. Market players should be aware that in the domestic retail market for pork, while customers do care for quality, they view price as a relatively more important factor in making their purchase decision.

VALUE CHAIN LINKAGES

Vertical linkages: Large commercial value chain players such as San Miguel Corporation adopt full vertical integration. These extend from breeding to marketing and the distribution of pork and other meat products. The vertical integration could be fully owned or relational. Under fully owned vertical integration, the company owns and manages both the value chain's inbound and outbound operations. Under relational vertical integration, the company contracts the activity to an independent enterprise. The contract agreement defines the requirement of the buyer and the corresponding payment for the services and products delivered. This is generally practiced in fattening and breeding.

There are also medium size players such as KCC in Gen. Santos City who vertically backward integrate swine growing as a business to ensure continuous supply of quality and competitively priced meat products to its chain of supermarkets.

Smallholders either grow for traders or direct buyers. The relationship is informal and is based on trust. The trader or trader-grower uses the government or municipal/provincial LGU or privately managed abattoirs for a fee in preparing the hog carcass for the market. In some slaughterhouses, the user must bring their own butcher and workers to slaughter and prepare the carcass and/or for whole carcass delivery or cutting.

Traders who deal in frozen meat products use blast freezing and cold storage facilities. The cold storage facility service provider charge fees on weight or volume basis and for the duration of storage room usage. Some users contract for long term usage of cold storage rooms.

Horizontal linkages: Industry associations characterize horizontal linkages in the value chain. These include the Swine Breeders Association of the Philippines, National Federation of Hog Farmers Inc., Philippine Association of Meat Processors Inc., Pork Producers Federation of the Philippines, Inc., and Native Pig Industry Association of the Philippines.

SUPPORTING INSTITUTIONS

Supporting institutions contribute to the enabling environment that influences the performance of the value chain. These include among others, industry associations, government, financial institutions and RDE organizations.

- **Industry associations**: These associations, which are more focused on policy advocacy, are found in every subsystem of the value chain. These include the Pork Production Federation of the Philippines Inc. (PPFPI), ProPork and PAMPI in meat processing, National Federations of Hog Farmers, Inc. (NFHFI) in growing, Philippine Association of Feed Millers Inc. (PAFMI) in feed milling.
- **Government:** Government influences the performance of the value chain through its formulated policies, rules and regulations. The main government department and agencies that have active roles in the chain are the DA, DTI, DENR and DAR. The DA, through its line agencies of the Livestock and

Development Council (LDC), BAI, PhilMECH and NMIS leads in addressing the concerns of the industry such as food safety and SPS standards, accreditation and certification of abattoirs, meat cutting and meat processing plants, and monitoring and control of animal disease, among others. The department's budget for 2017 allocates 30 percent for livestock out of its P10 billion budget. Some of the major policies in agriculture are the Agricultural Farm Mechanization Act (AFMA), Agri-Agra Law and the Agrarian Reform Law. An important ongoing program that supports the swine industry and value chain is PRDP.

- **Financial institutions:** These include microfinancing enterprises and NGOs, commercial banks and government banks. Small growers are dependent on microfinancing groups such as the CARD, the largest microfinancing NGO in the country. Government policy mandates commercial banks and government banks to allocate a certain percentage of their capital for agricultural loans to farmers and agribusiness enterprises. Loans extended by Philippine banks for agriculture/agribusiness and agrarian reform achieved a double-digit growth in the first half of the year but were still well below the threshold mandated under the Agri-Agra Reform Credit Act of 2009. According to the BSP, the banking system loaned a total of $8.5 billion for agriculture and agrarian reform credit from January to June, 13.9 percent higher than the $7.5 billion in the same period last year.[167] On the part of DTI, it has partnered with the BPI Family Savings Bank to provide technical and financial assistance to MSME clients of *Negosyo* (business) Centers.[168] Meanwhile DA has allocated $100 million for livelihood programs that include the livestock sector, in line with the government's poverty alleviation program.[169]
- **Research, Development and Extension Service providers**: Both the government and private sector undertake research, development and extension related to the various processes in the swine value chain. Government research institutions such as the Bureau of Agricultural Research (BAR) and the Philippine Council for Agricultural and Aquatic Research Development (PCAARD) undertake RD&E activities in partnership with research arms of universities such as the University of the Philippines Los Banos (UPLB), Mindanao State University (MSU), Visayas State University, Central Luzon State University (CLSU) and the Don Mariano Marcos State University.

VALUE CHAIN CONSTRAINTS

[167] Agcaoili, Lawrence. Philippine Star. Oct 2016. Agri-Agra loans grow double-digit in H1. http://www.philstar.com/business/2016/10/12/1632597/agri-agra-loans-grow-double-digit-h1.

[168] Mercurio, Richmond. Philippine Star. Oct 2016. DTI engages BPI Family Bank to extend support to MSME. http://www.philstar.com/business/2016/10/19/1634903/dti-engages-bpi-family-bank-extend-support-msme.

[169] Simeon, Louise Maureen. Philippine Star. Oct 2016. DA allots P5 B for poverty alleviation. http://www.philstar.com/business/2016/10/24/1636618/da-allots-p5-b-poverty-alleviation.

The swine industry faces several issues in its value chain. The key issues are the high cost of feeds and other inputs, high risk of disease outbreak and inadequate abattoirs or slaughterhouses.

- **Cost of inputs:** There is low productivity at the backyard grower level due to low level of technology adoption and breeder base. The costs of feeds and other inputs have been rising annually over 20 percent, while the farm gate price has been rising at a rate of only 4 percent.
- **Risk of disease:** Growers are always at the risk of major disease bouts of Porcine Circovirus, Porcine Reproductive and Respiratory Syndrome, Porcine Epidemic Diarrhea, Pseudorabies, Classical Swine Fever or Hog Cholera and Swine Influenza affecting their livestock. Although government, through the BAI and the NMIS, provide SPS monitoring services, these are inadequate to respond effectively to disease outbreaks.
- **Abattoir capacity:** Capacity inadequacy of triple A and double A abattoirs continue to limit supply and increase the risk of food safety problems.
- **Inadequate access to credit**: Backyard growers lack the financial capacity to expand their business. As of 2010, the investment needed of growing fatteners is $1.6/head. Investments in slaughtering, meat cutting, cold storage and processing facilities likewise require considerable investments.
- **Smuggling of meat products**: For years, pork producers have raised the issue of smuggling that is affecting local production of pork. This year the BOC confiscated two container loads of frozen pork products from the Netherlands and France at the Mindanao Container Terminal in Misamis Oriental estimated to be worth about $202,000. Unscrupulous importers also resort to technical smuggling or under declaration by placing and stacking up products with a lower tariff rate under the MAV list on the first two rows of containers to hide the import of pork products with higher tariff rates.

VALUE CHAIN UPGRADING STRATEGIES

The demand for pork and other pork products will continue to rise due to a growing population and rising per capita meat and pork consumption. With a current per capita consumption of 15 kg/year and a growth rate of 2 percent, per capita consumption in 2025 could reach 20 kg. This would require more than tripling the current slaughtered production of about 11 million kilograms per annum to support a population of 120 million assuming a population growth rate of 1.5 percent.

Aside from the rise in demand in the domestic market, the other opportunities open to the industry are export of processed pork products and the rising awareness for healthy and safe food products. The upcoming integration of the ASEAN Economic Community (AEC) will benefit the local swine industry as it holds several advantages over its counterparts in the region, such as being foot-and-mouth disease free. Changing lifestyles and heightened food safety and health awareness have given rise to the

development of niche markets based on using native breed and organically grown breeds.

There are several key points identified in the constraints analysis that should be addressed to upgrade the performance of the swine value chain. These are constraints internal and external to the chain. The following strategic recommendations aim to address these constraints:

Controlling price volatility and ensuring security of feed ingredients: Price volatility of feed ingredients such as corn threaten the profitability of the key players in the supply chain and feed quality. When the price of feed ingredients such as yellow corn unnecessarily rise its effect ripples through the entire chain in terms of higher live weight price of swine and pork. When price drop leading to lower revenues farmers tend to under apply inputs such as fertilizers leading to lower productivity and poor quality of grains.

