

UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES
PROGRAM ON ESCAPING THE MIDDLE-INCOME TRAP:
CHAINS FOR CHANGE

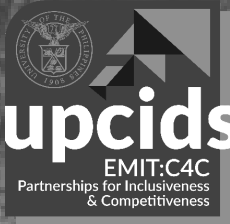
PUBLIC POLICY MONOGRAPH SERIES 2022-07

Going Against the Tide

Kapunungan sa
Gagmay'ng Mangingisda
sa Concepcion
(KGMC)

Tara Alessandra S. Abrina

*with Julian Thomas B. Alvarez, Jan Andrew Orocaay,
and Jane Lynn D. Capacio*



UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES
PROGRAM ON ESCAPING THE MIDDLE-INCOME TRAP:
CHAINS FOR CHANGE

PUBLIC POLICY MONOGRAPH SERIES 2022-07

Going Against the Tide

Kapunungan sa
Gagmay'ng Mangingisda
sa Concepcion
(KGMC)

Tara Alessandra S. Abrina

*with Julian Thomas B. Alvarez, Jan Andrew Oroca,
and Jane Lynn D. Capacio*

The UP CIDS PUBLIC POLICY MONOGRAPH SERIES
is published by the
UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES
Lower Ground Floor, Ang Bahay ng Alumni
Magsaysay Avenue, University of the Philippines
Diliman, Quezon City 1101
Telephone: 8981-8500 loc. 4266 to 4268 / 8426-0955
E-mail: cids@up.edu.ph / cidspublications@up.edu.ph
Website: cids.up.edu.ph

Copyright 2022 by UP Center for Integrative and Development Studies

The views and opinions expressed in this monograph are those of the author/s and neither reflect nor represent those of the University of the Philippines or the UP Center for Integrative and Development Studies. No copies can be made in part or in whole without prior written permission from the authors/editors and the publisher.

ISSN 2719-0722 (print)
ISSN 2719-0730 (online)

Cover Image: from UP CIDS EMIT C4C

Table of Contents

Introduction	1
Background	3
Philippine fisheries value chains	3
Philippine environmental policies	6
The Case Study: KGMC (Barangay Concepcion, Kabasalan)	7
Methodology	9
The Value Chain	9
Case Study Research within an Action Research Framework	10
Data Gathering Tools and Data Analysis	11
The Structure of the Data	12
Primary Activities	15
<i>Tara Alessandra S. Abrina, Julian Thomas B. Alvarez, and Jan Andrew Orocay</i>	
Enterprise: the fisheries value chains of KGMC	15
Primary Activities: KGMC Individual Value Chains	16
<i>Lapu-lapu</i>	16
<i>Alimango (mud crab)</i>	21
<i>Pasayan (Shrimp) and Alimasag</i>	26
<i>Aso-os</i>	31
Support Activities: KGMC as coordinator	33
<i>KGMC's roles in the value chain</i>	36
<i>LGU's role in the value chain</i>	38
Framework and Evaluation	40
<i>Industry Analysis</i>	40
<i>Value Chain Governance</i>	45
Summary and Design Principles	46

Support Activities	49
Environment	49
<i>Tara Alessandra S. Abrina</i>	
The history of KGMC has roots in mangroves	49
Natural endowments	51
Framework and Evaluation	53
<i>Common Pool Resources</i>	53
Summary and Design Principles	57
Empowerment: ‘values change’ and other empowerment actions	59
<i>Jane Lynn D. Capacio and Tara Alessandra S. Abrina</i>	
KGMC as a potent arm of the LGU	61
Bantay Dagat	61
Pursuit of projects	65
Time, Treasure, and Talent: True Empowerment	66
Organizational Enterprise and Fund Management	67
Membership	68
COMFAS	69
Framework and Evaluation	75
Patak-patak	76
Relationship to money and compensation	77
Understanding of formal public-order institutions	78
Summary and Design Principles	78
An evaluation of system operation	81
<i>Jane Lynn D. Capacio and Tara Alessandra S. Abrina</i>	
What does the value chain look like?	81
What motivates stakeholders to be involved in particular agricultural (fisheries) value chains?	85
What indicators do VC actors use to measure their own and other actors’ performance?	85
Growth-for-Sharing Mindset	85
What conditions enable intermediaries to continue operating?	86
3Es: Environment, Enterprise, Empowerment	86

Research and Policy Recommendations	89
Recommendations for Future Research	89
Policy Recommendations	90
Conclusion	93
References	95

List of Tables

Table 1. KGMC Live Lapu-lapu (Grouper) Value Chain	17
Table 2. Sizes and Consolidator Buying Prices (Fisher Selling Prices)	18
Table 3. Sample production information (Source: Delia Maningo)	21
Table 4. KGMC Mud Crab Value Chain	25
Table 5. KGMC Shrimp Value Chain	27
Table 6. Porter's Industry Analysis as applied to KGMC's case	42
Table 7. Spectrum of property rights and classification	53

Table of Figures

Figure 1. KGMC's Vision-Mission-Goals statement (lifted from their presentation)	2
Figure 2. Participants and Roles in the Live Reef Fish Supply and Value Chains lifted from Asian Development Bank, (2014, 123)	5
Figure 3. The Generic Value Chain lifted from Porter (1985, 49)	6
Figure 4. One module of grow-out fish cages among the mangroves	18
Figure 5. Mud crabs or alimango, with limbs tied	22
Figure 6. Buying and selling prices of mud crab (alimango) by type and size	26
Figure 7. Different sizes of sugpo (tiger prawn)	27
Figure 8. Pasayan (white shrimp)	28
Figure 9. Buying and selling prices of sugpo and other species	28
Figure 10. Trade value of shrimp; May to October 2019	29

Figure 11. Trade value of Putian, Bagal, and Reject; May to October 2019	30
Figure 12. Monthly income from shrimp of the top 5 fishers of one consolidator	31
Figure 13. Bulad drying area	32
Figure 14. A consolidator's accounting document. The entries are labeled per fisher, type or size of seafood, and weight or pieces.	35
Figure 15. Roles of KGMC within the value chain	37
Figure 16. Elements of Industry Structure (lifted from Porter 1985)	41
Figure 17. Kabasalan's municipal waters. Arrows indicate freshwater input through two tributaries. The blue flag is the location of KGMC's headquarters.	53
Figure 18. Kabasalan municipal waters nestled between Siay and Naga's municipal waters	55
Figure 19. Yearly cycle of organizational enterprise harvest and pay out	68
Figure 20. KGMC fish landing and processing center is found next to	75
Figure 21. Value Chains of KGMC	83
Figure 22. Satellite images of Barangay Concepcion, Kabasalan comparing mangrove cover, fishpond, fish cage, and roofing material for households, in 2003 and 2013. (Satellite images from Google Maps; slide lifted from KGMC)	84

Table of Abbreviations

COMFAS - Coalition of Municipal Fisherfolks Associations in Sibuguey Bay

CIDS - Center for Integrative and Development Studies

DENR - Department of Environment and Natural Resources

EMIT C4C - Escaping the Middle-Income Trap Chains-for-Change

KGMC - Kapunungan sa Gagmayng Mangingisda sa Concepcion

MAO - Municipal Agriculture Office

PEF - Peace and Equity Foundation

PSA - Philippine Statistics Authority

PTFCF - Philippine Tropical Forest Conservation Foundation, Inc.

SNPFF - Storya ng Pag-asa Film Festival

XAES - Xavier Agriculture Extension Service Foundation

Introduction

The success of the Kapunungan sa Gagmay'ng Mangingisda sa Concepcion (KGMC) as a fisherfolk organization was recently featured in a documentary entry for the Storya ng Pag-asa Film Festival (SNPFF), or Story of Hope. Entitled “Ka Dodoy,” the film is named after KGMC’s incumbent chairman of the board, Roberto “Ka Dodoy” Ballon. In the film, the story of KGMC is told mostly through his point of view and highlights the thriving mangrove forests under their care, the rich reward of productive fisheries, the group’s active participation in regional affairs, recognition from funding agencies, and the “generous” and understanding fisherfolk members who comprise KGMC.¹

It is a stark contrast to the usual portrayal of fisherfolk communities in the Philippines: dismal, disempowered, lagging, and poor. The Philippines’ fisheries sector is deemed to be one of the most productive in the world; however, poverty incidence among fishers was the highest from 2006 to 2012 among nine sectors,² according to the Philippine Statistics Authority (PSA). Truly a story of hope for this sector, “Ka Dodoy” won many awards at the SNPFF, not least of which was best short film.

Among the many awards and certificates that hang proudly on the walls of the KGMC headquarters, the largest is a sign that shows KGMC’s vision-mission-goals (Figure 1). The goals of KGMC are its three core pillars, namely: Environment, Enterprise, and Empowerment. These are collectively known as the three Es.

1 The short film “Ka Dodoy” can be viewed on Youtube using this link: <https://www.youtube.com/watch?v=-8MFlzRd6jQ>.

2 These sectors include farmers, children, self-employed and unpaid family workers, women, youth, migrant and formal sector workers, senior citizens, urban dwellers (PSA 2017). The sectors are not mutually exclusive.

Vision
A self sufficient [sic] and resilient fisherfolks in Zamboanga Sibugay sustainably managing and protecting the coastal resources and other environmental habitat [sic] for the benefit of the next generation
Mission
Through a unified and organized effort, KGMC will blaze the action of the marginalized sectors of fisherfolks, farmers, women, youth, indigenous people and the elderly towards coastal development and conservation to be economically productive through environment-friendly programs and projects.
Goals
As an independent fisherfolks organization KGMC will strive to:
<ol style="list-style-type: none"> 1. Initiate and implement Coastal Resource Management programs and projects appropriate for our immediate environment and the neighboring coastal town (Mangrove Reforestation, Marine Protected Area, Bantay Dagat) 2. Take the lead in providing for the income generation activities of the fisherfolks in the Province of Sibugay (<i>lapu-lapu</i>, lobster fishpens/cage/aquasilvi culture, <i>talaba</i>, crabs culture, seaweeds farming, soft loan, etc.) 3. Serve as a potent arm of the local government unit to pursue coastal resource programs and projects (Bantay Dagat and Katunggan task group, SECAP)

FIGURE 1. KGMC's Vision-Mission-Goals statement (lifted from their presentation).

In the interest of learning from their model, the Escaping the Middle-Income Trap Chains-for-Change (EMIT C4C) Program of the University of the Philippines Center for Integrative Studies (UP CIDS) thus launched an action-research study on KGMC in partnership with Peace and Equity Foundation (PEF) and the Partnerships Resource Center of the Rotterdam School of Management (Erasmus University). What makes KGMC relevant to the partners' action research inquiry are the following. First, they are a thriving grassroots agri-fisheries business model. Second, they seem to have demonstrated an ability to balance Environmental, Social, and Governance (ESG) and other sustainability metrics with profit in the pursuit of their vision-mission-goals. Third, and most importantly, they seem to have designed institutions that safeguard social inclusivity among its members. They have even operationalized these institutions in market exchanges among individual KGMC members who have different roles in their independent value chains (e.g., trader-lender/buyer, fisher/seller, regulators).

This case is also important for PEF because of the lessons that can be drawn for their social enterprise partners in the coastal areas. Lastly, KGMC is currently in the process of replicating and expanding its model into the Coalition of Municipal Fisherfolks Associations in Sibuguey Bay or COMFAS—and will benefit from an action research project that extracts lessons from their own organizational development and design.

This paper seeks to answer the following research questions:

1. What does the value chain look like?
2. What motivates stakeholders to be involved in particular agri (fisheries) value chains?
3. What indicators do VC actors use to measure their own and other actors' performance?
4. What conditions enable intermediaries to continue operating?
5. How are margins distributed in the value chains?

To make explicit the cocreation of this case study with KGMC, it will endeavor to use their language and articulation. First, this introduction continues with a brief background of the case study, followed by the methodology. We then present the data in three parts, one for each of KGMC's core pillars. Each section will start with details about the case study, which is then followed by a framework, a brief analysis and evaluation, and design principles for practitioners.

The *Evaluation of System Operation* section then seeks to piece all of the data and analysis to answer EMIT C4C research questions 1–5. In Policy and Research Recommendations, the aspirations of KGMC, especially that of Ka Dodoy as chair, the next steps in the action research, and/or opportunities for future research are laid out. The last section concludes the study.

Background

Philippine fisheries value chains

The Philippines is in the top ten country exporters of fishery products in the entire world. Its top export products have consistently been tuna, seaweed, shrimps, crabs, octopus, and grouper. It is estimated that there are around 1.4 million small fishers in the country (Philippine Crop Insurance Corporation n.d.) and fisheries statistics are divided into three sectors: municipal, commercial, and aquaculture. As of 2018, the Philippine fisheries sector has employed over 1.6 million people—99% of whom work in the municipal and aquaculture subsectors. The fisheries sector also contributed 1.4% to the country's gross domestic product (GDP) in 2017.

Since the 2000s, there have been many value chains studies of the fisheries in the Philippines. Among the most researched are the top fishery export products enumerated above. For example, the live reef fish trade, especially the trade of live groupers, is well-established and well-documented in some provinces in the Philippines, namely Palawan (Asian Development Bank 2014; Sadovy et al. 2003; E. H. Petersen, Muldoon, and Johnston 2004; Pomeroy et al. 2004; Pomeroy, Parks, and Balboa 2006). Older value chain studies in the 2000s usually aimed to document the relationships and costs and margins among the different actors in the chain (The Nature Conservancy 2004; Sadovy et al. 2003; Pomeroy, Parks, and Balboa 2006), to identify sections in the value chain where upgrading can be made (van Duijn, Beukers, and van der Pijl 2012; Pomeroy, Parks, and Balboa 2006; Brown et al. 2010). Industry analysis was also limited to supply and demand analysis, such as price and income elasticities (E. Petersen and Muldoon 2006; E. H. Petersen, Muldoon, and Johnston 2004) without explicitly analyzing the comprehensive competitive forces within the industry.

More recently, Philippine value chain studies following the methodology of Kaplinsky and Morris (2001) have since used the value chain to highlight differences in value retention of the source country and the importing country to inform policy recommendations for equity considerations (Sadovy et al. 2003; Rosales et al. 2017; Asian Development Bank 2014; Jacinto 2004). In the same value chain study of live groupers from Palawan, for example, authors found that only 20% of the value is retained by fishers, cagers, and traders in the Philippines, while the importers, their agents in the Philippines, wholesalers, and retailers in the foreign receiving country can absorb up to 80% of the final value per live grouper sold (Asian Development Bank 2014). Another study estimates that the Philippines as a source country of live grouper value retains up to 45% (E. H. Petersen, Muldoon, and Johnston 2004). However, Porter (1980) argues that value retention is in large part dictated by industry structure, which is lacking in these studies to provide the context for any insight on value retention.