Price spikes and fluctuations arise from farm production inefficiencies and effects of weather disturbances. The former could be related to the lack of economies of scale of production farms, low technology adoption, inadequate farm infrastructures and postharvest facilities, and changing weather patterns. Recommendations to address the constraints and upgrade the value chain are as follows:

1. **Strengthen the establishment of yellow corn production clusters**: The DA is currently implementing a program on establishing crop production clusters. These clusters receive focused interventions such as financial, technical, mechanization and technology and agribusiness enterprise strengthening services. These could be further strengthened by:
    - **a.** Rationalizing production clusters locations relative to yellow corn consolidation centers, postharvest processing centers and feed mills to improve logistics cost efficiency and coordination of processes in the chain.
    - **b.** Setting the optimal number and size of clusters in relation to specific feed milling centers or markets.
    - **c.** Collaborating with the private sector in strengthening the linkages of the production farms with input suppliers (i.e., seeds suppliers, fertilizer and agro-chemical suppliers, farm machinery service providers), logistics service providers (i.e., transport logistics providers, warehouse/storage service providers) and the feed millers.

2. **Strengthen linkages in the value chain through embedded marketing, technical and financial services:** The BMEG-assembler model of yellow corn procurement ensures the supply of the grains to BMEG's feed mills. However, this model fall short of reducing the risk to farmers. A formal contract arrangement between the assemblers and farmers should be included with embedded technical and financial services and a floor price that ensures an acceptable revenue to the latter. Financial services packages could be in the form of credit-in-kind schemes for fertilizer, seeds and land preparation services.

3. **Adoption of warehousing receipt scheme:** This scheme has the effect of stabilizing supply and financially empowers the farmers to get out of the bust and boom cycle of yellow corn marketing. It is like Thailand's warehouse receipt system for rice, corn and cassava dried granules. The yellow corn value chain strategic recommendations further discuss this scheme.

HIGHLAND VEGETABLES

Fresh highland vegetables provide income to many marginalized, small and medium scale farmers in the country. Moreover, it is an important crop in the government's program of food security and health improvement. The Cordillera Autonomous Region is the leading producer of highland or high value vegetables in the Philippines. Although domestic consumption has grown at a slow pace, the prospect is for higher growth due to expanding urbanization, improving economic condition and increasing population. However, the industry faces internal and external constraints that could slow down its growth. These constraints include technical, technological, structural, logistics and infrastructure weaknesses and gaps.

Efforts by government and other key value chain players have focused on the establishment of a market center, the Benguet AgriPinoy Trading Center (BAPTC), at La Trinidad Valley to replace the congested La Trinidad Valley Trading Post (LTVTP). The marketing center aims to link vegetable farmers in the Region directly to markets and to improve the income of farmers. However, problems in operationalizing the Center have constrained the achievement of these goals.

Farmers continue to face production risks because of weather disturbances associated with climate change. Meanwhile, inadequacy in the cold chain increases the risks for traders of losses during transportation and handling, and in display of fresh vegetables. This gap, together with the non-institutionalization of food safety and sanitary and phytosanitary standards in the chain, are constraining the development of the export market and import substitution.

OVERVIEW OF SUPPLY

Between 2000 and 2010, the production of vegetables in the Philippines increased from 3.4 million MT to 4.5 million MT, representing a CAGR of 2.7 percent. Highland vegetables are mainly grown in the Cordillera Autonomous Region (CAR), which supplies 75 percent to 80 percent of Metro Manila's demand. Other provinces such as Ilocos Sur, Nueva Ecija, Quezon, Cavite, Cebu, Negros Oriental, Davao del Sur, Bukidnon and North Cotabato are also notable producers.

Within CAR, Benguet is the largest producer and supplier of highland vegetables in the country. Production from 2000 to 2010 increased from 190,000 MT to 320,000 MT, with a CAGR of 5.3 percent. However, from 2011 to 2015, production has flattened as agricultural lands used as vegetable production reached their saturation point (see Figure 38). In 2015, production was 294,422 MT.

Benguet produces 19 vegetable types, but four types (i.e., white potato, cabbage, carrot, Chinese pechay) contribute 90 percent of total production. In 2015, white potato and cabbage contributed about 30 percent and 29 percent of production respectively.

Figure 38: Benguet production, area planted and yield of selected vegetables, 2011-2015

Vegetables	2011			2012			2013			2014			2015		
	Qty (MT)	Area (Ha)	Yield	Qty (MT)	Area (Ha)	Yield	Qty (MT)	Area (Ha)	Yield	Qty (MT)	Area (Ha)	Yield (MT/HA)	Qty (MT)	Area (Ha)	Yield
WHITE POTATO															
CAR	103,135	6,116	16.86	102,434	6,083	16.84	100,758	5,892	17.10	102,255	5,885	17.38	101,828	5,894	17.28
Benguet	90,816	5,176	17.55	90,148	5,157	17.48	88,373	4,969	17.78	89,918	4,969	18.10	90,095	5,014	17.97
CABBAGE															
CAR	98,943	5,444	18.18	99,362	5,442	18.26	99,958	5,402	18.51	99,520	5,316	18.72	97,307	5,274	18.45
Benguet	85,207	4,440	19.19	85,481	4,425	19.32	85,874	4,385	19.58	85,139	4,291	19.84	84,472	4,281	19.73
CARROT															
CAR	58,766	3,359	17.50	60,126	3,356	17.92	60,038	3,328	18.04	60,507	3,318	18.23	59,527	3,277	18.16
Benguet	53,965	2,927	18.44	55,471	2,938	18.88	55,399	2,913	19.02	55,786	2,903	19.22	55,134	2,889	19.08
PECHAY CHINESE															
CAR	44,389	2,791	15.90	45,170	2,791	16.18	45,058	2,786	16.17	45,145	2,787	16.20	44,677	2,770	16.13
Benguet	41,492	2,584	16.06	42,349	2,584	16.39	42,119	2,579	16.33	42,166	2,580	16.34	41,914	2,572	16.30
HABITCHUELAS															
CAR	7,961	1,292	6.16	8,108	1,286	6.31	8,120	1,283	6.33	8,092	1,283	6.31	7,757	1,235	6.28
Benguet	5,551	695	7.99	5,713	694	8.23	5,714	690	8.28	5,687	691	8.24	5,583	685	8.15
SQUASH															
CAR	6,250	238	26.26	6,309	252	25.03	6,286	272	23.11	6,105	275	22.24	5,982	275	21.77
Benguet	1,205	18	66.95	1,203	18	66.86	1,212	18	67.34	4,697	18	260.96	4,655	217	21.45
BELL PEPPER															
CAR	5,977	749	7.98	6,030	753	8.01	6,054	748	8.09	5,891	738	7.98	5,831	715	8.15
Benguet	4,534	522	8.69	4,642	530	8.76	4,649	525	8.85	1,222	525	2.33	1,079	521	2.07
CAULIFLOWER															
CAR	5,290	341	15.54	5,302	339	15.66	5,207	334	15.61	5,144	332	15.52	5,179	329	15.72
Benguet	5,270	338	15.59	5,290	337	15.70	5,194	332	15.64	5,131	330	15.55	5,167	328	15.75
PECHAY NATIVE															
CAR	4,102	529	7.76	4,110	530	7.75	4,064	526	7.73	3,984	523	7.62	3,911	507	7.72
Benguet	3,718	440	8.45	3,722	442	8.42	3,659	437	8.37	2,977	435	6.85	2,944	422	6.98
TOMATO															
CAR	3,856	360	10.72	3,899	359	10.86	3,898	355	10.98	3,972	356	11.15	3,783	342	11.06
Benguet	2,874	230	12.50	2,916	230	12.68	2,920	229	12.75	3,568	231	15.45	3,379	230	14.72
TOTAL															
CAR	338,669	21,217	15.96	340,849	21,190	16.09	339,441	20,924	16.22	340,616	20,812	16.37	335,782	20,617	16.29
Benguet	294,631	17,370	16.96	296,935	17,355	17.11	295,113	17,077	17.28	296,292	16,972	17.46	294,422	16,958	17.36
PH Losses															
CAR	67,734	4,243		68,170	4,238		67,888	4,185		68,123	4,162		67,156	4,123	
Benguet	58,926	3,474		59,387	3,471		59,023	3,415		59,258	3,394		58,884	3,392	
TOTAL SUPPLY															
CAR	270,935	16,973		272,679	16,952		271,553	16,739		272,493	16,649		268,625	16,494	
Benguet	235,705	13,896		237,548	13,884		236,091	13,662		237,034	13,578		235,537	13,566	

Source: Philippines Bureau of Agricultural Statistics

Across the 13 municipalities of Benguet, about 83 percent of production comes from five municipalities: Buguias, Atok, Kibungan, Mankayan and Kabayan. Buguias alone, contributed 41.6 percent of the total production of the province in 2015. Each municipality is engaged in a degree of production specialization. For instance, 85 percent of Chinese cabbage was produced in Buguias, 85 percent of cauliflower was produced in Kabayan, and 75 percent of white potato was produced in Buguias and Mankayan.