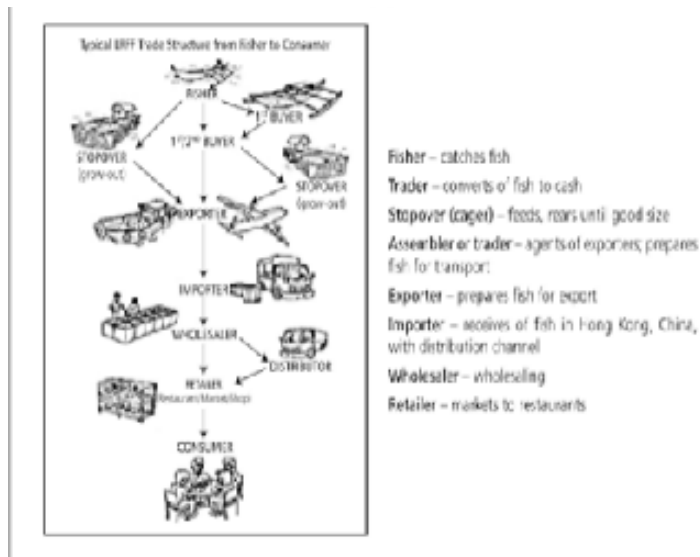


FIGURE 2. Participants and Roles in the Live Reef Fish Supply and Value Chains, lifted from Asian Development Bank (2014, 123).

Moreover, governance in the value chain does not simply refer to formal institutions, but rather the qualitative relationships of actors (Gereffi, Humphrey, and Sturgeon 2005). The studies do acknowledge these—Asian Development Bank (2014), for example, considers the fishers and their buyers as one unit, implying that upstream actors are more integrated, and their margins are more or less fluid between them. Rosales et al. (2017) also mention the influence of the *suki* relationship on certain transactions. However, the mechanics of these relationships are not explicitly analyzed in these studies, which would have provided context and even prescriptive insight into the value retention that is observed in case studies. We argue that the explicit illustration of backward linkages among actors and their respective activities, particularly how the forward transactions are financed, will provide a richer insight into the cost and profit structures of the economic actors in the chain.

Another gap in Philippines' fisheries value chain research is the absence or omission of the analysis of support activities. The value chain was introduced for the first time in Porter's (1985) book, *Competitive Advantage*, as a tool to identify sources of competitive advantage for firms. The tool in its original form breaks down the firm into its primary and support activities and analyzes the different ways in which these activities are interconnected (Figure 3).

The value chain studies in the Philippines have so far emphasized the mapping of primary activities and their actors. However, given that industry structure and/

or competitive forces influence how margins are distributed (Porter 1980), support activities can be a powerful, but often overlooked, entry point for value chain analysis. We argue that it is by mapping the mechanics of these support activities that value chain governance, as defined by Gereffi et al. (2015), becomes clearer. This is especially true when it comes to wild-caught marine fisheries and other mariculture fisheries that are dependent on wild stock, which tend to have a backward-bending supply curve due to over-exploitation (E. H. Petersen, Muldoon, and Johnston 2004).

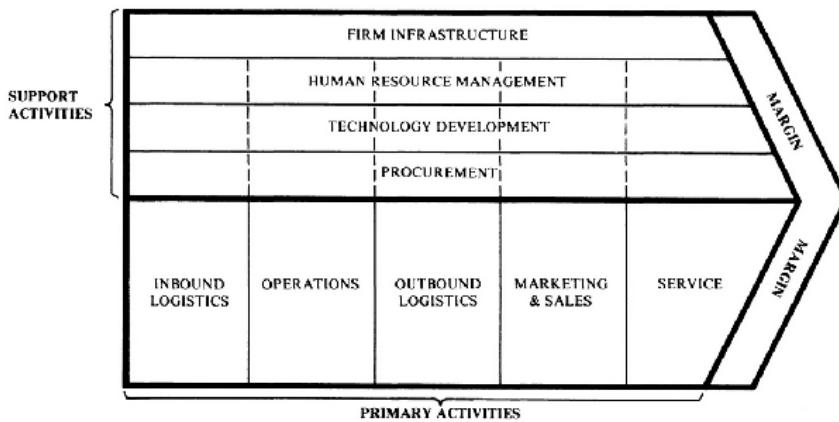


FIGURE 3. The Generic Value Chain lifted from Porter (1985, 49)

Philippine Environmental Policies

Mangrove forests are the most important coastal ecosystem in the KGMC story. Mangroves provide shelter and nursery services for fish and other target fishery species. They are also important as a natural barrier against storm surges and protect seagrasses and coral beds from runoff coming from the land (Thompson, Primavera, and Friess 2017; Primavera and Esteban 2008).

Unlike in farming, where farmers’ land tenure may not always be secure due to privatization, municipal waters are classified in the Philippine Constitution as public domain (Courtney et al. 2016). However, because mangrove forests are located at the boundary between land and sea, some areas can be owned, some are considered public property but are given temporary leases, while others remain completely public. Due to the movement of the waterline, especially in light of rising sea levels, these classifications can become confusing (Primavera 2000).

While the open-access nature of fisheries makes it vulnerable to exploitation or “tragedy of the commons” (Wade 1987), we argue that this feature of fisheries is also what makes it a strong case for collective action.

The Philippines also has national environmental policies that provide the backdrop to this case study. For example, Republic Act (RA) 8550 (as amended by RA 10654), or the Fisheries Code of 1998, figures into the KGMCs story significantly. The procedures for the cancellation of an FLA and its subsequent conversion back into mangrove forests allowed KGMC and the fishers of Kabasalan to regain access to the coastal resources in the area (Primavera 2000; Primavera and Esteban 2008). RA 8550 is also the law that protects municipal fishers' preferential use rights of municipal waterways, which KGMC uses as the basis for their assertion.

Policies and projects for reforestation opened new positions in the government as well. The National Greening Program, for example, went on to become the policy framework that mandated the government to allocate funds for forest rangers and institutionalize reforestation efforts, including those of mangroves. A more comprehensive overview of Philippine fisheries policy can be found in the appendices of Courtney et al. (2016), while mangrove laws that are relevant for the KGMC timeline are summarized in Primavera (2000).

The Case Study: KGMC (Barangay Concepcion, Kabasalan)

In English, *Kapunungan sa Gagmay'ng Mangingisda sa Concepcion* can be translated into "Association of Small-scale Fishers in Concepcion." It was founded in 1986 with only 30 members. Today, it is a Securities and Exchange Commission (SEC)-registered fisherfolk (people's) organization made up of 321 households across eight municipalities within Zamboanga Sibugay province. Approximately 35% of the fishers who reside in Kabasalan are members of KGMC.

Barangay Concepcion is located in the municipality of Kabasalan in Zamboanga Sibugay province. Kabasalan is a second-income-class municipality of 44,000 people (PSA 2015), and it is found at the apex of the coastline of Sibuguey Bay. Endowed with rich natural resources, Kabasalan's economy thrives on live grouper (*lapu-lapu*) trading, mud crabs (*alimango*), rubber trees, coconut and mangrove forests, and fresh-tasting water. In fact, it is the top producer of seafood products in Region IX, and one of only four provinces in the Philippines that compete in live grouper trading. It is considered the "mother town" of all the other towns in Sibuguey Bay as its rich resources attracted the first plantations in the area. Over time, this led to a mature and externally integrated market for seafood and other agricultural products.

The Kabasalan municipal market is known to have the highest price of seafood products in Zamboanga Sibugay. According to its municipal agriculturist (MAO), Kabasalan has the highest number of *alimango* buying stations in the province. For this reason, seafood vendors from all over the province prefer to sell their goods in

Kabasalan if they do not have alternative buyers in the nearest urban centers, such as Zamboanga or Pagadian. As such, Kabasalan is an important market for the small fisherfolks in the province.

Zamboanga Sibugay, like many areas in Mindanao, is a settler province. Many members of KGMC, for example, speak Hiligaynon, which is a language more commonly spoken in the Western Visayas region. We acknowledge that there are many cross-faith and cross-cultural interactions that were documented in this case study; however, these will not be discussed in this case study. The relationships that we describe here are of a more economic and transactional nature. However, to the extent that we are able, we will provide demographic information about the subjects for some context.

Methodology

The main tool for analysis in this case study will be the value chain. To provide a deeper understanding of the context of the KGMC value chain, it will be encapsulated within another important method known as the case study (Yin 2018).

Although the primary tool of analysis is the value chain, in the course of data analysis, we identified other supplementary frameworks. These will be discussed in the body of the data to reflect how they were not chosen *a priori*, and to represent the grounded theory feature of this study. Some of these frameworks are Porter's (1980) competitive forces framework, Gereffi et al.'s (2015) value chain governance, and New Institutional Economics (NIE) for collective action and resource use.

The Value Chain

Rosales et al. (2017, 12) identify four useful features of value chain analysis for small-scale fisheries: (1) map economic agents and their characteristics, such as profit and cost structures; (2) the distribution of benefits by disaggregating margins and profits to their respective actors; (3) the role of upgrading, and to identify potentials in profitability, governance; (4) the role of governance, particularly the policy framework that supports or constrains the decisions of the economic actors in the chain.

As a development case study, our intended point of entry or point of view (Kaplinsky and Morris, 2001; M4P 2008) is that of the poorest, and in this case the most primary producers: the fishers. However, because data collection among fishers was limited by the project specifications, this study most extensively uses the data from the next link in the value chain: the consolidators. Consolidators are thus the primary unit of analysis in this study. We also argue that quantitative data on the relationships between fishers and consolidators, or their transactions, are only available through the consolidators' books. Therefore, data from consolidators is assumed to reliably reflect

the situation of the fishers.³ Moreover, much of the information was articulated by Ka Dodoy. We indicate whether the information was said in the presence of and/or corroborated by other members of KGMC.

According to Kaplinsky and Morris (2001), a value chain may also be lacking in the following: (1) macroeconomic issues (capital flows and volatility), (2) political issues (rate and productivity of investment), and (3) determinants of social capital. Although not extensive, some sections in this case study will touch briefly on these.

Case Study Research within an Action Research Framework

A case study is an empirical method that investigates a contemporary phenomenon in depth and within its setting or context. It is relevant for research that asks how and why questions and those that do not require control over behavioral events (Yin 2018). This method fits the study on KGMC because of the need to explore themes on inclusion and competitiveness within the context of shared or common-pool resources. The case study is also appropriate for explaining aspects like the motivations of stakeholders and mechanisms that KGMC employs.

This case study on KGMC was undertaken as an action research project where researchers and practitioners from PEF and KGMC worked together to ask probing questions, reflect on emerging lessons, and address what seemed like dilemmas and tradeoffs. Key researchers from EMIT C4C and core staff from the Institutional Concerns Office and the Operations Group of PEF conducted data gathering together and formed what we call the “impact team.” This impact team was responsible for developing the research instruments and training each other on the use of the various questionnaires. Moments for reflection among the impact team members and KGMC board members were incorporated in the field visits. Every member of the impact team submitted reflection memos during and right after the field visits to KGMC. Said reflection memos were used as part of the corpus of data that were analyzed. For example, one impact team member from PEF, Jan Andrew Oroca, contributed significantly from his reflection memos. When the Enterprise section of this monograph was finalized, the authors thought his contributions merited a coauthorship of the section.

3 There are other strong justifications for this data gathering preference: (a) due to the schedule of their work, most of the fisherfolks were unavailable for comment; (b) the consolidators were former small fisherfolks who were able to secure and share their capital with KGMC; (c) we were able to interview a few fisherfolks who validated our preliminary findings (e.g., during the meeting with former Kabasalan mayor Freddie Chu, Regional DOST, and the Kabasalan MAO).

Using action research as an approach also enabled the researchers to look for mechanisms to address relevant queries like “How can a best practice case like KGMC be replicated within the coalition of fisherfolk organizations (COMFAS)?” and “What lessons from KGMC may be relevant for the social enterprise partners of PEF?” The design principles emerged out of the felt need to guide other organizations in gleaning lessons from KGMC while incorporating lessons from pertinent literature. It is important to underscore, however, that these design principles are not “cookie cutters” or oversimplifications of institutional designs (Saunders 2014). Caution should be exercised so that the complex, indigenous, or actual design of particular commons are considered in crafting and assessing policies and plans. Even among COMFAS members, for instance, the natural resource endowments of KGMC may be starkly different from other communities even if they share the same Sibuguey Bay.⁴

Data Gathering Tools and Data Analysis

Data were collected over two weeks: one week in November 2019 and one week in January 2020. For the first visit, a focus group discussion (FGD) was conducted with the board of KGMC. Key informant interviews were also conducted one-on-one, especially with the consolidators. For the second visit, interviews and FGDs were again undertaken, this time to include key leaders of COMFAS and officials of municipal and provincial governments. Preliminary findings from the first visit were also validated through an FGD with the board members and a number of KGMC members. Through these, the impact team was able to validate the themes, which then served as the initial pool of codes for the transcript analysis. A final validation meeting was scheduled for May 2021.

Each interview was audio-recorded and then transcribed. Consolidators’ books of transactions were scanned and transcribed, when applicable. Photo documentation of assets, awards, and video documentaries were also used as supplemental data. For the preliminary analysis, the daily reflection memos and debriefings of the impact team were inductively used as the basis for the themes.

To prepare the monograph, a principal investigator among the researchers/authors consolidated the corpus of data and guided coresearchers in the use of the database.

4 There are data and insights from the KGMC case study and action research that were not included in this monograph. This was to ensure a concise and coherent narrative in spite of the richness of the data. We will incorporate those in other knowledge products.

She also led in the planning for the intended content per section. The principal investigator, who is also the expert on common-pool resources, guided researchers in creating design principles, which is an initial attempt to produce a knowledge tool that can be used by practitioners. In developing key sections, every researcher used their expertise to draw lessons from the case. Each researcher also made efforts to generate insights from relevant literature.

In Manila, the impact team made two presentations of the KGMC case study to key officials and staff of PEF. The second presentation was conducted through a Zoom meeting. When the monograph was finalized following the presentations, comments were also provided by KGMC and PEF, which seek to give the insights construct validity (Eisenhardt 1989).

The Structure of the Data

The data are structured into three chapters that reflect their three core pillars (3Es): *Environment, Enterprise, and Empowerment*. We took the liberty, however, in separating the primary and support activities of the value chain. Thus, the 3Es as chapters are presented in this order: Enterprise, which covers the primary activities and some support activities of the KGMC value chain, followed by Environment and Empowerment, which are categorized as support activities. In each chapter, the data from the reflection memos and interview transcripts are first presented, followed by a relevant framework, then a brief analysis and evaluation.

Then, each chapter ends with preliminary design principles for practitioners. These are specific institutional characteristics that could “increase the likelihood of sustained collective action” through conditions that encourage users to cooperate with common property institutions (Cinner et al. 2012, 5219). They are the enabling conditions that allow stakeholders to continue operating and are considered exogenous. This is our initial attempt to produce a knowledge tool that can be used by practitioners to assess if the practices documented in this case study, which lean heavily on collective action, are applicable for their sites.