Production is seasonal, with two peaks of production annually - one between May to August and the other from November to December. Production of leafy vegetables (e.g., cabbage, lettuce) peaks from August to December, root vegetables (e.g., white potatoes, carrots) from March to July, and vegetables (i.e., tomatoes, broccoli, cauliflower) from June to December.

OVERVIEW OF DEMAND

Highland vegetables are mainly used for domestic consumption. The domestic demand of vegetables, in absolute value, grew by 2.7 percent and that of highland vegetables by 5.9 percent.[170] This demand trend is expected to continue with the growth of the population, increasing urbanization and heightened health consciousness among Filipinos. Urban consumption of vegetables has been increasing at a rate of 4.42 percent from 1980 to 2003 as compared to rural consumption increase of only 0.20 percent.[171]

The highland vegetables produced in CAR and other neighboring areas find their way to Metro Manila and other urban centers around the country. Of the 1,174 MT per day consumed in Metro Manila, about 75 to 80 percent is supplied by Benguet province. The neighboring provinces of Nueva Ecija, Cavite and Quezon supply the rest of the needs of the Metro Manila market, who are classified as high end consumers. High end consumers are less reactive to price increase or changes compared to middle income consumers, but they are more responsive to quality, even willing to pay 30 to 50 percent more for organic vegetables.

There are about three classifications of high value market segments in Metro Manila and other urban centers. These are the: 1) institutional buyers such as upscale and midsize hotels, resorts, restaurants, fast food chains; 2) supermarkets and groceries, and 3) wet markets.

Given the variability of quality and unpredictability of supply from local markets, the supermarkets, fast food chains, and institutional buyers resort to multi-sourcing their vegetables supply. Some types of vegetables such as table tomatoes, sweet pepper and high end broccoli are imported for high end hotels and restaurants. Importing is also done when there is an acute shortage of domestic supply, though imports do not have a significant impact on local production. The inherent perishability of vegetables, coupled with inadequate cold chain facilities constrains imports. Price is also a prime factor since imports from Europe are much more expensive than locally produced vegetables, though European imports are of a much better quality.

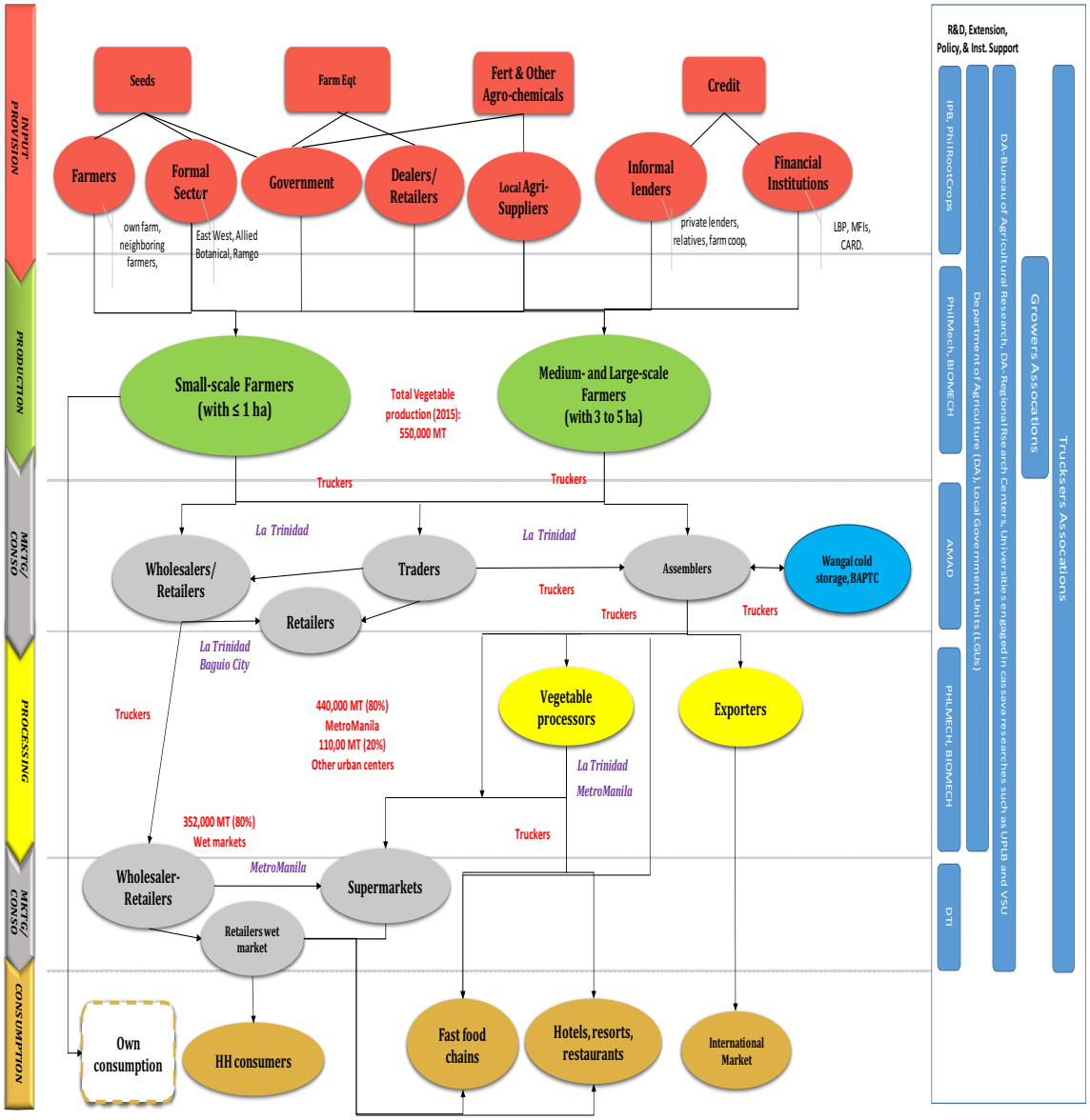
[170] PricewaterhouseCoopers. 2012. Cold Chain System Project.

[171] Digal, LN and SB. Concepcion. 2005. Enhancing Upstream Linkage in the Philippine Vegetable and Mango Industries.

KEY VALUE CHAIN PLAYERS AND FUNCTIONS

The processes in the value chain range from input procurement to marketing and distribution. The players doing these processes include the input suppliers, vegetables growers/farmers, traders/consolidators, logistics transport providers, cold storage service providers, marketing service providers and buyers. The layer or number of vertically connected traders/consolidators varies from location to location. The case of Benguet high value vegetable value chain players is presented in this report (see Figure 39).

Figure 39: Benguet Vegetable Value Chain Map



Input suppliers: Seeds, fertilizers and pesticides are the critical inputs in production, accounting for more than 60 percent of production cost. Seed companies such as Allied Botanical Corporation, Ramgo International Corporation and East West Seeds Corporation are the dominant seed suppliers in the market. The Bureau of Plant Industry and academic research institutions, such as the Benguet State University, the Institute of Plant Breeding, and the Department of Horticulture of the UPLB produce and supply seeds to farmers. Trader-suppliers import seeds and buy seeds from local seed suppliers to be distributed and grown by their preferred farmer growers. Farmers also supply seeds for their own and for other farmers' use.

Fertilizer companies are in urban centers such as the La Trinidad Valley and Baguio City. They cater to the fertilizer and other agrochemical requirements of vegetable farmers and other agricultural commodity growers in the province. Dried chicken dung is popular among vegetable farmers as organic fertilizer and is supplied by truckers, who collect the dung from the neighboring provinces of Pangasinan, Tarlac and Nueva Viscaya.