The chapter on Enterprise, for example, seeks to profile KGMC’s seafood value chain as it is today. The primary and support activities in four important seafood product chains are broken down from the point of view of the consolidators. The value chains are then analyzed using Porter’s (1980) competitive forces framework and Gereffi et al.’s (2015) framework of global governance of value chains. In the chapter on *Environment*, we not only describe the natural endowments in Kabasalan, but also loosely document the emergence of KGMC and their relationship with their resources. Here, the framework used for analysis is Wade’s (1987) common-pool resource profile

and collective action. The chapter on Empowerment then documents the relationship of KGMC with the local government and other stakeholders as well as their operational definition of “true empowerment.” It also discusses the various leaders as “institutional entrepreneurs” even as it details the leadership stories of two prominent figures in the case study. Here, the design principles are the themes that have emerged from discussions with KGMC members on leadership and their civic duties to KGMC and Kabasalan.

Primary Activities

Enterprise: The Fisheries Value Chains of KGMC

Tara Alessandra S. Abrina (EMIT C4C), Julian Thomas B. Alvarez (EMIT C4C), and Jan Andrew Orocaay (PEF)

Based on the interviews with its various leaders and members, KGMC seems to fulfill two roles for its member fishers. The first is a formal role, as a people's organization (PO). As a PO, their official role is to organize the fishers of Barangay Concepcion for representation and leverage in civic projects. This formal role will be discussed more in-depth in the section on *Empowerment*.

The second role of KGMC is a more informal one, but one we argue is just as important to their success as a group. This role is as a coordinator among the members' collective action activities. While members generally fulfill roles in their own value chains independently of KGMC, members are able to collectively manage and/or own some factors of production through the fisherfolk organization. It can thus be said that KGMC only influences the business culture of its individual members but does not explicitly regulate how they do business.

In this section on Enterprise, we focus on this second role. Recall that a value chain distinguishes between the primary and support activities of firms. In this chapter, we first provide an overview of the member consolidators' primary activities. One of the strategies that KGMC employed to foster cooperation and ensure that benefits are distributed evenly was to assign specific products to specific members for consolidation. This allows certain consolidators (or more specifically, their households) to work as separate, independent firms that specialize in certain products without the need to compete for buyers or suppliers.

Then, the chapter takes a look at how these consolidators manage the support activities of their respective value chains. While some activities are performed by the

consolidators, such as procurement and some human resource management roles, KGMC as a coordinating body also performs other support activities on behalf of their member consolidators. It is through these shared supporting roles that collective action takes place in the enterprise aspect of KGMC. Moreover, we demonstrate how this arrangement further reinforces and cultivates KGMC's culture of sharing and reciprocation.

Primary Activities: KGMC Individual Value Chains

VCA studies have focused on particular marine species as products (e.g., Rosales et al. 2017). For this case study, we chose to focus on four key products: live grouper or *lapu-lapu*, mud crab or *alimango*, shrimps or *pasayan*, and the whiting fish or *aso-os*. Live *lapu-lapu* was chosen because it is a high-value product that is traded in the export market. According to all key interviewees, it is the product that sustained Kabasalan's reputation as a seafood hub. There are only two other provinces in the Philippines that can compete with the volume of live grouper produced each year: Quezon and Palawan (Philippine Statistics Authority 2020). Almost all of the live grouper in the Philippines is traded internationally or in national capital markets, such as Cebu or Manila. *Lapu-lapu* is usually caught from the wild, but the fingerlings can also be bred in a hatchery (Pomeroy et al. 2004; Bureau of Fisheries and Aquatic Resources 2019). The fingerlings are then grown out in fish cages to increase their market value (SEAFDEC and APEC 2001). *Alimango* was chosen for the same reasons, except that in this value chain, there are more competitors in the Philippines.

On the other hand, *pasayan* and *aso-os* were chosen to juxtapose the industry structure of live *lapu-lapu* and *alimango*. They have a lower market price and more regional demand, i.e., markets in the Zamboanga region. Additionally, *aso-os* has two more interesting features: (1) the value-adding process of deboning and sun-drying; and (2) its heterogeneous seasonality within sections of Sibuguey Bay. In this study, we observe KGMC's *aso-os* price sensitivity to neighboring municipalities' supply.

Lapu-lapu (*Grouper*)

Live *lapu-lapu* is a high-value product. In Hong Kong, wild-captured red grouper (*Epinephelus akaara*) was able to fetch a wholesale price of HKD 1,076.6 per kilo in January 2016 (approximately PHP 6,600 in 2016 values). In the Philippines, live grouper was the top third export in terms of volume from 2014-2016, next to tuna and seaweed. For KGMC, the top two species of grouper sold are *Epinephelus fuscoguttatus* and *Epinephelus coioides*, which are sold in Hong Kong at wholesale price for HKD 199.7 (PHP 1,225) and HKD 98.5 (PHP 604), respectively (at January 2016 HKD–PHP exchange rate). Almost all of their live groupers are produced for the export market.

Because of Kabasalan’s natural endowments, KGMC fishers need not maintain a hatchery and broodstock where groupers are cultured.⁵ Table 1 shows the breakdown of KGMC’s primary activities for live groupers.

TABLE 1. KGMC Live *Lapu-lapu* (Grouper) Value Chain

Links/Roles	Activities	Costs	Selling Price
Producers (Fishers)	Set up nets and traps Harvesting Boat maintenance	<i>Baklad</i> <i>Bangka</i> <i>Gasolina</i> Basket	(see Table 2)
Consolidators	Loans Input procurement Sorting Grow Out Marketing Harvest Packing	Fish cage Trash fish (see Table 2) Styrofoam boxes Plastic Ice Permit Labor	
Exporters	Manila Cebu Hong Kong	Freight Permits	

Ka Dodoy claims that 80% of the grown-out fingerlings are caught from the wild. When asked why, he says that though they maintain and sell grouper broodstock (breeding individuals), the supply from breeding is not as consistent as wild stock. The fingerlings are brought to the consolidators alive and are sorted into seven sizes: good, under, super, XL, 5 up, 4 up, and 3 up. Table 3 shows these sizes and their corresponding prices. It is interesting to note that the Good and Under sizes are sold per kilogram because these sizes are good enough to be sold at the market. Given that these individuals are rare and thus difficult to consolidate, they can be sold opportunistically in local markets on the day of landing, consumed by KGMC on some occasion, or

5 Ka Dodoy mentions that maintaining a hatchery and breeding groupers in captivity is difficult. He cites that the conditions are very specific for groupers to be born and bred in captivity. As such, though they sell broodstock to willing fish farmers, the consolidators themselves source 80% of their fingerlings from the wild. Only KGMC’s organizational enterprise sources their fingerlings from their hatchery—this will be discussed in the section on *Empowerment*.

included in the next batch of grouper for export, if the harvest date is near. For the remaining sizes, these are placed in KGMC's fish cages and grown out until they are big enough to be sold live (Figure 4).

TABLE 2. Sizes and Consolidator Buying Prices (Fisher Selling Prices)

Species: <i>Lapu-lapu</i> (by size)	
Kind/Size	Buying Price
good	PHP 200 per kg
under	PHP 150 per kg
super	PHP 35 per kg
XL	PHP 30 per kg
5 up	PHP 25 per kg
4 up	PHP 20 per kg
3 up	PHP 15 per kg



FIGURE 4. One module of grow-out fish cages among the mangroves

Usually, the grow-out phase varies by size, but the general turnaround time is 4-6 months. The same fishers who catch and sell the groupers are also the same fishers who provide the feed for the groupers. Called “trash fish,” they are an assortment of fishes that cannot be sold for human consumption. While trash fish is available in the fishing grounds of KGMC, it is easier to source bulk trash fish from other fishers

in Kabasalan and other neighboring municipalities. In these cases, the procurement of trash fish is done collectively and facilitated by one of the consolidators, i.e., one grouper consolidator pools the orders and procures trash fish for the rest of the group.

There are only a handful of member consolidators that are assigned to collect groupers from fishers. These consolidators are the ones who contributed fish cages to KGMC. Because live groupers are high-value products, and because Kabasalan is well-known in this industry, the consolidators are contracted by exporters who are stationed at the port near Kabasalan and shoulder all the costs of delivery and freight.⁶ With this arrangement, it is possible for both exporters and KGMC consolidators to project profits.

A sample profile of one of the grouper consolidators, Mrs. Delia Heis Maningo, can be found in Box 1. Similar to other consolidators, this consolidator had some level of human and financial capital endowed to them: they are educated (finished college), have the skills to manage finances and business, and invest in the needed capital to start up the business without credit. With these skills and endowments, they were entrusted by KGMC to consolidate the grouper landings of the member fishers.

BOX 1: Of Aling Delia, Income Streams, and Low Earners

Aling Delia, a 38-year-old woman with two children, lives in a poor community, but she is not poor. When asked about the condition of her life in Concepcion, she describes it as “maginhawa na.” Her husband used to farm rice on land he owns; now, he has a tenant farmer with whom he shares profit every harvest. Aling Delia also manages her own sari-sari store which she inherited from her mother.

Delia also owns two modules of *lapu-lapu* fish cages or 24 compartments. At the time of her interview in January 2020, she earned PHP78,800 by selling the groupers from half of her fish cages. With her family having three sources

6 These costs are unknown to KGMC consolidators.

of income, she is able to send her eight-year-old son to a private elementary school. The capital for their fish cages all came from their pockets. They've never had to incur any debts. She frowns at all microfinance groups coming almost every day in their barangay.

From a fishing family

Aling Delia is the youngest of 11 siblings. One of her older brothers, Ely Heis, is a leader and board member of KGMC. They all grew up in Kabasalan. The young Delia would then know fishing even at an early age. The life skills learned in a fishing community helped her become more effective in managing her groupers. One look at a *lapu-lapu* fingerling and she could tell if it will survive to maturity or if it will get eaten by the other fishes in her cage.

In college, Delia took BS Aquaculture from Zamboanga Sibugay State University. After graduation, she didn't pursue a career outside Kabasalan. Instead, she helped her mom manage their sari-sari store. Eventually, as Delia began a family, the store was given to her. A couple of years later, KGMC offered Delia and her husband the opportunity to manage two compartments for *lapu-lapu*. After seeing the potential earnings they would receive from investing in live *lapu-lapu* trade, they asked permission from KGMC if they could build their own module of fish cages, which KGMC granted.

TABLE 3. Sample production information without module costs

Operations	<p>Operations:</p> <ul style="list-style-type: none"> • Grouper • Pen preparation, monitoring, feeding, harvesting/catching • 2 modules (12 compartments of fish cages per module) or 24 fish cages • Nursery ponds: 4 compartments • Grow out ponds: 20 compartments • Decision making on farm operations (unclear how the husband contributes) • Fingerlings: 100% caught from the wild, she buys from fishermen in Concepcion
Variable Costs	<p>Operations:</p> <ul style="list-style-type: none"> • One assistant in harvesting fish: PHP 200 per harvest day, happens once or twice a month • Caretaker of the fish cages: PHP 2,000 per month <p>Materials:</p> <ul style="list-style-type: none"> • Electric bill per month: PHP 200 • Feed or trash fish: PHP 200-400 (every other day or twice a week, varying) • Packing: PHP 8,000 for the whole batch
Revenues	<p>Last Harvest Season:</p> <ul style="list-style-type: none"> • 192 kg x PHP 410 per kg = PHP 78,720

Source: Delia Maningo

As illustrated in Box 1, sample costs, as well as revenues for live grouper trading, can be very high. However, the cost of grouper fingerlings is still missing from this estimate to get a clearer picture of the value retained by grouper consolidators. According to the accounting books of another consolidator between October 7 and November 14, 2019, the total value of live grouper purchased by Daniboy from various fishermen amounted to PHP 10,523, of which, 62 percent were of “good” and “under” sizes, while the remaining 38 percent were of other sizes (3 up to Super).

If we account for the operational costs from Delia’s estimate, and the costs of grouper fingerlings from Daniboy’s books, a good estimate of the profits that KGMC grouper consolidators take home monthly is around PHP 50,000–60,000.

Alimango (*mud crab*)

Like groupers, mud crabs are also export and high-value products. However, unlike the live grouper with only a few players in the country and a lucrative market abroad,

the market for mud crabs is relatively more competitive; therefore, its prices are more volatile and can vary daily compared to the live grouper. Because of the environmental conditions in which their mud crabs are harvested from/grown out, Kabasalan's mud crabs have a sweeter, rounder taste than the mud crabs that are grown in fishponds in other areas (interviews from KGMC, former mayor Freddie Chu, former vice governor Edwin Alibutdan). This gives KGMC mud crab consolidators one of their biggest sources of competitive advantage.



FIGURE 5. Mud crabs or *alimango*, with limbs tied to prevent escape or removal of limbs

Mud crab prices vary according to their sex and size (Figure 5). While most of the crabs are harvested from stationary fishing nets called *baklad* and crab pots called *bobo*, some are procured from Sorsogon as crablets. The crablets are shipped, via air, to Zamboanga Sibugay. Whether sourced from Sorsogon or caught in the waters of Kabasalan, if they are smaller than marketable size, they are grown out in fishponds and fed trash fish, much like groupers. This trash fish is also sourced locally as mentioned in the previous section. Because there is considerable overlap in the production process with the groupers, the consolidators that collect groupers are also usually in the best position to consolidate mud crabs.

Unlike the value chain for groupers where the buyer or exporter fulfills the role of transportation from Barangay Concepcion, not all buyers order in advance and not all of them offer to cover the cost of transportation from the consolidation area. Hence, another source of competitive advantage is if the consolidator is able to deliver the mud crabs to the market. Because Barangay Concepcion is located near the national highway, KGMC consolidators only need to pay for half a liter of gasoline per delivery. Likewise, compared to live groupers where prices are negotiated months in advance, as mentioned, mud crab markets are volatile and prices fluctuate daily; however, these

prices simply follow the market in the importing city or country. Despite this volatility, mud crab prices still consistently peak around Chinese New Year, much like the live grouper.

KGMC's strategy to provide a buffer for this highly competitive price setting is to negotiate with only a few selected buyers. Again, KGMC has a competitive advantage in terms of taste, volume, and delivery service, which gives it both cost and differentiation advantages and some leverage in price setting.

In addition, KGMC has a highly skilled negotiator-member, whom they call the 'commissioner'. For this highly specialized role, Ka Dodoy trained his nephew Potpot to negotiate on behalf of KGMC's consolidators. His background and activities are documented in Box 2.

BOX 2: The Young Commissioner

A Place for Potpot

John Joseph "Potpot" Blancaver didn't have to secure a college degree to be good at what he does. At 17 years old, he started dealing for *alimango* (mangrove crab) exporters. Now 20 years old, he has his own *alimango* buying center, doing business with more or less 20 exporters and 50 local consolidators in Kabasalan and nearby towns. KGMC Chairman Roberto Ballon eyes Potpot to be the point person in Manila when their organization realizes their prospect of exporting from the capital.