Vegetable Farmers and Producers. Production is highly dualistic, consisting of small production farms and relatively large production farms. The former is the dominant production landholding, with most of the farmers having less than one hectare, either owned or rented from other farmers or from the municipality. Most of the growers are indigenous people whose main source of income is from vegetable farming. The other production group consists of large and corporate farms. They use advanced technology, such as protected growing using modified greenhouses equipped with drip and sprinkler irrigation systems. They have reefer delivery trucks and make use of the cold storage facilities of Wangal and Benguet AgriPinoy Vegetable Trading Center at La Trinidad Valley in Benguet and other cold storage facilities in Metro Manila for the delivered vegetables.

Truckers of Logistics Transport Service Providers. These are local transport service providers who haul the vegetables from the farms to the trading centers of LTVTP, BAPTC and at the Hangar Market in Baguio City. Farmers are highly dependent on them to move their vegetables. Some of the truckers act as traders-wholesalers when the prices of vegetables are high. In some instances, they also sell inputs to the farmers and extend credit to them.

From the trading centers to the Metro Manila market and to other urban center vegetable markets, the vegetables are carried by another group of truckers or logistics transport service providers. These are either owned by traders or hired by them. Trucker-wholesalers are popularly known as 'viajeros' or 'Tagalog' since most of them come from Tagalog-speaking provinces. The Wangal Cold Storage Facility at La Trinidad has its own fleet of refrigerated vegetable delivery trucks that service farmers, assemblers and wholesalers for a fee.

Disposers. These are chain players who operate inside and outside of the trading centers and act as agents of farmers in negotiating with buyers. They either own permanent retail stalls in the trading centers and/or act independently as trading facilitator. They are paid commission by the buyer depending on the volume and quality of vegetables purchased from the farmer/s. Some act as haulers in the trading center. In the past, they did the negotiations with farmers at Halsema Highway before making the delivery of the vegetables to the trading center.

Haulers / 'Comboys': These are individuals in the trading centers and the Hangar Market who haul or move the vegetables from one player to another. They unload the vegetables from the

trucks, carry and then load them to the trucks of the buyers. Haulers are usually attached to buyers and are paid accordingly. In the Baguio market, they unload the vegetables from the delivery trucks and haul them to retail stalls.

Wholesalers/Wholesaler-retailers: There are two groups of wholesalers. One group own retail stalls in the trading posts and in the Hangar market. They transact directly with farmers and local traders for the supply of vegetables, which they retail at the LTVTP, BAPTC, Hangar market. The local traders call them 'viajeros' or 'Tagalogs'.

The other group is the Metro Manila the wholesaler-retailers who bring the vegetables to the Divisoria and Balintawak markets, the two largest public or wet markets in Metro Manila, and to other urban centers. They sell part of the deliveries in their market stalls and the rest are sold wholesale to other wholesalers/retailers and directly to institutional buyers.

Assemblers/Consolidators: These are agents of marketing and trading companies, such as Dizon Farms, GTGF and Big R, that organize and contract farmers to grow their required types and volume of vegetables. Relationships are either formal or informal. The formal relationships with farmers are established through contract growing arrangement that details the type of vegetable to be grown, when it is to be grown, the volume that should be delivered, the schedule of delivery and the prices of each type.

Marketing/Trading Services Providers: These are operators of trading posts and public markets that provide facilities and services in the marketing and selling of vegetables, fruits and other agricultural commodity products. There are three trading centers of importance in Benguet. These are the LTVTP and BAPTC at La Trinidad and Hangar market in Baguio City. All these trading centers are owned and operated by government. The La Trinidad LGU will be closing the operation of the LTVP as the BAPTC operation stabilizes. It will be converted into the La Trinidad Community Business Center that will be operated and managed by the Municipality LGU – La Trinidad. The Center will showcase La Trinidad's diverse processed food products such as Arabica coffee, strawberries, organic products and non-food products such as cut flowers and live ornamental plants. The government also operates and manages the Divisioria Market, Balintawak Market and other public markets in Metro Manila.

Cold Chain Service Providers: The Wangal Cold Storage facility operator provides cold storage chain services to farmers and consolidators. The services include temporary storage in its two cold storage rooms and refrigerated delivery transport from Wangal to destination. The Provincial LGU owns and manages the facility.

Another cold storage facility is the BAPTC owned, operated and managed by the DA in partnership with the BSU, Municipal LGU – La Trinidad, and Provincial LGU – Benguet. Benguet Farmers' Marketing Cooperative also provides cold storage services to vegetables farmers, traders and consolidators. It has ten cold storage rooms with a capacity of 28 MT per room. However, to date there are only two cold storage rooms in operation. Aside from cold storage services, it provides other services such as minimal processing lines that can handle one to three MT per hour and warehousing that can accommodate 320 MT.

Retailers: The retailers are stall owners in the public or wet markets, supermarkets and street sellers. The wet market or public market retailers rent the stall that they occupy from the Public

Market Management Office. Most of their buyers are walk-in individuals and small and medium scale restaurants and food caterers. The supermarkets sell vegetables in its wet and vegetable sections, where they are presented in refrigerated display racks. Some supermarkets such as Puregold and SM lease their vegetable and fruit section to Dizon Farms, one the biggest marketing and traders of fresh and minimally processed vegetables in the country. Some enterprising individuals buy from wholesalers and retailers in the public market and sell the vegetables in side streets and/or bring them around to residential areas such as housing compounds or subdivisions.

Consumers: These are the individuals, households, fast food chains, restaurants and other institutional buyers who directly consume or use vegetables for further processing into food products for consumers. Individuals and households buy vegetables from wet markets and supermarkets in fresh, fresh-frozen and processed forms. Cash transactions are the dominant practice between retailers and consumers or buyers. Fast food chains, restaurants and other institutional buyers' transactions are generally based on credit purchasing.

The product requirement varies with the market segment served by the value chain. In public markets, freshness and price are the two key customer concerns. Supermarkets and institutional buyers require more stringent quality requirements that are tailored to their type of business. Price stability and supply volume reliability are also major considerations.

VALUE CHAIN LINKAGES

Vertical linkages: The prevailing linkages between players in the value chain are predominantly informal. Formal linkages exist only between large farmer growers, consolidators and large commercial buyers. Some agrochemical companies partner with farmers in promoting their products through demonstration farms that the companies technically and financially support.

Farmers buy their inputs directly from independent seed and agrochemical suppliers in open markets. There are some input supply services embedded between commercial buyers and some large or corporate growers. The government, through the DA, grants inputs to farmers like seeds, farm tools and equipment, and rain shelter production structures. It also extends technical assistance such as trainings and setting up of demonstration farms.

For wholesalers and cold storage providers, the linkage is transactional and depends on a first come first serve basis. However, there are also preferred wholesalers who are favored by the cold storage facility due to political connections, long term relationships they have developed with the wholesalers and the wholesalers' capacity to pay the full storage fee. There are strong linkages between wholesalers and other players in the chain with logistics transport service providers or truckers. As vegetables are highly perishable and susceptible to mechanical damage, access to dependable transport is critical.

The relationship between wholesalers at the LTVTP and BAPTC is formal and requires the wholesalers/retailers to follow the rules and regulations of the trading posts. Users of the facility must pay fees for the services availed.

Horizontal linkages: Several horizontal linkages exist in each of the subsystem or central point of the value chain. There are about 104 farmer groups in Benguet. The more prominent ones

are the Benguet Farmers' Marketing Cooperative, Lengaoan Farmers Credit Cooperative, Nastubleng Organic Farming Practitioners Association, Sinipsip Amgam Pines Farmers Association and Bakun Seed Potato and Vegetable Growers Association.

The transport service providers in the province organized themselves as the Benguet Truckers and Traders Association (BTA). They are the main provider of transport services within the province along with some others, acting simultaneously as wholesalers/traders. There are other local truckers' associations in the chain such as the Manila Harbor Truckers Association. Most of the truckers' associations are members of the Confederation Truckers Association of the Philippines.

SUPPORTING INSTITUTIONS

The government through the DA, DTI and DAR maintain close links with the vegetable industry. Government policies and industry specific policies have supported the various processes in the chains. The DA through its CAR-Regional Office in collaboration with the Provincial LGU – Benguet and the Municipal LGUs, provides technical extension services and farm inputs and structures. It also assists farmers' associations to organize themselves into production clusters that are then, connected to buyers through its BAPTC.

WEAKNESSES OF THE VALUE CHAIN

There are several factors that have direct impact on how the vegetable chain operates and performs.

- **Cost of production:** There is a relatively high cost of production, particularly for fertilizers and seeds. In addition, vegetable farmlands are saturated, with practically no room for expansion. As such, farmers lack economies of scale to adopt more advanced productivity enhancing technologies such as rain shelters, drip irrigation systems and fertigation.
- **Inadequate cold storage:** There is inadequate cold chain to transport vegetables from production areas to markets. There are gaps in the field level precooling of vegetables and the consolidation of cold storage and wholesale marketing center at Metro Manila.
- **Management and operational issues.** There are management and operational issues that prevent the full operationalization of the BAPTC.
- **Climate change**: Changing weather patterns have affected the production cycle of vegetables and created huge losses in production. The increasing frequency and intensity of typhoons have resulted in huge losses in production in Benguet. For example, the two consecutive typhoons, Karen and Lawin, that recently hit the country caused $209 million in damages to agriculture out of which $34.5 million represented damages in vegetable production.
- **Access to technology**: Though the DA has provided technical assistance through the distribution of seeds, rain shelters and other farm tools and equipment to vegetable farmers, these are not sufficient to develop a critical mass of productive farmers. Technology development has also lagged as research studies and programs are more

ad hoc rather than being focused on long term growth, due to inadequate funding for research.

- **Risk mitigation insurance**: Although the country has an agricultural insurance program under the PCIC, it is not sufficient to mitigate the risks of losses of the crops, livestock and agricultural assets because of natural calamities, plant pests and disease and/or other perils. Of the 7,690 farmers of high value crops who submitted claims for $5.2 million in insurance damages from 1981 to 2000, only 1,357 farmers claimed their policies. The payouts amounted to $18,000, only about 3 percent of the submitted claims.

VALUE CHAIN OPPORTUNITIES

A growing population, expanding urbanization, rising economic growth and health awareness are the drivers of growth for the highland vegetable industry. In 2010, the level of urbanization, measured as the proportion of the urban population to the total population was 45.3 percent. This is higher by 2.7 percent than the 2007 urbanization level. The growing urbanization has given rise to more fast food chains and restaurants demanding more high value vegetables and processed vegetables. Fast food chains such as McDonald, Jollibee, Wendy's and KFC, to name a few, use processed vegetables such as diced carrots. Ready to eat green salads are also becoming a trend in supermarkets, restaurants and hotels.

The increasing health awareness and the growing trend towards healthier lifestyles, especially among the middle and upper class income group are creating niche markets such as in organic food. The demand for organic vegetables is growing and more of these types of vegetables are being displayed in supermarkets and used in gourmet and high-end restaurants of hotels and resorts. This is encouraging some farmers to serve the organic vegetables market segment. The DA, cognizant of this potential market, has expanded its support through the Republic Act 10068. This Act aims to strengthen the state's policy to promote, propagate, develop further and implement the practice of organic agriculture. This development has given rise to the formation of Organic Producers Trade Association (OPTA) with members from the various agriculture and agribusiness industries in the country.

On the global scale, the trade of organic food reached US$40 billion to US$70 billion in 2012.[172] Nevertheless, the response of farmers is somewhat subdued because of the tedious production process, high production costs and stringent certification requirements that have discouraged farmers to shift fully into organic farming.

VALUE CHAIN UPGRADING STRATEGIES

Lack of economies of scale, fragmentation of players in the value chain and inadequate cold chain are the major factors constraining the performance of the high value vegetable value chain in the CAR in general and the Benguet province. The following recommendations intend to address these concerns.

[172] Far Eastern Agriculture. 2012. Organic farming: The future of Philippine agriculture. *http://www.fareasternagriculture.com/crops/agriculture/organic-farming-the-future-of-philippine-agriculture.*

1. **Create economies of scale by strengthening the operation and establishment of production clusters.** More consolidation of the small landholdings into production associations and cooperatives will facilitate the implementation of technical, technology and financial support services program. It will further enhance traceability in the chain and connectivity with markets. Consolidation in production will also support the operation of the BAPTC.
2. **Improve quality and reduce postharvest losses by strengthening the BAPTC.** Inadequate cold chain is a major reason for high postharvest losses and quality deterioration in highland fresh vegetable trading. Although there are two cold storage and packing facilities, the BAPTC and the Wangal, in La Trinidad these are not sufficient to handle the produce of the region and the province. Moreover, these are not complete chains since there are not connected pre-cooling facilities at the farm level and cold storage and packing facility at the market end. The precooling centers strategically located at the farm will also serve as collection centers. The extended cold storage and packing facilities at the market level will serve the south and north side of Metro Manila. This will create traceability along the chain, facilitate the adoption of sanitary and phytosanitary protocols, opens opportunity for export and effectively manages supply and demand. The cold chains should be operated and managed by the private sector through a PPP scheme. Currently the DA which does not have the expertise in operating vegetable cold chain facilities operates and manages the BAPTC. This has resulted to less than optimal utilization of the facility and farmers still patronizing the La Trinidad Vegetable Trading Center (LTVTC).
3. **Adopt more productivity enhancing technologies.** Promoting the use of rain shelters, drip irrigation systems and improved varieties improve quality and productivity. Although the DA has been providing rain shelters and other types of vegetable production technologies to some farmer groups these are not enough. Tapping the private sector through embedded technical and technological support services arrangements and counterpart sharing program packages can stimulate further technology adoption and technical skills enhancement.

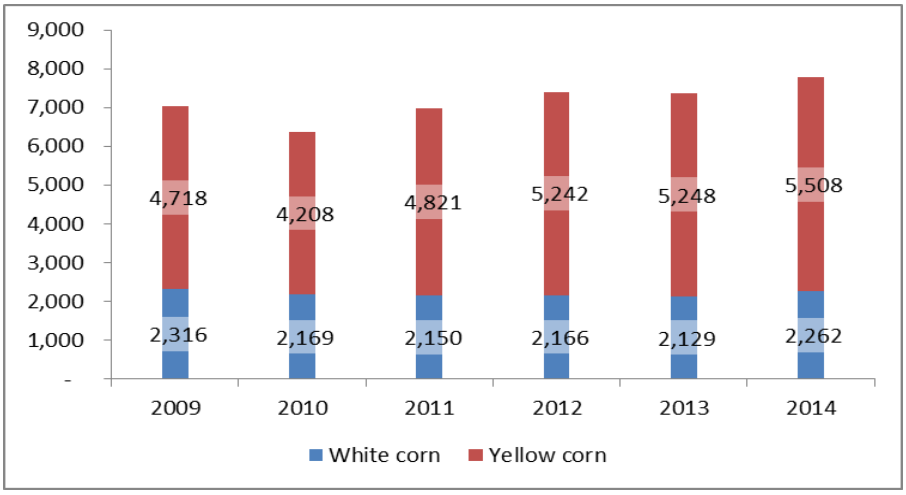
YELLOW CORN

Corn is one of the most important crops in the Philippines. The two main varieties of corn grown in the Philippines are white corn and yellow corn. White corn is used for food, and yellow corn as raw material for animal feed. Corn is the preferred ingredient in feed production as it has high energy content and is easy to digest. The amino acid profile of corn protein complements that of other feed ingredients, such as soybean meal. Corn accounts for 50 – 60 percent of livestock and poultry feed in the country.[173] Corn farming is the primary source of livelihood for about 600,000 farm households.[174] For these reasons, the corn sector in general, and the yellow corn sector deserves special attention. Current productivity level indicates substantial potential for improvement. At present, the country's average yellow corn productivity is 4.2 MT per hectare, well below the 7 MT to 10 MT potential of hybrid varieties.

OVERVIEW OF SUPPLY

Production of white corn has been falling in the face of changing market preferences. Long term per capita consumption has declined by about 1.2 percent per year from 12.5 kg/year in 1995 to 10.3 kg/year in 2012. Consumer preferences for the primary staple have shifted further away from corn towards rice. Meanwhile yellow corn production has been expanding rapidly throughout the country, driven by demand for feed from the swine and chicken industries (Figure 40).

Figure 40. Domestic white and yellow corn production (Thousand MTs)



Source: PSA CountrySTAT

In 2005 - 2010, growth has averaged at 6 percent per annum for yellow corn. Whereas the total area harvested for white corn has fallen at a rate of 1.6 percent per year since 2005, that of yellow corn production has increased by 3.2 percent per year.

[173] Sison, J. 2014. Feed use estimation – data, methodology, and gaps: the case of the Philippines. Report submitted to Agricultural Market Information System, FAO: Rome.