Growing up in Barangay Concepcion, Potpot acquired the skills of sizing *alimango* at a very young age. According to Ka Dodoy, the children from Barangay Concepcion would play with the *alimango* as if they were toys, comparing sizes and using the community standard as winning criteria for their little game. This would later on prove to be very crucial for his job as "commissioner." As commissioner, he must be able to assess the sizes and quality of the *alimango* sold to him by consolidators, which he then matches to the requirements of different exporters.

Promoting himself

When he was 17, Potpot was first employed by a Chinese businessman in their area. He would do all the transactions with consolidators and exporters, while the capital to buy crabs came from his boss. After some time, Potpot found it difficult to deal with his employer. He felt that his boss was inconsiderate of their clients, and it was not good for business. Having a direct network among consolidators and exporters, he made a decision to put up his own buying center.

The bold decision paid off. Potpot, the third of five siblings, can now help his parents financially. He can earn PHP 1,000 for a lean day and up to PHP 10,000 per day during the peak season from December to March.

Potpot's place in the chain

As a commissioner, Potpot plays a vital role in the chain. He deals with different consolidators and updates them on the buying price daily. He also needs to maintain a good relationship with them as there are many other commissioners and buyers in their area. Aside from that, the likes of him are the link of exporters to local fisherfolks. Talking with different exporters, he is able to compare buying prices and strategically choose to whom he would sell his mud crabs. And again, he needs to build a good relationship with them and cleverly play the game of these bigger businessmen.

If Potpot is able to buy a kilo of M1 grade Mud crabs for Php 1,650 from a consolidator, he makes a Php 50–70 commission from the exporters. During the peak season, his markup can go even higher.

The skills required for a commissioner include coordination, sorting and assessment, pricing and selling strategy, negotiation and relationship building, among

others. With such a level of complexity, it will be difficult for consolidators to take on this additional role. Likewise, it will also be cumbersome for exporters to go directly to various consolidators in Kabasalan. They need to outsource the process to someone who is well-connected in the crab producers' community, like Potpot, who would be able to link them to various local mud crab suppliers.

TABLE 4. KGMC Mud crab (*Alimango*) Value Chain

Link	Activities	Costs	Selling Price
Producers	Set up traps Harvest crabs	<i>Baklad</i> <i>Bangka</i> <i>Gasolina</i> Basket/traps	See Figure 6
Consolidators	Loans Input Procurement Sorting Grow out Marketing Cleaning Packing Delivery	Loans Fish pond Trash fish <i>Semilya</i> from Sorsogon (see Table 4) Delivery Boxes Plastic Ice Permit	Figure 6
Commissioner	Set up traps Harvest crabs		+PHP 50–70 per kilo
Buyer/Exporter	Set up traps Harvest crabs		

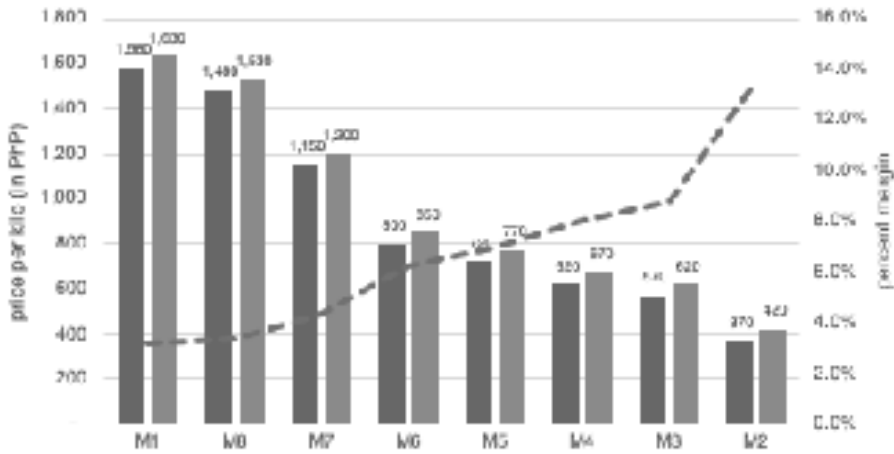


FIGURE 6. Buying and selling prices of mud crab (*alimango*) by type and size

Note: Prices are as of November 30, 2019

Source: Interview with Dannyboy

Buying and selling prices for *alimango* vary by type and size. *Alimango* is broadly categorized as “male” (M) or “female” (O). Buying price for male *alimango* ranges from PHP 370 per kilogram (for the smallest, M2) to PHP 1,580 per kilogram (for the largest, M1). Meanwhile, the buying price for female *Alimango* ranges from PHP 520 per kilogram (BKL) to PHP 800 per kilogram (OS7). For all types and sizes, the consolidator’s margin is uniform at PHP 50 per kilogram.

Pasayan (*Shrimp*) and Alimasag

In the Philippines, shrimps are often farmed in fishponds and not caught in the wild.⁷ In contrast, the shrimps that KGMC sells are naturally present and in sufficient quantity in the waters of Kabasalan. Inputs aside from fishing gear are not needed since they have no need for a grow-out phase; after harvesting, the fishers bring the shrimps to the consolidator where the prices are dictated by size, weight, and type of shrimp. However, because of this, the quantities and sizes are more difficult to predict, and therefore more difficult to consolidate into wholesale volumes.

7 From 2009-2019, inland municipal fisheries in the country landed 9-14% of aquaculture shrimps/prawns by volume. These four species are Tiger prawn (Sugpo), Endeavor prawn (Suahe), White shrimp (Hipong Puti), Freshwater shrimp (Hipon). 95% of this volume came from Tiger prawn (sugpo).’ Source: Philippine Statistics Authority (Open Stat Databases, last updated 2022-11-16 09:26 and 2022-08-15 11:22).

TABLE 5. KGMC Shrimp Value Chain

Link	Activities	Costs	Selling Price
Producers	Set up fishing net Harvest shrimp and alimasag	<i>Baklad</i> <i>Bangka</i> <i>Gasolina</i> Crab pot Basket/traps	See Figure 9
Consolidators	Loans Input Procurement Buying Sorting Marketing Delivery	Delivery Boxes Plastic Ice Permit	See Figure 9
Wholesale/Retail	Buying Selling		

The consolidators are then tasked to cover the costs of delivering these to markets, such as the one in Kabasalan, and to as far as Zamboanga City and Pagadian. To transport the shrimp, the consolidator pays for a tricycle to pick up 1–2 boxes daily from the consolidator’s home and bring to the highway for a bus to pick up. The tricycle ride costs PHP 10. The bus fare for each box of sugpo costs PHP 300. Other varieties of shrimp would cost PHP 20 per box. At the market, the prices are relatively stable, varying by only PHP 10.



FIGURE 7. Different sizes of sugpo (tiger prawn)



FIGURE 8. Pasayan (white shrimp)

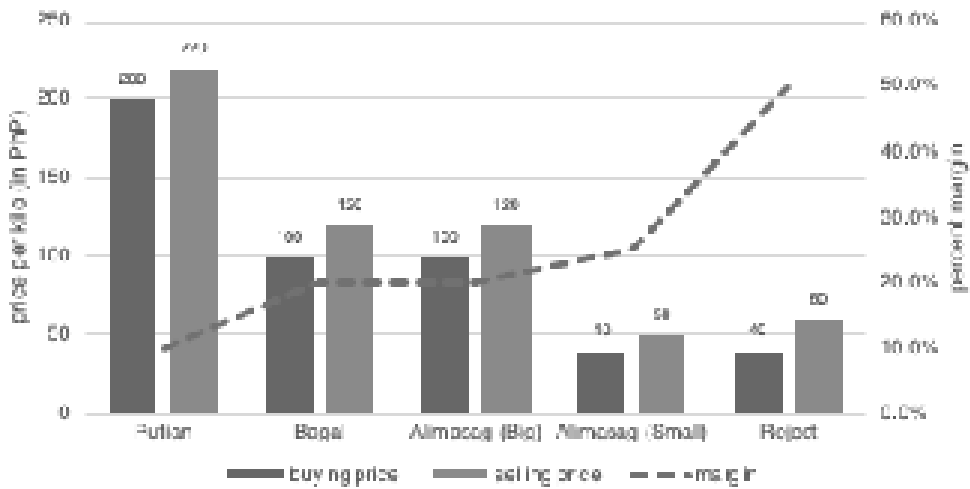


FIGURE 9. Buying and selling prices of sugpo and other species by type and size, margins made by consolidators. Notes: Prices are as of November 30, 2020. Sugpo BT4 is approximately 25 grams. Sugpo S1 refers to shrimp with soft shells. Source: Interview with Dannyboy.

Shrimp is also generally classified according to size. As shown in Figure 9-A, the consolidator’s buying and selling price of shrimp is determined by its size and its type. The largest of which, known in the locality as “Super,” is purchased by the consolidator at PHP 580 per kilogram and is sold at a PHP 40-margin. Meanwhile, the smallest size, known as BT4, is purchased at PHP 280 per kilogram, at the same margin. Just like mud crabs, margins are also fixed regardless of size. This means that margin as a percentage of buying price declines with the shrimp’s size, as depicted by the dotted green lines.

Buying and selling prices for other species are also shown in Figure 9-B. Both Putian and Bagal are sold by the consolidator at a PHP 20 margin; big alimasag at PHP 20 margin; small alimasag and “reject” at PHP 10 margin.

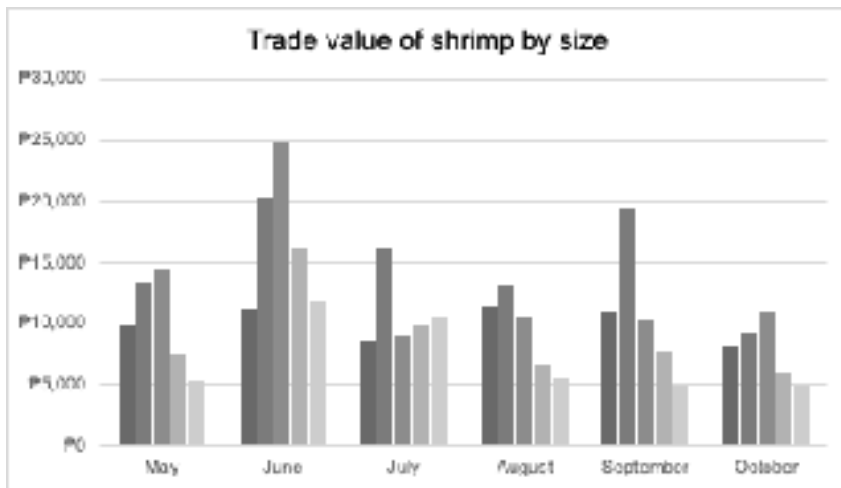
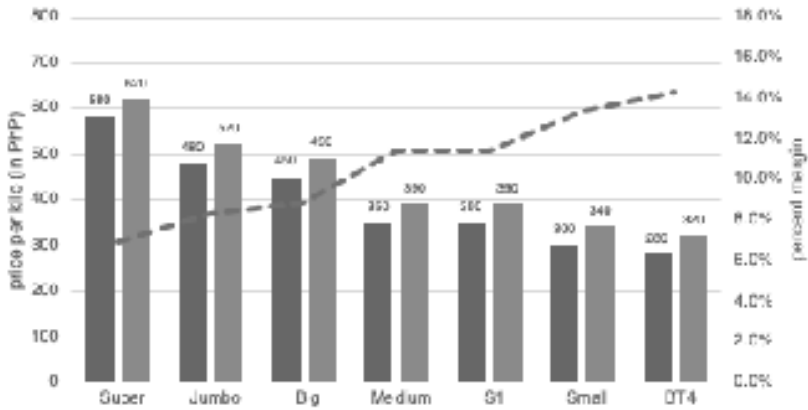


FIGURE 10. Trade value of shrimp; May to October 2019

Figure 10 illustrates the monthly trade value of shrimp between the consolidator and fisherfolk. Transaction value is computed as the amount that the consolidator pays the fisherfolk, inclusive of the deductibles from asset loans and cash advances. Over this period, buying prices for shrimp were fixed at prices shown in Figure 9. Hence, differences in trade value also reflect changes in transaction volume.

It should be noted that due to the unavailability of accounting records, the trade value in Figure 10 only reflects the monthly transactions of one consolidator. Nonetheless, this provides us with information on the extent to which transaction

value varies by shrimp size and by period. For example, it can be deduced from the second panel in Figure 10 that the trade value of shrimp is highest for June, mainly driven by “big-” and “jumbo-sized” shrimps.

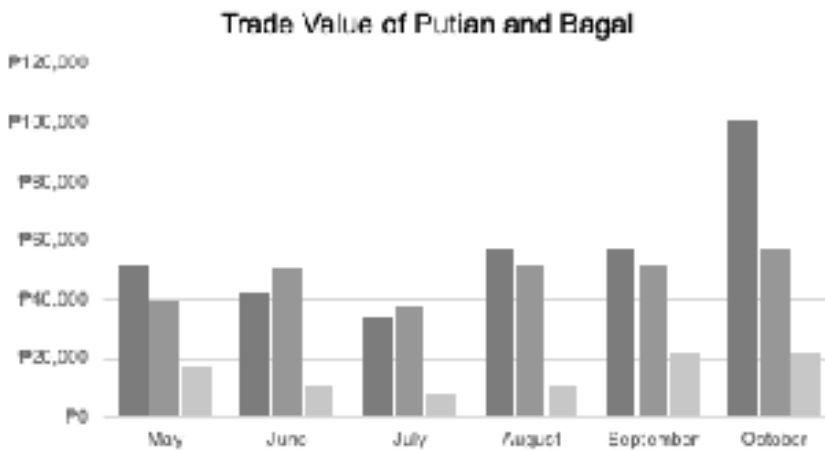
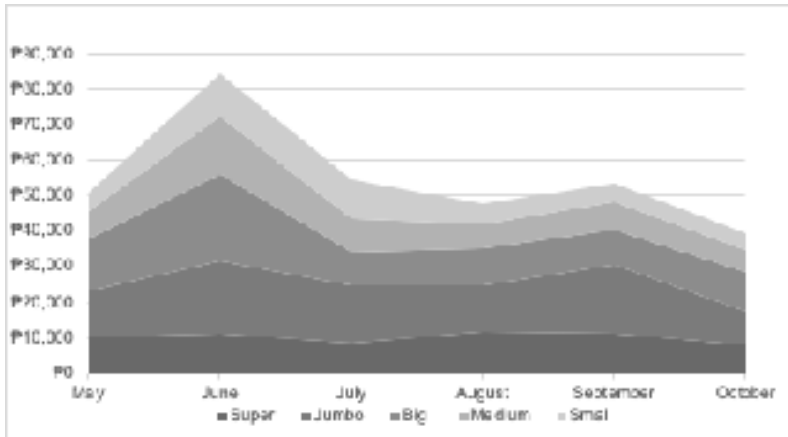


FIGURE 11. Trade value of Putian, Bagal, and Reject; May to October 2019

Meanwhile, Figure 11 shows the trade value for the other shrimp species not included in Figure 10. Trade value for *putian* and *bagal* is lowest in July and highest in October, with the trade value of the former even exceeding PHP 100,000. Note that the total value of monthly transactions is shared by at least 50 fishers, whose fishing income also significantly varies from each other, and also fluctuates by period.

As a rough illustration (Figure 12), we examine the monthly income of the top five fishers with the highest income derived from shrimp. This figure highlights the volatility of their monthly income, which ranges from about PHP 4,000 to as high as PHP 16,000. Assuming that the shrimp stock in the wild is equally accessible to these

fishers, the fluctuations may reflect their effort (including gear). However, this has yet to be determined.

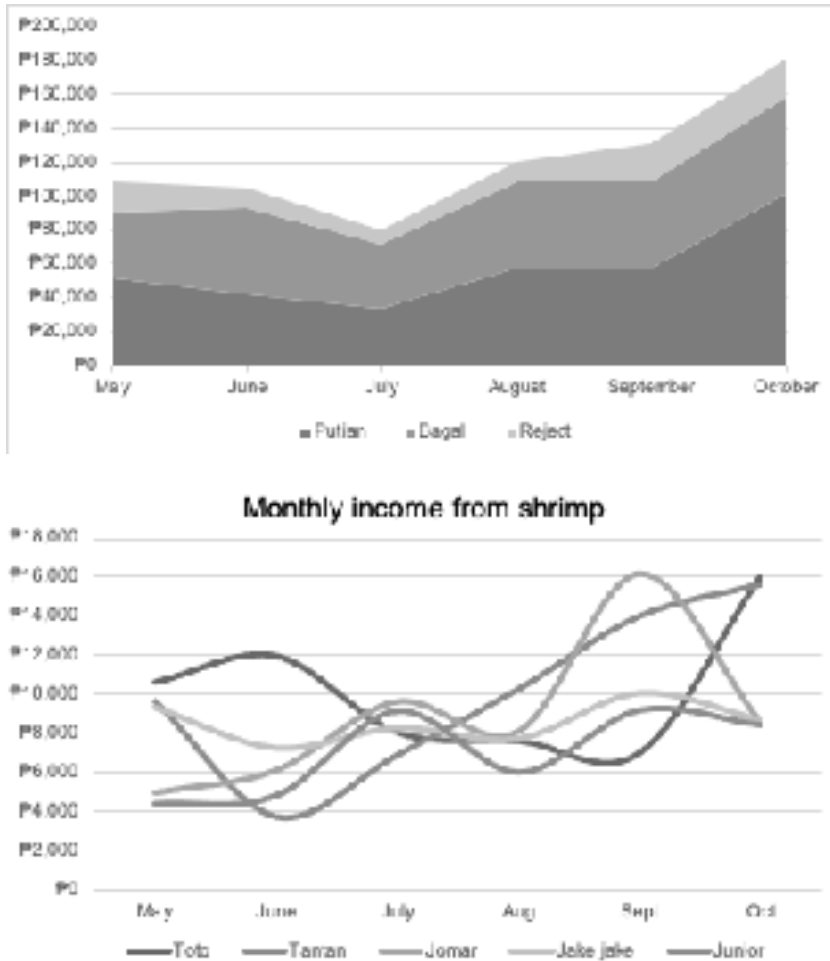


FIGURE 12. Monthly income from shrimp of the top 5 fishers of one consolidator

Aso-os (Whiting Fish)

Lastly, we illustrate the value chain of the *aso-os*, or whiting fish. *Aso-os* is a small, schooling, silvery fish that can be sold either fresh or dried; in the region of Zamboanga it is usually sold dried. The process of drying *aso-os* involves deboning, salting, and drying in the sun. Sun-drying is a traditional method of preserving fish, which was traditionally done during the peak season in preparation for the lean seasons when the weather or the stocks of fish are unfavorable. When fish is sold dried, it is generally called *bulad*.

Two members are currently assigned to consolidate *aso-os*. Compared to the grouper and crab consolidators whose homes are located along the river, the *aso-os* consolidator we interviewed does not process the *aso-os* adjacent to their home. Instead, a wide, open, communal drying area is available for the two *aso-os* processors of KGMC. This drying area is slightly more inland (Figure 13).



FIGURE 13. Bulad drying area

The fishers first use gillnets to catch the *aso-os* schooling near Kabasalan waters. The consolidator then buys the *aso-os* fresh from fishers at PHP 40 per kilo. The consolidator and her household then debone the fish manually with a sharpened knife. The deboned fish is then washed in saltwater and then arranged on top of old fishing nets which are laid out on top of bamboo slats and stakes (Figure 13). Another layer of fishing net is placed on top of the drying fish to protect them from insects, birds, and cats. The nets also make it easy to quickly pack away the fish if it suddenly starts raining. However, because of the longitudinal location of Zamboanga Sibugay, the area experiences more sunny days than rainy days and is not known to suffer from strong tropical typhoons.

This process of drying takes anywhere between a few days to a week. Six kilograms of fresh *aso-os* yield one kilogram of *bulad*, which is then sold at PHP 360 per kilogram. Batoto, the *aso-os* consolidator we interviewed, mentions that the usual margin she makes is PHP 20 per kilogram of fresh *aso-os* bought.

One of the features of the *aso-os* value chain is the geographic variation in seasonality of *aso-os* within the bay. Because the waters near KGMC are more protected than other areas, the *aso-os* shoal in that part of the bay during most of the year. However, during the peak season for *aso-os* where they are plenty in number and spill out into other parts of the bay, the market price of *aso-os* in the province suddenly drops.

Batoto mentions that when she has the funds, she would like to invest in a “bodega” or a storage facility for the *aso-os* she buys during this bay-wide peak season. That way, when the peak season ends, she is still able to sell that stock at lean season prices.

Support Activities: KGMC as Coordinator

Besides the primary activities of the value chain, Porter (1985) identifies the activities that support these primary activities (Figure 2). These support activities include technology development, procurement, human resource management, and firm infrastructure (e.g., business culture). All the consolidators interviewed perform some support activities independently, while some are performed in coordination with KGMC. The ability to perform these support activities counts towards their social capital, which is required to become a consolidator.

In the next few paragraphs, we detail how the KGMC consolidators from different value chains perform their support activities similarly. These support activities are financing, procurement, and human resource management. What is most interesting about this is that the ability and the willingness of a KGMC member to fulfill these supporting roles is an important criterion for KGMC to elect a consolidator. Though financial capital is necessary to be a consolidator, it is not the only one, and neither is it the most important.

For example, the members who can finance the materials and the labor to build and maintain fish cages are those chosen to be consolidators of the high-value aquaculture products: live *lapu-lapu* and *alimango*. However, even if an individual member owns the fish cage, the use of these fish cages is agreed upon by KGMC as a group, because the waters are communal, and space is limited. Only a certain number of fish cages can be deployed in the estuary at a time, lest the waters become too crowded and less productive. Even the location of these cages is agreed upon as a group, because incorrect placement may also negatively affect the flow of natural spawn or larvae and productivity of the waters. When there are surges in demand for live *lapu-lapu*, such as on Chinese New Year, all the fish cages are allocated solely for live grouper culture to meet the purchase orders. Currently, among the members of KGMC, there are 24 modules with 12 fish cages each, or a total of 288 fish cages for the benefit of KGMC members.

The role of consolidator or even board member is not hereditary. Alan de Pio, a member fisher of KGMC, is the son of the chairperson who went before Ka Dodoy. In his interview, he mentions that he did not become a consolidator simply because he did not think to become one. Instead, he chose to remain a fisher and actively contributes as a member of the Bantay Dagat. From this example, we can see how children need not inherit their parents' roles in the enterprise.

Consolidators are also chosen based on their ability to lend money or *pautang*, which is also a support activity. Consolidators act as financiers for the fishers, for both production and personal expenses. For example, KGMC's consolidators can

either finance or procure the nets or *baklad* that are used to trap the marine species. Sometimes, these nets are repaid by the fisher through deductions in their catch revenues, called *kaltas*, which is fulfilled by the consolidator. Often, it is much simpler in terms of accounting for the consolidator to give the fishers the *baklad* with no expectation of repayment. In these kinds of arrangements, it is simply understood by both parties that, by accepting the *baklad* at no cost, fishers agree to sell their catch exclusively to that consolidator. In this sense, the consolidator provides procurement and capital—support activities for the fishers' production process—in exchange for the fisher's labor and/or their future output. This practice is called interlinked financing or contracts (Bell 1988; Esguerra et al. 1993; Platteau and Abraham 1987).

Interlinked contracts can also apply for personal loans (Platteau and Abraham 1987). In this case, repayment is expected. As mentioned, the consolidator keeps a *kaltas* from the fisher's revenue if the fisher has some debts to settle. The size of the *kaltas* is negotiated between the parties at every transaction and is dependent on at least the fisher's household needs, the amount of their running debt, and the consolidator's (perceived) equity and exposure. The consolidator keeps a running tab of the fishers' debts (Figure 14); each time the consolidator deducts a *kaltas*, it is credited against the debt of that fisher. It is not common practice that consolidators charge interest. Sometimes, fishers and their consolidators will arrange for a payment schedule. Fishers can be paid after a few days, or after a certain threshold of their earnings. Either way, this arrangement is flexible, again dependent on the needs of the fisher and on the consolidator's risk exposure.

This method of accounting is quite different from the accounting or bookkeeping standards of today. Ka Dodoy recalls that a local university once visited their area with the intention of teaching the consolidators good accounting practices. However, the consolidators would soon revert to their own accounting methodology. As Ka Dodoy points out, this is the 'indigenous way' of bookkeeping for their business finances.

Instead of keeping records per transaction, the consolidator simply keeps a record, a tab, or an account for each *suki* fisher (a consolidator can have as many as 30 *suki* fishers at a time). It reflects the relational *suki* arrangement between the consolidators and the fishers. An advantage of this system is that the consolidator becomes intimately acquainted with the fisher's personal finances and overall situation. In this sense, the consolidator provides another set of support activities: human resource roles, such as employee or supplier records, and catered, professional, and personal support. The multi-species per fisher per transaction accounting style also reflects how the consolidator is willing to buy the fisher's catch in its entirety, as opposed to mono-species fisheries, which tends to be more wasteful. This practice has positive effects

on the fisher, who will be paid for their entire catch and will not need to throw away unwanted bycatch, and the environment.

Fisher	Date	Type/Size	Weight/Pieces	Value
Pinang			30	150 0.2
11-15-19				
LTON				0.4 160/100
JOMPA				0.8 20 5
JOMPA	10 00	40		0.8 0.1
JOMPA		30		0.4 60 100
Pinang		40		0.7 0.4
ANTHONY				35 1.5
LTON				0.7 50
ANTHONY	10 00	120		0.8 0.4 0.8 1.3 1.6
11-16-19				0.8 0.4 0.8
LANDO				20 20
11-16-19	10 00	170		0.5 7.50
JOMPA				0.5 1.0 0.1
JOMPA		50		1.5 0.1 0.2
JOMPA			30	2.50 1.50 50 0.5
ANTHONY	12 10	15 40		1.1 1.2 1.0
ANTHONY				
ANTHONY				2.008 2.80
ANTHONY				3.450
11-17-19				
JOMPA				0.7 0.1 0.4
JOMPA				0.5 0.1 1.0
JOMPA				1.00 0.5
ANTHONY	50			0.6 4.0 0.7
ANTHONY	85			3.8 0.6 3.57
ANTHONY				1.3 1.6
PINANG				

FIGURE 14. A consolidator’s accounting document. The entries are labeled per fisher, type or size of seafood, and weight or pieces. Debts are also written/written off on this document.

There is no KGMC policy for fishers to stay with their consolidators. However, Alan de Pio mentions that he remains loyal to his consolidator Dannyboy for three reasons: (1) he has debts to settle with him, (2) Dannyboy was the one who had always provided funds for his production and personal expenses, and (3) they are brothers-in-law.

Profits for consolidators are modest—no more than PHP 20 per kilo. When prices fluctuate in the market, for example when supply increases in other locations (e.g. *aso-os* during *amihan*) or peak during the holidays (e.g. mud crab around Chinese New Year), the consolidator transfers most of this shock by keeping the margins per kilo of product stable in absolute terms. When asked, Ka Dodoy mentions that this arrangement is advantageous to consolidators because it keeps accounting simple. However, the advantage to fishers is that it allows them some degree of certainty

in revenues after their harvest (as opposed to the bidding “*bulungan*” system that is prevalent in large fishing markets that incentivizes lower price offers). In addition, the long-term and suki relationship of the consolidators and fishers and the cost transparency from KGMC’s coordination and years of transactions afford consolidators a degree of trust with the fishers in setting the buying price (see Abrina 2020).

As observed in the story of Aling Delia, KGMC consolidators will mostly self-finance and fulfill their own primary production activities, such as sorting, deboning, drying, grow-out, packing, marketing, and delivery. That is, the consolidators we interviewed have avoided incurring debt to finance their production activities. For some value chains, especially that of the grouper, these activities are shared among consolidators.

An interesting feature of the KGMC enterprise is that some support activities are fulfilled through collective action. Procurement, mostly for fishing gear, is often coordinated to get discounts from bulk buying. The members who procure on behalf of others get the added benefit of transferring some of the transaction costs among their co-procurement parties or *kahalili*.

However, nowhere is collective action in the value chain more exemplified than in the way members—both consolidators and fishers—share in the maintenance of the mangrove forest and the bay. Contributions can come in the form of labor or funds. Ka Dodoy says that this is possible because members treat their healthy environment as a crucial factor of production. He says, “Kung wala ’yung environment, e di wala silang benta!” Environmental management and protection activities will be discussed in more detail in the following section on *Environment*.

There are many other ways that individual members cooperate through KGMC despite acting independently in their respective value chains; these are discussed in the next section.

KGMC’s roles in the value chain

As mentioned, KGMC acts as a coordinator among value chain links. One interesting strategy was to designate certain members to consolidate specific products. According to Ka Dodoy, the current roster of consolidators are the members who have contributed significantly since the start of the organization. Their contributions can be in terms of labor, attendance in meetings and events, and/or capital.

Technology development or infrastructure maintenance can be costly for individual small-scale fishers or consolidators. KGMC thus sets aside a fund to send

willing members to training sessions, expos, and learning field trips, who are expected to then share their learnings to the rest of the group. The designs of fishing gear are also developed as a group. For example, KGMC members often brainstorm and codesign new and more efficient traps for crabs and fish. These designs are hand drawn (codified) and are free to use among the members.