[174] Department of Agriculture. 2013. Agri-Pinoy Corn Program. http://www.da.gov.ph/component/content/category/23-laws-and-issuances.

In the 1990s, the average yield was only about 2.5 MT/Ha since most farmers used local open pollinated varieties (OPV). The introduction of hybrid seeds by multinational companies like Monsanto and DuPont in the 2000's raised yields to 5.0 MT/Ha to 11.5 MT/Ha. Field data shows an average of 6.7 MT/Ha across 12 regions.[175] Luzon (42 percent) and Mindanao (50 percent) are the sources of over 90 percent of corn production. The major producing regions are Region II - Cagayan Valley (24 percent) in Luzon and Regions X - Northern Mindanao (15 percent) and XII – SOCKSARGEN (17 percent) in Mindanao.

Corn is grown as a monocrop, as an intercrop and as an alternate crop. It is usually intercropped with fruit trees, as well as legumes such as peanuts and rice. The alternate crops are rice, papaya, cassava, tobacco and sugar cane. Yellow corn is usually grown twice a year depending on location. In the Visayas and Mindanao Regions, the first cropping cycle is from January to July, while the second cropping is from August to December. In Luzon, the first cropping cycle is from May to September and the second cycle from October to June. Most of the corn areas are rain-fed but four provinces in Region I irrigate using shallow tube wells.

Yellow corn production consists of four general processes, namely: 1) land preparation, 2) seeding, 3) growth maintenance cultural management practices, and; 4) harvesting. In land preparation farmers practice either tilling the soil or 'zero-tillage'. Soil tilling is the more common method with 95 percent using mechanical (i.e., use of four-wheel tractor drawn implement) and/or manual (i.e., use of draft animal) tillage. Zero tillage is only done when necessary as most of the farms use Bt-resistant hybrids. The cultural management practices include weed control, fertilizer application, irrigation and pest and disease control.

Aside from seeds, the other key inputs of production are fertilizers and other agro-chemicals. The two types of fertilizers that farmers use are organic (i.e., chicken dung and vermi-compost) and/or inorganic such as urea, complete, ammophus, and ammosul. For hybrid varieties, such as Bt variety, herbicides such as Roundup, Clearout, Spit Fire, Safe Time, and Triple 8 are the most common agro-chemical being used.

Harvesting is done after 110 to 120 days using mechanical harvesters or manual labor. Mechanical harvesting is commonly practiced in Central Luzon (Region III) where agribusiness or farm service providers lend their corn harvesting combine to farmers. After harvesting, the corn undergoes several postharvest processes.

Postharvest processes include the dehusking of corn ears at the field level, drying of the corn cobs, shelling, drying and packing in bags. Shelling, drying and packing are done at the farm level or at drying centers. There are two drying practices in the value chain, solar drying and mechanical drying. Solar drying is the more common practice.

[175] KIIs and FGDs, 2016. Assessment of the Current Status of the Yellow and White Corn Supply Chains in the Country, partial report.

OVERVIEW OF DEMAND

The demand for yellow corn in feed milling depends on the demand of fresh meat and processed meat products, chicken eggs and fish products together. Economic development and population growth have driven the per capita consumption of these products. From 2001 to 2015, the annual average per capita consumptions of pork and broiler meat have grown 1 percent and 6 percent, respectively. As the demand for these products increase, the livestock and poultry growers respond by expanding their capacities, which in turn trigger the demand for feeds and consequently for yellow corn.

Domestic demand for yellow corn has been demonstrating strong growth. Demand has risen from 6.5 million MT in 2010 to 8.3 million MT in 2014 representing a CAGR of 5.24 percent. Domestic demand is mostly met through domestic production. However, the proportion of imports has been rising over time, from 1.4 percent of total demand in 2010 to 6.9 percent of total demand in 2014.

Figure 41: Domestic market demand for yellow corn (in '000 tons)

Indicator	2010	2011	2012	2013	2014
Domestic demand	6,465	7,037	7,544	7,719	8,345
Percentage of domestic demand met by production	98.6	99.1	98.2	95.6	93.1
Percentage of demand imported to PHL	1.4	0.9	1.8	4.4	6.9

Source: Production data from FAO Stat, trade data from International Trade Commission

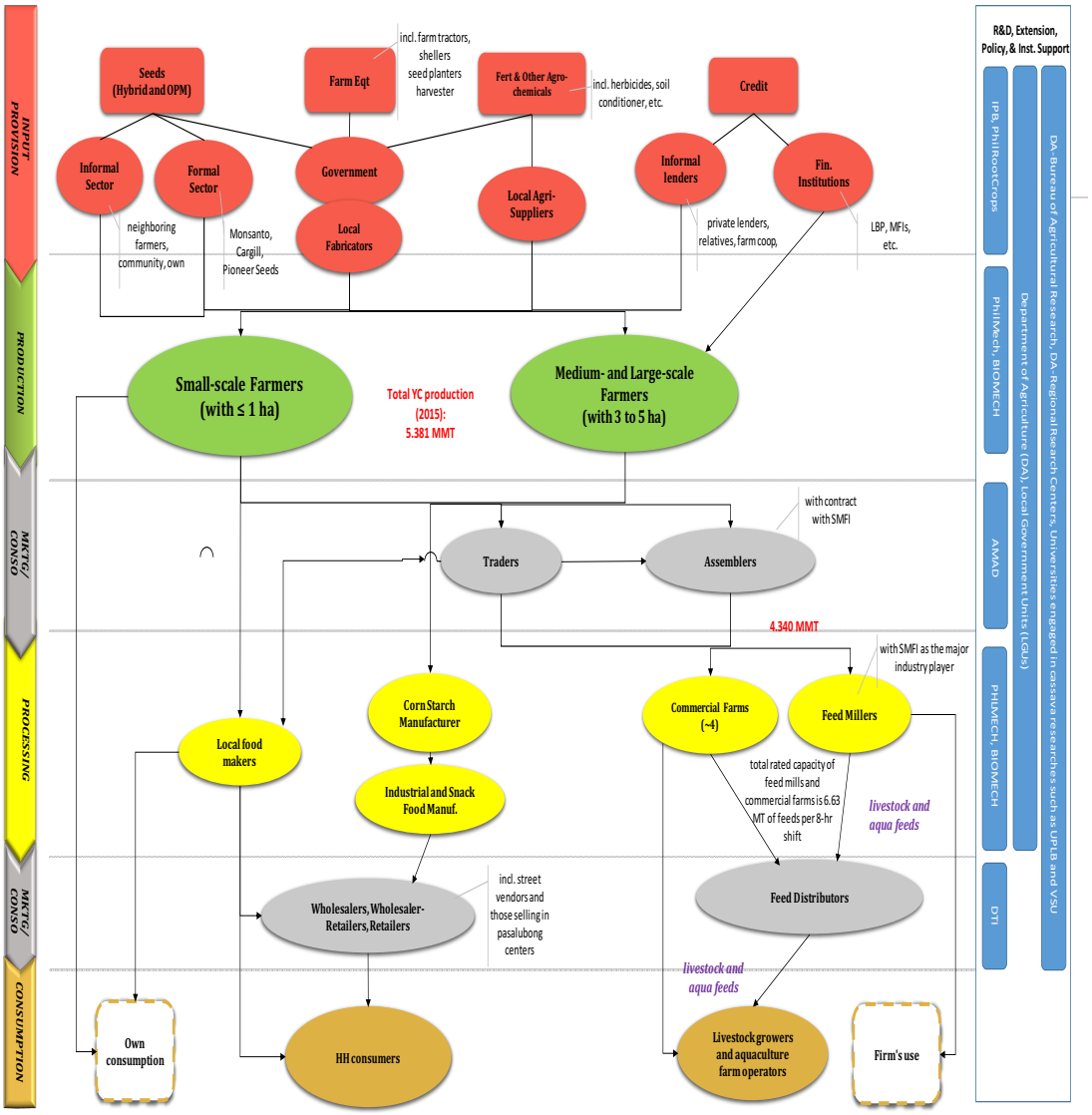
The quality standard followed in the global trade of corn follows the US standard of five grades. The Philippine corn industry follows the US No. 5 grade standard in the domestic as well as in global trade. Aside from quality, price is an important concern since yellow corn can account for as much as 40 percent of the total cost of feed. There are several substitute ingredients for yellow corn which include cassava dried, soya beans, sorghum and feed grade wheat. Whenever the prices of substitute ingredients fall below the threshold price of yellow corn, the millers either shift to, or substitute partially the yellow corn with the alternatives in the feed mixes.