Another way that KGMC coordinates its members is to freely share information that is vital to their production success, such as new industry standards or new policies passed. The fact that KGMC can access new information and provides these freely to the different players along the chain (e.g., fishers, buyers, and sellers) makes the transactions from producer to intermediate buyer coordinated to some extent. An example that we observed would be the members’ knowledge of the size of grouper that ensures sustainability of its population in the wild. Thus, KGMC, as gatekeeper and facilitator among the different links in the chain (Figure 15), is able to foster an environment where information is more or less symmetric, and the trust that is needed in price-setting negotiations. In accordance with economic theory, it is this kind of environment that facilitates market efficiency (Balaoing-Pelkmans 2020).



FIGURE 15. Roles of KGMC within the value chain

Another, subtler way that KGMC coordinates individual value chain activities is in building the business culture. Ka Dodoy likes to say that “values change” is KGMC’s business strategy. This has somewhat been passed on to individual consolidators: they choose the buyers they transact with. This is likely due to their competitive advantage earlier—which then demonstrates at least some market empowerment. Ka Dodoy mentioned discouraging members from selling to certain buyers who would drive down prices (*nambabarat*), especially when they find out that that buyer was patronizing

another fisher group that was selling undersized (and therefore unsustainable) or low-quality seafood.⁸

Towards fishers, member consolidators have consistently demonstrated their responsibility for the welfare of the fishers by offering personal and production loans, often at zero interest and lax repayment schedules. Furthermore, they offer to fulfill procurement roles for fishers, which would otherwise be cumbersome for individual fishers. Consolidator Batoto mentions in her interview that, because the fishers are her neighbors and comembers, it is difficult not to be concerned for their welfare. She says that, because she is the one who provides their income, she feels it is incumbent upon her to adjust when markets are slow. This mindset is consistent with what Ka Dodoy says: consolidators take on the responsibility of caring for their fishers.

It is not only within consolidator–fisher relations that this culture of care exists. Member consolidators with the same products and large buyers (such as exporters or institutional buyers) practice sharing their purchase orders, regardless of who receives the order. In an interview with Ka Dodoy, he mentions that this policy is self-enforcing because member consolidators who share their orders with others are more likely to be invited to contribute to another member’s purchase order in the future. He claims that it is a common practice among consolidators who have bigger surpluses to provide only a portion of the supply that they have, so that other consolidators may be able to contribute and thus earn from their purchase order. In this way, it is similar to the observed phenomenon in Abraham and Platteau (1987) among fishers in India where “[a] solid link is forged between the two parties arising out of their mutual concern for each other’s predicament.” As will be documented in the next section on *Empowerment*, KGMC actively encourages this culture.

The LGU’s role in the value chain

In Vice President Robredo’s reflection video on the story of KGMC, Ka Dodoy mentions that people must be independent and competent without the need for much LGU support. In fact, today, Kabasalan LGU’s role seems to be minimal; it seems to only provide political representation and support for KGMC’s government-related requirements. Below is a list of services mentioned by KGMC that the LGU, especially the office of the municipal agriculturist (MAO), currently provides:

8 Although the extent that consolidators have adopted this has not been observed/validated.

1. Technical assistance: production, community organization
2. Legal services: proposals, adjudication, ordinances, contracts, permits
3. Funding: Bantay Dagat honoraria

One of the main programs of the LGU is the rehabilitation and maintenance of the mangrove forests. Likewise, the LGU also provides an honorarium for twelve Bantay-Dagat at PHP 7,000 per person per month. The MAO supports fisherfolk by helping them draft proposals, contracts, and ordinances. In addition, the MAO also provides relevant training and capacity-building activities. This funding and technical role supports the productivity of the marine ecosystem and is vital for the value chain.

More than a minimal role, the MAO is KGMC's partner in gatekeeping the entry of exporters. Ka Dodoy shared an instance when the members denied an exporter who attempted to contract some KGMC members' seafood supply. Upon failing, the exporter then attempted to coerce KGMC through a permit from the MAO, who also expressly declined. Based on this anecdote, which was corroborated by the MAO's fisheries technician, KGMC seems to be able to influence who gets access to municipal trade permits.

KGMC's reputation as empowered and enterprising fisherfolk is well-known even outside Kabasalan. The former mayor of the capital of Zamboanga Sibugay, Edwin Alibutdan, and the municipal environmental officer of the capital, Felix Badon Jr., were interviewed due to their experience of environment projects at the provincial scale. They said that one of the challenges that fisherfolks around the bay have is coordinating and funding joint activities, such as enforcement, even if this is coordinated on the level of the fishers. This is because the LGUs of other municipalities are not as supportive of their fishers, they may have conflicting policies, and because the budget appropriation and general ownership of bay-wide joint activities have been difficult.

However, according to Alibutdan and Badon, the maturity of the export market in Kabasalan provides an opportunity for the entire province to build a fishing port that would further develop the bustling seafood trade in Zamboanga Sibugay. They are also of the opinion that KGMC is in the best position to organize the fishers in the bay and demand these services. Scaling up capital is also an important role that the provincial LGU can help with.

The political power that KGMC has demonstrated—to the extent that it affects their members' seafood value chains—will be discussed more in the section on *Empowerment*.

Framework and Evaluation

In this section on *Enterprise*, we have endeavored to illustrate four of the value chains of KGMC. That said, the framework used is already that of Porter's (1985) value chain, with the primary and support activities delineated. In the following sections, we use another framework from Porter (1980), this time reanalyzing the value chain information in this chapter through the lens of industry structure and competitive forces.

Industry Analysis

Porter (1980) outlined the competitive forces that ultimately determine a firm's profitability. These forces include (1) bargaining power of buyers, (2) bargaining power of sellers, (3) the degree of input and product substitution, (4) barriers to entry and/or exit, and (5) industry rivalry. Each of these exerts influence on the prices, costs, as well as investment decisions of an enterprise. The relative strength of these forces is then determined by the industry structure in which the firm operates, which sums up the underlying economic and technical characteristics of an industry. Though originally intended to determine sources of profitability, Porter's competitive forces framework can be applied to determine how margins are distributed in the upstream portion of the value chains, particularly between fisherfolk, consolidators, and the immediate buyers in the next chain link.

From a value chain perspective, consolidators are both buyers and sellers. The most upstream transaction is between fisherfolk as sellers, and consolidators, as buyers. In the next chain link, however, the consolidator becomes the seller. The species are then sold to different markets depending on type, from local markets in Kabasalan to as far as Metro Cebu and Metro Manila. Other species, particularly the live groupers, are even exported to international markets such as Hong Kong. While value-added propagation extends way beyond the buyers from consolidators, focusing on the upstream portion of the chain allows us to get an in-depth glimpse of the role played by KGMC in managing the enterprises within their organization.

The value chain for each species is unique; therefore, the distribution of margins could also significantly vary per product. For the purpose of this analysis, however, we sketch a "representative" value chain based on the general characteristics of the fishery enterprise in the KGMC community. Figure 16 shows Porter's elements of industry structure, while Table 6 compares the data presented in the KGMC case study to some of these elements.

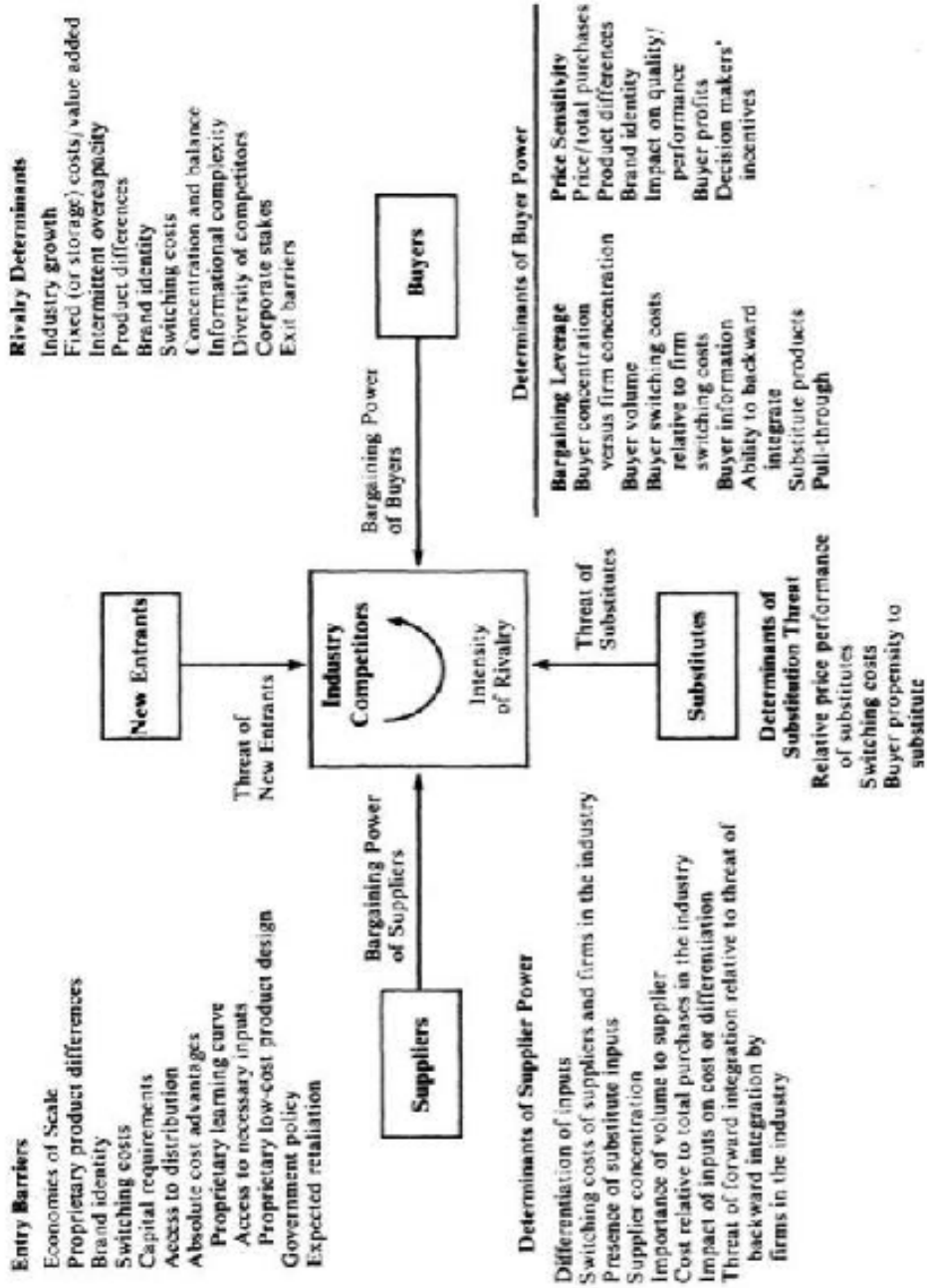


FIGURE 16. Elements of Industry Structure (lifted from Porter 1985)

TABLE 6. Porter’s Industry Analysis as applied to KGMC’s case

Competitive Force	Case: KGMC
<p><i>Bargaining power of buyers and sellers</i></p> <ul style="list-style-type: none"> • In a competitive market setting, both buyers and sellers are said to be price-takers. This means that neither of them has enough bargaining power to influence the market price. • Bargaining power is determined by the buyer’s size in relation to total purchases, or the seller’s revenues in relation to total sales in the market. • Degree of information asymmetry matters on who gets to enjoy greater bargaining power. 	<ul style="list-style-type: none"> • As in most fisheries, prices are competitively determined. Consolidators regularly receive information through text message on how much they can sell each species per kilo or per piece of their product. • From this information, consolidators subtract a PHP 10 to PHP 50 margin depending on species, to determine their buying price from the fisherfolk. This margin covers the cost of transportation to the market. A substantial part of the profit, when accumulated, is invested to finance the fisherfolk’s assets such as nets, boats, and fishing equipment. • Since the buying price from the fisherfolk is taken as the “residual,” fisherfolk would have the greatest uncertainty, especially in times when market prices are volatile. Nonetheless, interviews with consolidators suggest that prices are actually quite sticky. This means that they are usually set at a fixed level for quite some time. For some species, there are months when the buying price is even expected to be higher than the rest of the year (e.g., Chinese New Year red crab). • Information is more or less symmetric among the upstream players because of KGMC’s supporting role as coordinator and gatekeeper.
<p><i>Degree of input and product substitution</i></p> <ul style="list-style-type: none"> • The degree by which inputs and products are substituted for another also determines who gets to earn profits and how much profit is earned. • Innovative sellers, who can introduce new products as substitutes, or differentiate products from existing ones, have the highest propensity to earn a greater margin. 	<ul style="list-style-type: none"> • Within KGMC, competition among consolidators is managed since they see to it that each consolidator specializes in one or two species. This means that product substitution within the community is mostly negligible, as buyers are not likely to substitute crab for shrimp, and vice versa. • As high-value commodities, live grouper and mud crab have few substitutes in the country. • Shrimp and <i>aso-os</i> have some substitutes as everyday food for locals.

<p><i>Barriers to entry and/or exit</i></p> <ul style="list-style-type: none"> • When barriers to entry are significant, threats of new entrants could be negligible. As such, competition is managed. • Significant barriers to exit, such as high fixed costs, could also influence industry structure. 	<ul style="list-style-type: none"> • For consolidators, barriers to entry would include: (a) membership to KGMC and therefore, adherence to conservation and protection of the mangroves and fishing grounds, (b) financial capital (e.g., to finance fish cages for grouper), (c) social capital as embodied by the trust earned from fellow consolidators and from fisherfolk/moral obligations/reputation. • However, because fisheries are a CPR, municipal waters can be accessed by all municipal fishers; even without membership to KGMC. For fisherfolk, barriers to entry into the KGMC supply chain would include (a) membership to KGMC and (b) social capital. Barriers to exit would include the assets and loans from the consolidator. Hence, it may not be as easy to switch from one consolidator to another. • There is an “implied contract” between the consolidators and the fisherfolk. For a small community like Barangay Concepcion, social capital has an integral role in enforcing “implied contracts.” • KGMC would also have some degree of influence on the consolidator’s decision to engage with certain markets. More than profit-seeking, the organization also ensures that the next chain-link after the consolidator would have objectives that are not in conflict with that of KGMC. This also serves as another barrier to entry.
<p>Industry rivalry</p> <ul style="list-style-type: none"> • In competitive markets, players act independently from one another. • The intensity of rivalry influences the cost of competing in aspects, including product development, advertising, and sales. 	<ul style="list-style-type: none"> • Within KGMC, rivalry among consolidators does not exist. By not competing, common resources are not exploited, giving time for the fishing grounds to replenish the marine and aquatic resources. • KGMC ensures that consolidators, as well as the fisherfolk, cooperate with the organization’s policies, and therefore, industry rivalry is avoided. • Outside KGMC, however, industry rivalry may be observed. There are other local consolidators to which KGMC fishers can sell; however, it can

be minimized due to the relational transactions offered by KGMC *kumpradors*. On a regional scale, there is some rivalry for *aso-os* in the locality on certain seasons. Consolidators like Batoto, who is engaged in the production of dried *aso-os*, would want to invest on storage or a warehouse so that they can compete with the other producers of dried *aso-os* outside KGMC. Meanwhile, on a national scale, for grouper production, Palawan fisheries are among KGMC's competitors for markets in big cities like Manila and Cebu.

Overall, the competitive nature of the industry,⁹ in relation to external markets, limits the producers in KGMC to fully take control over the prices of their produce. In this particular arrangement, where prices are quite sticky and are exogenously determined by external markets, volatility of revenues would also be largely dependent on fluctuations in output. Their output, of course, is dependent on the number of resources that can be extracted from the commons at a specific period of time. In a static setting, a purely profit-maximizing economic agent is incentivized to keep extracting marine resources from the common pool, without due consideration to the consequences to the other agents. At the community level, this would eventually result in overfishing and the depletion of resources over time. Such a setting, therefore, needs concerted efforts to conserve the common pool, and this is where KGMC plays a significant role. Through the organization's initiatives and policies, gains are therefore sustainably shared by the community.

9 It is also important to note that the case of KGMC does not cleanly fit into the traditional and classical assumptions that we see under pure markets, where transactions are impersonal, and are solely driven by profit-seeking motivation. Our interviews have consistently shown the importance of social capital in market transactions within the community, and this clearly highlights the highly relational transactions, especially among the fisherfolk and consolidators who do transactions on a regular and repeated basis. At best, Porter's competitive forces framework could provide a rough sketch of the industry as we have done in Table 6, but it may not perfectly capture all the nuances that are actually observed on the ground.

Value-Chain Governance

Apart from analyzing the industry structure within which KGMC operates, we also add another layer of insight through the lens of Gereffi et al.'s (2005) framework of value chain governance. Even though this typology was distilled from global, as opposed to local value chains, it would be interesting to explore if they also apply, even with our limited scope on the most upstream players.

In particular, Gereffi et al. (2005) posit that there are three criteria: (1) complexity of transactions, (2) codifiability of transactions, and (3) capabilities in the supply-base that determine the type of governance of a value chain.

First, we define complexity in transactions. In Gereffi et al.'s (2005) case study on vegetable value chains, complex transactions were implicitly defined as those where buyers have certain specifications for the product (e.g., increased food safety regulations, and when supermarkets became increasingly more reliant on relational or explicit coordination with their vegetable suppliers). For KGMC, their live *lapu-lapu* would be the model value chain for complex transactions defined this way, simply because live reef fish require highly skilled handlers to grow and pack them for shipping to importer countries. KGMC's *alimango* value chain would also fall under "complex transactions" when defined this way, as evidenced by the need for a commissioner to be trained with special sorting and negotiation skills, like Potpot.

However, this definition does not seem to consider the simple act of fish vending to the wholesale market as a complex transaction, because its complexity arises not from the buyer specifications but from fisher-consolidator relations. There is sufficient evidence here to suggest that KGMC consolidators supply interlinked credit contracts to fishers. Transactions that happen simultaneously in two or more markets by themselves warrant investigation into their "complexity."

Likewise, further investigation into Gereffi et al.'s (2005) implicit definition of capabilities means that suppliers must be capable of meeting the demand of the buyers. However, based on this case study, capabilities can also take the shape of harvest practices that conform to the limits of the environment, or procurement and purchase order fulfillment that ensures equitable gains among those who participate, regardless of capital contribution.

Lastly, the codifiability of transactions requires players to have proficient literacy first and foremost, then the culture of documenting their transactions. However, as mentioned by Ka Dodoy, meticulous documentation does not conform

to the “indigenous approach” to enterprising.¹⁰ In this case, codification is low in the KGMC value chains, because the details of their production processes have yet to be documented to such a degree that allows a more modular mode of production.

Based on these observations, and within the limited scope of the fisher–consolidator link, we classify KGMC’s value chain governance as having characteristics of relational governance: (1) transactions can be highly complex based on processing, interlinked credit contracts, and buyer specifications for certain value chains; (2) codification is low (or rather, deemed unnecessary) for most value chains and is reinforced by tradition. However, codification may still be possible, especially when production processes are simple enough, such as that for *aso-os* (deboning and drying) and shrimp (sorting and weighing); (3) KGMC not only has the capability (both in terms of skills and capital) to conform to buyer specifications; their capabilities for resource and organizational management are also high (more evidence to support this claim will be detailed in the *Empowerment* section of this text).

Moreover, there is evidence that KGMC consolidators are in a position to bargain with their buyers, which suggests that KGMC and their buyers are more or less symmetrical in terms of power. This is consistent with Gereffi et al.’s (2005) classification of relational governance. However, more observations between consolidators and their buyers are needed to be able to reach this conclusion on KGMC’s bargaining power.

Summary and Design Principles

As this paper’s main objective is to use the value chain framework to interrogate how benefits are distributed along a supply chain, this section on *Enterprise* has proven to be the main repository of our data collection and analysis. Despite being limited to the most upstream players in the chain, our goal in this section was to answer: who does what, and who pays and benefits?

First, we dissected the primary activities of each of the four chosen value chains: live grouper, mud crabs, shrimp, and *aso-os*. By doing so, we have identified the mechanisms through which consolidators and commissioners earn their revenues, and the ways in which they distribute those revenues to smallholder fishers. Then, we detailed the support activities: this section demonstrated the ways in which KGMC

10 We acknowledge that, for KGMC’s value chains, tradition replaces the need for codifiability for the purpose of replicating or scaling production.

members, although working independently within their respective value chains, treat support activities as avenues for collective action to achieve economies of scale, coordination and transparency for market efficiency, and mutual care. The role of the LGU in supporting the value chain was also discussed.

Porter (1985) mentions that industry standards dictate the portion of value that each player retains. Thus, based on this theory, industry structure is an important profile to have in identifying opportunities to redistribute value to smallholders. For the KGMC case, bargaining power, substitution, rivalry, and barriers to entry and exit were particularly highlighted to show how their chosen (or endowed) seafood products gave them a competitive advantage and high value retention. Further studies can be done to show this empirically.

Lastly, we used Gereffi et al.'s (2005) typologies of global value chain governance to characterize KGMC's value chains and identified that they are consistent with relational governance value chains, at least within the upstream links. Although no further analysis was done on this point, it will resurface in the latter sections on *Evaluation of System Operation* and *Policy Recommendations*.

In suggesting design principles for enterprises that want to take lessons from the KGMC enterprise, the following contextual/profiling questions may be asked:

1. What are the primary activities along the value chain and who fulfills them? What are the support activities and who fulfills them? Are they part of the same social group (e.g., organization, barangay, family, religion, etc.)?
2. Which of these activities can become opportunities for collective action?
3. Industry Structure Questions
 - a. Is there some information asymmetry between the links?
 - b. Are there significant barriers to entry and exit at the level of the fishers and consolidators?
 - c. Do their immediate buyers have substitutes for the product they offer?
4. Is the production process highly complex? Are the producers highly skilled or competent enough to perform these complex processes? Are these processes codified or documented so that other producers may also replicate or follow them?
5. Are management and rehabilitation efforts treated as a valuable support activity for the production value chain? What inputs and resources within the enterprise are allocated for this?

Support Activities

Environment

Tara Alessandra S. Abrina (EMIT C4C)

In the book *Community Resource Management*, Siy (2011) points out that there is a tendency for groups to cooperate rather than compete when they share common resources. This tendency has also been observed in the shared and indigenous arrangements of water users in the Philippines (Araral 2009; Ostrom 1990; Siy 2011). In this section on *Environment*, we articulate the impact team’s observation of the same phenomenon in KGMC. First, we document how KGMC started out as a mangrove rehabilitation group and describe their natural endowments in Kabasalan. Then, we present some frameworks from institutional economics that resonate with the resource use aspect of this KGMC story, insofar as they help us understand how their environment and resources helped shape their value chain institutions and vice versa.

The History of KGMC has Roots in Mangroves

Although KGMC is a fishers’ organization, their first and original mandate was mangrove reforestation and rehabilitation. Kabasalan’s bustling seafood market was rooted in the fishpond boom in the 1950–70s and the subsequent entry of foreign export companies.¹¹ However, following the adoption of new aquaculture pesticides and the subsequent mismanagement of wastewater (F. Chu, interview, 2019), its waters became less productive. The fish stocks eventually declined as the pesticides killed off the natural spawn in the area. Meanwhile, mangrove logging became rampant, both for its timber and the suitability of its substrate for fishponds (both activities are substitute sources of income while fish stocks were dwindling).

11 It is unclear which countries were trading with Zamboanga Sibugay during this time.

The degradation of coastal resources during this time was what spurred rehabilitation efforts in the 1980s and became the impetus for civil society environmental groups like KGMC to become established. In fact, KGMC's first few mandates involved patrolling the mangrove forests of Kabasalan and replanting and propagating mangrove trees.¹² The passage of national laws saw mangrove cutting become illegal, which KGMC would help monitor on the ground, and support for community-based mangrove stewardship become institutionalized on the national level (see Primavera 2000).

However, conservation work at the time was hardly lucrative. It also caused much tension between community members who were enforcing the law and making a living from resource exploitation. Moreover, it was expensive to continue contributing to the group without getting immediate returns (for example, compensation for mangrove planting was only paid out quarterly). Membership within KGMC dwindled until they were down to six members in the 1990s.

Despite environmental and organizational degradation, Kabasalan's reputation as a bustling seafood hub in the Zamboanga region remained. KGMC's leader, Robert "Ka Dodoy" Ballon, would go on to get involved in the grouper and oyster trade in the early 2000s, both of which are high-value commodities. Palawan, which was the main producer of live grouper in the country at the time, was also beginning to tighten regulations over threats of overfishing (Sadovy et al. 2003). Hence, exporters were looking for substitute suppliers in the Philippines. Over time, KGMC would be able to amass some wealth from these ventures and acquire specialized skills and capital. Kabasalan's reputation would likewise continue to grow with KGMC and Ka Dodoy's participation in trade shows and competitions.

Concurrently, Kabasalan's local government unit, Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF), and Xavier Agriculture Extension Service Foundation (XAES) would form the support group that helped KGMC mature as a people's organization. Policies such as Bantay Dagat, Bantay Katunggan, enforcement deputization, solid waste management, along with the strengthening of their mangrove patrolling, nursery, and planting projects slowly helped their fishing grounds regain much of its lost productivity (R. Ballon, interview, 2019).

12 The impetus for KGMC to organize at the beginning was the need to conserve their mangrove forests. However, it was not clear from discussions how this idea came about—whether prompted by the passage of laws, or external groups, or a spontaneous idea that came from KGMC. In the short film *Ka Dodoy*, Robert Ballon's interview gives the impression that the fishers of KGMC attributed the decline in fish catch to dwindling mangrove forests as well.

In more recent years, a KGMC policy was passed that tasked members to plant mangroves in lieu of membership fees. Everyone was expected to contribute to community activities, including joint enforcement and patrolling activities, a system that Ka Dodoy refers to as “patak-patak.” This was especially impressive given their continued participation in the export market (which is usually cited as the cause for the destruction of fisheries habitats).

Idle fishponds around the country were being reclaimed and converted into forests following the Philippine Department of Environment and Natural Resources (DENR)’s Administrative Order 15 in 1990 (Primavera 2000). KGMC’s roots as a mangrove rehabilitation group would bear fruit during this time: being involved at the grassroots level, they were able to broker the release of some idle fishponds on behalf of the LGU. They would then expressly convert them back into mangrove forests through reforestation.

Finally, in recognition of their work with the fishpond conversion, KGMC entered into a tripartite, forest comanagement agreement with the Kabasalan LGU and the DENR. This would be one of the first environmental comanagement agreements in the Philippines that included a fisher’s organization, which Ka Dodoy attributes to the government’s recognition of their efforts with mangroves.

Through all these partnerships, the low mangrove coverage in the 1950s would become 50 hectares in 1994, until today where approximately 600 hectares have been replanted across the municipalities that share Sibuguey Bay. These mangrove forests are protected and conserved to support the fishery and aquaculture hub, but some trees may also be cut and used sparingly by the members for personal needs, with permission from the board of KGMC.

Not only is Kabasalan endowed with active community members and a thriving seafood market: the topography of their coastal area naturally provides ideal fishery and trade conditions.

Natural Endowments

Despite the lack of coral reef and seagrass area, the large mangrove coverage and protected location within the bay provide a suitable habitat for marine and estuarine species to thrive. The two rivers that snake through Kabasalan and flank Barangay Concepcion (Figure 17) naturally provide sweet, freshwater input that supports the ecosystem and gives the seafood its distinct flavor. These characteristics are said to mimic the conditions in fishponds or nurseries used in the culture of seafood products (aquaculture). It thus supports a stable and steady supply of their chosen seafood products all year round.

This natural topography also provides logistical support for trading. The rivers allow fishers to use their *bangkas* to go directly from the fishing grounds to the *kumpradors* (consolidators), who are the next link in the value chain. Because these consolidators' houses are strategically located along or near the riverbanks, transport from harvest location to consolidation points is virtually costless.

The consolidators then fulfill the trader's role and sell these seafood products to external markets. Barangay Concepcion is located just five minutes away from the national highway by land. However, on the days when tides are high and this short road is inundated, the rivers also give the consolidator-traders the option to go by sea.

With all of these market and environmental conditions endowed to Kabasalan, the fishers of KGMC were able to carve themselves a niche in the seafood market. Today, their top five seafood products include (arranged according to volume and value):

1. Live grouper or *lapu-lapu*
2. Crabs or *alimango*
3. Shrimps of different sizes and species or *pasayan*
4. Dried or fresh whiting fish (*Sillaginidae*) or *aso-os*
5. Oyster or *talaba*

All of these species are currently naturally occurring¹³ in their municipal waters. All these species, with the exception of *aso-os*, can be bred or grown out in an aquaculture (mariculture) setting to further increase their value.¹⁴ Other products that KGMC members aquaculture include tilapia and milkfish (*bangus*); however, these have gone out of fashion among the members of KGMC for commercial use. A key informant mentioned that these products were only grown “nung taghirap pa kami” (“when we were still struggling”) and only when there is nothing else to grow. When milkfish is cultivated now, it is only for subsistence/personal consumption and is not sold commercially. This is indicative of the current quality of life in Barangay Concepcion.

13 It is not known if these have always been naturally occurring or occur now as a result of decades of aquaculture practices in the area.

14 Therefore, in Philippine fisheries statistics, they are technically classified as aqua/mariculture products, even if they were initially caught in the wild.



FIGURE 17. Kabasalan's municipal waters. Arrows indicate freshwater input through two tributaries. The blue flag is the location of KGMC's headquarters.

Framework and Evaluation

Common Pool Resources

Common pool resources (CPRs) are non-excludable, or difficult to make exclusive to a few users, but rival or subtractive (Table 7). This is what makes a CPR subject to depletion.