KEY VALUE CHAIN PLAYERS AND FUNCTIONS

The yellow corn value chain map shows the various processes from input procurement to marketing and distribution to feed millers, corn starch millers and corn oil processors. There are three sub-chains in the yellow corn value chain. These are the feed, starch and oil, food and seeds as planting materials. The dominant sub-chain is the feed sub-chain that caters to the livestock, poultry, pets and aquaculture/aquamarine market segments (see Figure 42).[176]

[176] The corn starch and corn oil value chains have a very similar structure as the animal feed except in procurement where the starch mills procure directly from preferred farmer suppliers. The major players in this value chain are the yellow corn farmers, corn starch millers and corn oil processors.

Figure 42: Yellow Corn Value Chain Map



Input Supply: Seeds and fertilizers are the most important inputs in yellow corn production. Per industry sources more than 90 percent of land area for corn production is planted with hybrid (GMO) varieties of corn. The most popular hybrid seeds used are Monsanto's Dekalb and DuPont's Pioneer hybrid seeds. Other seed companies supply hybrid seed varieties such as *NK, Evogene, Agrisure,* and *Bioseed.* More than 90 percent of yellow corn farmers are now using hybrid seeds as planting materials. In some provinces in Mindanao farmers use the 'ukay-ukay' or 'sigue-sigue' variety which they themselves develop. It is a cross of a hybrid variety and an OPV.

Producers: Yellow corn growers are farmers with landholdings ranging from less than one hectare to more than 50 hectares. Technology adoption ranges from manual to highly mechanical. Technology adoption is high in land preparation and planting of new improved seed

varieties. Land preparation uses four-wheel tractor drawn implements (disc plows, disc harrows, power tillers). However, in some areas zero tillage is being practiced. Farmers, together with hired labor, do the planting using hand-held seeding equipment commonly known as the 'hand jabber' or 'farmalite'. Women's participation is relatively high in this activity. Generally, farmers with smaller landholdings do the cultural management practices (i.e., weed control, fertilizing, pests and disease control) after seeding. For those with farms of 2 hectares or more, they hire labor to do certain farm activities such as application of fertilizer.

Farmers and hired labor do the manual harvesting 100 to 110 days after planting. In other areas, small combine corn harvesters do the harvesting task. Farmers' cooperatives provide the harvesting services with a fee. Participation of women is highest in this activity since the task is considered less physically tiring than other farm cultural management activities.

The postharvest activities include the dehusking, packing, drying, shelling and packing tasks. Farmers do the dehusking and packing by themselves and/or hire farm labors to do the task. The corn-in-cobs are then dried in mechanical dryers of private drying facilities and government owned and managed drying facilities. Another practice is to dehusk, shell and dry the grains at farmers' level before these are picked up or are delivered to traders or feed mills. Farmers' cooperatives provide the shelling services and farmers use the solar drying method or make use of cooperative batch type dryers.

Millers: There are three market segments in this marketing channel, the integrated farm feed millers, commercial feed millers and home-mixed feed millers. There were 475 feed mills registered in 2015, of which 61 percent were considered small. The combined capacity of the registered feed mills is 26,600 MT per eight-hour shift. Of the commercial feed mills, about 70 percent operate in Luzon. The rest are equally distributed in the Visayas and Mindanao Regions. The integrated feed mills are part of the vertically integrated operation of meat processing companies such as BMeg, which is the feed milling business of the San Miguel Food Purefoods Incorporated (SMFPI). These mills produce for their own consumption as well as for sale. The commercial feed millers produce varied feed mixes for sale to livestock, poultry and aquaculture/mariculture growers, while home-mixed feed millers produce feeds only for their own livestock or poultry growing consumption. The dominant markets are the industrial level markets of vertically integrated and commercial feed millers.

Transporters: Private enterprises provide the transport and warehousing logistics to farmers and traders. Some traders and vertically integrated firms have their own hauling vehicles and trucks. Transport service providers for agricultural products move the grains from the farm to the drying centers and from the drying centers to the feed mills. Storage service providers provide warehousing services. Other feed mills and drying facilities use their own warehousing facilities.

VALUE CHAIN LINKAGES

Vertical linkages: Smallholders or farmers with landholdings of one hectare or less are directly linked to consolidators/traders. The consolidators are either farmer cooperatives or private enterprises that act on behalf of a much bigger consolidator, or are directly contracted by the animal or cornstarch mills. Informal transactional and trust relationships exist between the smallholders and the traders. A similar type of trust based informal relationship exists between traders and consolidators too. The relationship between the large commercial feed mills and

corn starch mills is formal and transactional. Consolidators are given purchase orders covering a period indicating the volume, prices based on standards and delivery period.

Transaction frequencies between the traders and farmers, as well as between traders and consolidators depend on orders from feed mills. Because of their market power and position in the chain, feed mills can advise their consolidators to stop buying when the target volume of the mill is reached. In times of supply scarcity, the mills compete to meet their scheduled production requirement and build up their buffer stock to ensure continuous supply. When feed mills order consolidators to stop buying, the smallholders tend to lose out, since traders can abruptly or incrementally stop buying stock. In these scenarios, farmers become price takers with the traders dictating the price. During supply scarcities, however, the farmers can better negotiate with the traders and have more leverage in dictating the price.

Consolidators have gained prominence in the value chain by controlling the supply of grains to the mills. They can create artificial shortages by hoarding stocks to push up prices beyond the normal. These rent seeking practices benefit the consolidators but disadvantage the farmers and millers because in such cases, consolidators dictate the price to farmers and renegotiate a higher price with millers.

In the corn starch value chain, the relationship between farmers and the mills is more direct and tight. The mills provide technical and financial assistance through contract growing schemes with farmers to ensure that quality and required volume are achieved.

Horizontal linkages: Horizontal linkages exist in production and the primary marketing subsystems. In production, linkages among farmers are made through cooperatives and federations of cooperatives. Through cooperatives, farmers can schedule their production and access inputs, technical assistance, development grants, government assistance and finance. An example is the Confederation of Cooperatives in South Cotabato, which consists of five cooperatives. It provides different kinds of assistance to farmer members and in turn, receives government assistance on electrical power and machinery to provide these further to its members.

PAFMI links the various feed mills with each other. This group consists mainly of integrated and commercial feed millers. The association facilitates procurement of yellow corn from domestic production and import through collective actions by members. Industry associations, however, are more directed towards policy advocacy rather than on collective effort to promote productivity through technology development and adoption.

SUPPORTING INSTITUTIONS

Philippine government: The government plays an important role in the development of the yellow corn industry and value chain. The government's role includes, among other things, policy formulation and implementation, investments in logistics and marketing infrastructures, financing programs, provision of farm inputs, and research, development and extension services. As of 2012, the Government through its Agri-Pinoy program, has distributed 77 tractor units, 42 village-type dryers, 16 corn shellers, 61 corn mills (for white corn) and 408 shallow

tube wells.[177] Additionally, 178,566 bags of OPV seeds were distributed to farmers and 1,255 training programs through the Farmer Education Program were conducted.

Research and development: Support in research and development is provided through the DA's research agencies such as the BPI, Bureau of Agricultural Research, Philippine Council for Agriculture, Aquatic and National Resources Development (PCAARRD) and specific commodity units such as the Corn Commodity Center. They collaborate with academic research institutions such as the UPLB, MSU, University of Asia and Pacific (UAP), CLSU, University of Visayas (UV), and Mariano Marcos State University MMSU, in the planning and implementation of studies, projects and programs.

Private Sector: The most important role played by the private sector in the corn industry is in microfinancing and R&D. There were 28 private microfinance institutions (including cooperatives) in 2011 that provided access to credit to low-income farmers. One of the biggest microfinance organizations is the CARD, an NGO with more than half a million borrowers, most of whom are poor farmers. The private sector's research and development is focused on varietal improvement or the development of more superior hybrids. The dominant players in this activity are Monsanto and DuPont.

Industry Associations: Industry associations represent the various key players in the value chain and serve as the focal point for policy advocacy. The two prominent groups are the Philippine Maize Federation (PhilMaize), which represents the entire value chain, and PAFMI, which acts for the affairs of animal feed millers.

VALUE CHAIN CONSTRAINTS

The inefficiencies in the value chain have strengthened competition from substitute ingredients and yellow corn import. In the animal feed chain, substitute ingredients such as feed grade wheat and cassava dried chips and imported yellow corn compete with domestically produced yellow corn. With these substitutes, the millers have the flexibility to shift from one ingredient to another. Dried cassava chips are the more common substitute, being locally available. In 2015, SMFI procured 240,000 metric tons of dried cassava granules. In the same year, it imported 165,765 MT of corn which is 3 percent of the total supply and 28 percent of the total import. Factors that influence value chain competitiveness include:

- **Cost of inputs:** In the input subsystem, the cost of hybrid seeds and agrochemical inputs such as fertilizer limit the access of farmers to these inputs. In production, the common practice of outsourcing leads to instability of supply and price, gaps in technology adoption and inefficiency in technical knowledge and skills enhancement. Non-integration of small landholdings has prevented smallholder farmers from achieving economies of scale, which could allow the use of farm machineries and better logistics. In the postharvest processing subsystem, the insufficient capacity and inadequate number of efficient mechanical drying facilities continues to be the main reason for high postharvest losses. On the marketing side, a monopsonistic-oligopolistic structure exists

[177] Department of Agriculture. 2013. Agri-Pinoy Corn Program. http://www.da.gov.ph/component/content/category/23-laws-and-issuances.

that concentrates market power to San Miguel Foods Inc. (SMFI) in yellow corn procurement.

- **Lack of infrastructure:** Infrastructure constraints include inadequate farm to market roads, warehousing services and sea port services. Bad roads prevent the timely transport of grains and/or corn cobs from the farm to drying centers during the rainy season and unnecessarily raises transport cost. In times of peak harvest, there is not enough warehouse capacity to store the entire volume of harvested grains. In Mindanao, this situation worsens when there is sea port congestion.
- **Lack of finance:** Lack of access to credit is still common among farmers despite the presence of government financial assistance programs and financial services from micro-financing organizations. Loans, if granted, are not enough to cover even the cost of seeds and the cost of fertilizer to be used per the recommended application frequency and quantity.
- **Availability of electricity:** Power source stability and cost of electricity are constraints that affect the efficiency and competitiveness of postharvest processing facilities and feed mills. The Philippines has the highest cost of electricity in Asia, which impacts the competitiveness of yellow corn against import. In Mindanao, power supply stability is a persistent problem.
- **International factors:** Policy change in major yellow corn trading countries is another factor affecting the industry's competitiveness. For example, China's removal of government market subsidy of yellow corn has resulted in a global glut of supply. Thus, it depressed prices of traded corn creating pressure on the price of locally grown yellow corn. The higher productivity and the diminishing yellow corn based bioethanol production in the United States have further depressed global prices.
- **Climate change**: Climate change is another external threat to productivity. The occurrence of extreme weather conditions such as La Nina and El Nino has brought down productivity and production.

VALUE CHAIN UPGRADING STRATEGIES

The yellow corn market has shown vibrant growth over the past decade, driven by downstream feed demand. Feed industry demand has usually surpassed domestic production, necessitating the need for imports. In recent years, technological change and improved farm practices have reduced production cost, improving the competitiveness of the industry. However, the yellow corn industry still faces several challenges, related to quality assurance, logistics, competition from ASEAN corn, and slowing growth of feed demand.

There are untapped opportunities for value addition in the corn starch value chain. Corn starch has many applications in the food and nonfood sectors that could create more prospects to farmers and micro, small and medium enterprises. This include high value yellow corn production for value added products for market niches, production of yellow corn starch based snack foods, sweetener making, and bread and confectionery making.

As discussed in the swine value chain report yellow corn as a major ingredient in feed formulation impacts on the cost of feed and subsequent costs of the live weight of swine, pork and processed pork products. The recommendations as discussed apply to this section and are presented again but from the perspective of the yellow corn producers or farmers. Also included are other recommendations to upgrade the value chain.

Controlling price volatility and ensuring the supply of yellow corn as feed ingredient. The fluctuations in prices of feed ingredients such as corn threaten the profitability of the key players in the supply chain and feed quality. When the price of feed ingredients such as yellow corn rise its effect in terms of higher priced swine and pork ripples through the entire chain. Stability of supply is another concern that affects the cost efficiency of feed production and quality of feeds.

Price spikes and fluctuations arise from farm production inefficiencies and effects of weather disturbances. The former could be related to lack of economies of scales of production farms, low technology adoption, inadequate farm infrastructures and postharvest facilities, and changing weather patterns. The following strategic recommendations aim to address these problems.

1. **Strengthen the establishment of yellow corn production clusters:** The DA currently has a program of establishing crop production clusters. These clusters receive focused interventions of financial, technical, mechanization and technology and agribusiness enterprise strengthening services. These should be strengthened by:
    a. Rationalizing the location of the production clusters relative to consolidation centers, processing centers and feed mills to improve cost efficiency.
    b. Setting the optimal number and size of clusters in relation to specific feed milling centers or markets.
    c. Collaboration with the private sector in strengthening the linkages of the production farms with input suppliers (i.e., seeds suppliers, fertilizer and agro-chemical suppliers, farm machinery service providers), logistics service providers (i.e., transport logistics providers, warehouse/storage service providers) and the feed millers.
2. **Strengthen linkages in the value chain through embedded marketing, technical and financial services:** The BMEG- assembler model of yellow corn procurement ensures the supply of the grains to the feed mills. However, this type of relationship or linkage should be extended to farmers through formal contract agreement between assemblers and production clusters or farmers. Technical services and financial services should be part of this relationship. The feed mills' and assemblers' technical people in collaboration with RD&E institutions and government extension arms should provide organizational, management and production technical services. Financial services packages could be embedded such as in the form of credit-in-kind procurement schemes of fertilizer, seeds and land preparation services. This is already being done by some traders who have established long term relationship with farmers. However, this is not sufficient to cover more farmers because of the limited financial capacity of traders.

    This could be expanded by using yellow corn postharvest processing and trading centers (PHPTCs) as a conduit of financial institutions for credit in kind schemes to

farmers. Repayment will be through the PHPTC by deducting from the value of farmer's delivery the amount of loan.

3. **Adopt a warehousing receipt scheme:** One reason why yellow corn farmers are unable to sustain their production is the low buying price of their harvest. Often they are reduced to being price takers. With no way to inventory their harvested grains to wait for better prices they are forced to sell at the level dictated by rent seeking traders. Under this situation they delay planting and reduce their application of inputs like fertilizers adversely affecting productivity and grain quality. A warehousing receipt scheme like the 'pledging' scheme of Thailand for yellow corn, rice and cassava crops could be adopted. The scheme financially empowers the farmers to get out of the bust and boom cycle of yellow corn marketing by leveraging the crop stored in government warehouses as collateral for a financial loan. In this way, farmers could delay selling and wait for a better price and are gainfully compensated for the investment in producing the grains. This pledging scheme could be adapted to fit the Philippine context
4. **Encourage more investments in yellow corn drying and warehousing facilities**. Establishment of more postharvest facilities should go hand in hand with improvement in productivity and production and is needed if the warehouse receipt financial scheme will be implemented. The construction of warehousing facilities could adopt a modified PPP scheme that considers the peculiarities of agricultural and agribusiness practices. The general practice in yellow corn drying is solar drying on concrete pavements. This practice lead to higher postharvest losses and besides it is not applicable during the rainy months. The National Agribusiness Corporation (NABCOR) PHPTC, which were turned into a PPP projects after its dissolution were found to be effective in providing postharvest services to farmers within their areas of operation. It makes use of a two-stage drying system and equipped with a warehouse for temporary storage. Immediate implementation can be initiated by using the NFA rice centers like the one at Isabela.
5. **Encourage investment in other yellow corn based agribusiness products**. Aside from being an ingredient in animal and aqua feeds, yellow corn is the raw material for starch, flour and oil making. Enhancing these product value chains provide a diversified market which will provide market options to farmers.
6. **Build more farm to market roads.** This is a common, persistent problem of agriculture and agribusiness that has been identified as one of major bottlenecks in the value chains. Though government has earmarked a large portion of its budget for infrastructure, collaboration between government and industry players is necessary in strategically locating key infrastructures and sustaining their maintenance.

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