Fisheries are non-excludable because it would be very costly to exclude anyone from using the open sea (e.g., patrolling a coast to deter entrants from the land or patrolling a water perimeter to deter poachers from the open sea would be very costly to communities who do not have the technology or the manpower to do so on a regular basis). Fisheries are also extractive when the rate of extraction exceeds that of the fishery's natural ability to regenerate. Thus, fisheries are considered as CPR.

TABLE 7. Spectrum of property rights and classification between private and public goods

	Excludable	Non-Excludable
Rival	PRIVATE GOODS Examples: ice cream, house	COMMON POOL RESOURCE Examples: fish, timber
Non-Rival	CLUB GOODS Examples: SLEX, cable TV	PUBLIC GOODS Examples: knowledge, defense

There are three possible regimes for managing CPRs: state, private, and collective action (Wade 1987). Wade (1987) created a CPR profile that structures information about CPRs, including their users and institutions. Here, we use this profile to characterize KGMC's relationship with its resources. We show how collective action was a viable mode of resource management given their parallelisms to the design principles set out by Wade.

1. *Resources.* According to Wade (1987, 231), "The smaller and more clearly defined the boundary of the common resources, the greater the chance of success." Despite the lack of coral reef and seagrass area, the municipal waters of Kabasalan are known for its large mangrove area (600 hectares). It is flanked by two rivers that provide nutritious freshwater input (Figure 17). It is possible that these conditions mimic the conditions needed for fish pens or nurseries used in the culture of seafood products (aquaculture) and can partly explain the reason why KGMC's wild stock is reliable and consistent. This also implies that their supply curve is not backward-bending.

Because Kabasalan's municipal waters are relatively small, the costs of enforcement are low. Moreover, they are nestled between neighboring municipalities Siay and Naga's more vast waters (Figure 18), which offer some degree of protection and exclusion from commercial encroachment. Cases of encroachment are usually committed by small-scale fishers from other municipalities, whose fishing gear and techniques are less extractive than commercial varieties.

2. *Technology (for exclusion).* Wade (1987, 231) presents this principle involving exclusion technology: "The higher the costs of exclusion technology (such as fencing), the better the chances of success." The logic of this design principle stems from the fact that if the cost of exclusion is high, then privatization of the resource becomes difficult. For KGMC, the cost of exclusion is relatively low, given that their resources are small and clearly defined, especially when compared to neighboring municipalities. However, KGMC takes advantage of these characteristics to exclude outsiders and enforce preferential use rights for the municipal fishers of Kabasalan. Within this scale, the cost of excluding non-KGMC fishers of Kabasalan may be higher.
3. *Relationship between users and resource.*

Location: The greater the overlap between the location of the common-pool resources and the residence of the users, the greater the chances of success.

Users' demands: The greater the demands (up to a limit) and the more vital the resource for survival, the greater the chances of success.

Users' knowledge: The more users know about sustainable yields, the greater the chances of success (Wade 1987, 231).

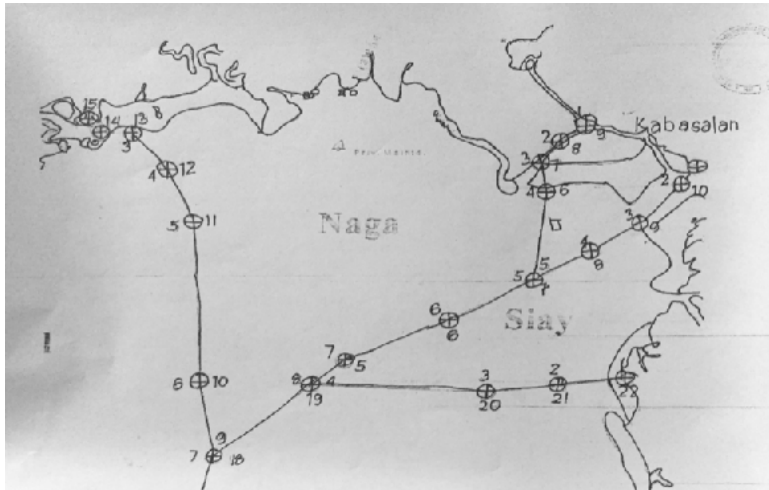


FIGURE 18. Kabasalan municipal waters nestled between Siay and Naga's municipal waters

There is a strong relationship between KGMC users and their resources: with KGMC being mostly fishers, their livelihood is directly dependent on their marine resources. The rivers are also used as “highways” on which people use their boats for mobility. Because the rivers snake through the barangay, the fishers' residence and their marine resources overlap considerably. Moreover, the houses in Barangay Concepcion are built close together and with light materials or open designs. As Abraham and Platteau (1987) note, this allows fishers to be aware of the standard of living of their neighbors.

KGMC displays and applies knowledge of sustainable yield and practices. They also seem to be well-supported by technical partners from the academe, non-government organizations, and local and national government agencies. Because of the overlap between resources and daily life, the fishers can apply these learnings constantly. Moreover, because of the reputation of Kabasalan, commercial demand for fishery products and services is high in the area.

The two rivers are used as direct highways from the fishing grounds to the consolidators. This strategic use of resources further shapes the relationships between the fishers and their consolidators in ways that are different from communities that rely on the *bulungan* system of silent auctioning.¹⁵ There is no space in Kabasalan to

15 *Bulungan* system: a bidding system where bids are kept secret.

auction off species, and each consolidator specializes in only a few types of seafood. Bidding drives down prices and makes fishers vulnerable to exploitation.

One additional aspect of the relationship of users with their resource that is not mentioned in Wade (1987) is if the users own or have preferential use rights to the CPR (over outsiders). KGMC does, as enshrined in their comanagement agreement and assertion of municipal fisher rights as stipulated in RA8550. This more or less acts as *de facto* tenure, as KGMC or the municipal fishers of Kabasalan, in general, are assured access to municipal waters and mangrove forest products and services (Courtney et al. 2016).

4. *Characteristics of Users*

Size: The smaller the number of users, the better the chances of success. However, there is a minimum number below which the tasks able to be performed by such a small group cease to be meaningful.

Boundaries: The more clearly defined the boundaries of the group, the better the chances of success.

The relative power of subgroups: The more powerful are those who benefit from retaining the commons and the weaker are those who favor enclosing private property, the better the chances of success.

Existing arrangements for discussion of common problems: The more developed such arrangements are, the greater the chances of success.

The extent to which users are bound by mutual obligation: The more concerned people are about their social reputations, the better the chances of success (Wade 1987, 231–32).

Currently, there is insufficient information on the most optimal number of users for KGMC resources. However, KGMC has institutionalized that the current number of floating cages in their estuary is the maximum, implying that they have an idea of the constraints in users. As for boundaries, coordinates are set in the municipal ordinance; however, as of this writing, there is no physical demarcation, such as buoys or bamboo stakes.

KGMC is a powerful subgroup among the fisherfolk groups that share Sibuguey Bay. They also benefit much from the upkeep of these commons, as most of their product comes from the bay. KGMC is seen to be able to influence government and market policies, both informally and formally. Moreover, the KGMC board regularly discusses problems openly with all of its 321 household members.

Contribution to the commons is an important social norm that binds the members by mutual obligation. It forms the basis for a member's social capital, which then becomes their currency when transacting and negotiating with KGMC. In fact, to become a member of KGMC, the "membership fee" is planted mangroves.

5. *Noticeability*: Wade (1987, 232) presents these points on noticeability: "The more noticeable is cheating on agreements, the better the chances of success. Noticeability is a function partly of how clearly defined are the resource boundaries, how near they are to users' residences, and how large is the group of users." The small resource area, the frequency of patrols, and the fact that fishing gear is mostly stationary with some parts above the surface of the water make it easy to notice when cheating occurs.
6. *State position*: Wade (1987, 232) describes state position this way: "The less the state can or wishes to undermine locally based authorities and the less it can enforce private property rights effectively, the better the chances of success." The Municipal Agriculturist's Office (MAO), which oversees all fishery activity in the municipality, has been supportive of KGMC since 2001. It has been providing technical and legal assistance—so much so that KGMC is now capable of co-drafting ordinances that are beneficial for and supported by the MAO. It is a bottom-up approach that ensures that the needs of the constituents are met, while the MAO's work is delegated. In some instances, KGMC has enough power to bargain with the mayor or vice mayor of Kabasalan, over political as well as business matters. They are one of the only few people's organizations that have been granted a comanagement agreement with the DENR and the LGU, recognizing the people's capability to manage their mangrove forests.

Wade (1987) and Ostrom (1990) provide evidence from case studies that these characteristics are what make KGMC CPR-compatible with a collective action regime (as opposed to state control or privatization). It will become clear in the subsequent sections of the text how collective action is further operationalized in KGMC.

Summary and Design Principles

In the *Environment* section of this case study, we present information about KGMC and its resources to build their CPR profile (Wade 1987). The objective of this section was two-fold.

First, by presenting their history as a grassroots organization that started with mangrove conservation and the common pool nature of their fisheries, we will argue in later chapters that this provides the foundation for KGMC's collective action and inclusive approach to their value chain.

Second, we describe the natural endowments that are accessible to KGMC—water quality, topography, and ecosystem productivity. In the context of their fisheries value chain, the process of managing and rehabilitating ecosystems is an important support activity that we argue forms part of the “firm infrastructure.” Resources and inputs are thus allocated within the enterprise for this activity.

In thinking about adopting the best practices of KGMC for environmental protection, fisheries practitioners are advised to create a similar profile of their fishery in terms of the following:

1. Are the resources common pool (rival but non-excludable)?
2. Is the CPR compatible with collective action? If not, is it malleable enough to be designed towards these design principles?
 - a. Are the boundaries of the resource well-defined? Is it small?
 - b. Is the cost of technology for exclusion high? If it is low, who would be excluded from using it?
 - c. Do the users live near or on the resource? Do they live near each other? Do they depend on it for survival? Do they know the rate of unsustainable extraction? Do they have preferential access to these resources, or can the resources be accessed by others (e.g., bought or fenced off)?
 - d. Do the users have social, economic, and political power within their broader community?
 - e. Is shirking or cheating easy to spot?
 - f. Does the state, in the policies they have ratified and the way that these are implemented, support how users manage their resources? At the local level? Province? Region? Country?

Empowerment: “Values change” and Other Empowerment Actions

Jane Lynn D. Capacio (EMIT C4C) and Tara Alessandra S. Abrina (EMIT C4C)

In the early 1990s, Ka Dodoy was involved in delivering grouper spawn and fingerlings to Seven Seas, a company that grew out grouper in the mangroves protected by KGMC. During this stint, he realized that he, too, could carve a place in the Seven Seas grow out chain and become a supplier for the company. At first, he loaned money from the manager of Seven Seas to buy fishing gear. Aside from those that he cultivated himself, Ka Dodoy also bought grouper spawn and fingerlings from other KGMC members and sold these to the company. Eventually, he was able to pay his loan.

It got him to consider: what if KGMC tries growing out grouper? After receiving seed fund from XAES for the minimum scale that they need to set up a big fish cage module, key members of KGMC decided to pitch in money to reach an initial capital of PHP 280,000.00. Ka Dodoy even donated his own fish cage to the pool of common assets. He told those who pitched in resources, “Gamitin na. Kahit sarili ko yun, ipasa ko na sa organisasyon. Kung ano ang puhunan ko dun ay ibalik nyo na lang, tapos yung kita, sa atin na lang. Instead na sa akin na sana yun. Sa huli, gumana sya kasi lumawak.” [“Use them. Even if those fish cages were mine, I am letting the organization use them. Just return my capital for those fish cages and let us share whatever income we will get. That business could have been mine. In the end, the enterprise worked well because we expanded.”]

When Ka Dodoy was probed about why he offered his fish cage, he answered that he had to have a stake so that many more would also be encouraged to take on risks and shoulder costs. He reflected that leaders should be willing to invest their three Ts— time, talent, and treasure—in group and community members. When they do, members will also be inspired to become more open to trying new enterprises, venture into new initiatives, and be more giving of their 3Ts to the group. For Ka Dodoy, having

a stake and encouraging others to pay forward with their 3Ts usher in a virtuous cycle of true empowerment (interview with R. Ballon, November 20, 2019).

Fast forward to present times when buyers flock to KGMC to purchase products, Ka Dodoy surmises that among other reasons, buyers value the volume and diversity of the products that they can deliver. Over time, KGMC earned criticisms that they are keeping the business within their organization or among the members. Ka Dodoy told critics that KGMC has preferential rights as municipal fishers, and later, as the legitimate fisherfolk group that patrols and manages the mangrove area.

This short story gives a glimpse of the different facets of empowerment in the organization. In their vision–mission statement, KGMC defines empowerment as their goal “to serve as a potent arm of the LGU to pursue coastal resource programs and projects (Bantay Dagat, Bantay Katunggan Task Force, SECAP).” However, being empowered also meant knowing the policies that are relevant to them and being able to assert their rights when other stakeholders want to clip their claims.

It can also be seen that KGMC’s definition of empowerment does not fully capture the essence of “true empowerment” as Ka Dodoy mentioned. For the chairman, to be truly empowered is to have the ability to take on costs and risks and inspire others to do the same. Continuous *pagtataya*—having skin in the game—can become a virtuous cycle of risk-taking and risk-bearing within the community. This is an important value to have as an entrepreneur.

In this chapter, empowerment will first be discussed relative to KGMC’s definition of its goal to become a potent arm of government. To be able to do this, the “empowerment actions” (Freeman et al. 2018, 2633) or the efforts of KGMC to improve their participation in governance will be discussed in the next section. And then, “true empowerment,” as described by stakeholders of KGMC, will be discussed in the third section. This is important since KGMC’s stated definition does not wholly reflect their efforts to empower members to sustainably use the resource (Sibuguey Bay), to undertake viable enterprises, and to engage with state and non-state actors in pursuing common pool resource initiatives. It also does not describe KGMC’s efforts to organize COMFAS so that along with other fisherfolk organizations, they can all promote the sustainability of Sibuguey Bay and enhance the livelihood of more fishers. Thus, KGMC’s efforts at fund management, membership, and replication through COMFAS will be discussed as part of true empowerment. Like the sections on Enterprise and Environment, this chapter has a discussion of the framework and evaluation for Empowerment as well as a summary and design principles.

KGMC as a Potent Arm of the LGU

KGMC leaders recall that before the 1980s, Sibuguey Bay was full of mangroves resulting in rich fish catch. The main concern was the lack of market because of oversupply of fish. A few years later, fishpond operations and various legal and illegal activities were undertaken in Sibuguey Bay, resulting in declining fish catch. By the late 1980s until the 1990s, fisherfolks and buyers recognized the problem of overfishing.

By the mid-1980s, there were only around five members of KGMC who were planting mangroves in around 50 hectares of the bay. They decided to have themselves registered thus starting the difficult period of processing papers and reaching out to local and national agencies despite a meager budget for follow-ups. Eventually, they became an organized and registered fisherfolk organization in 1986.

With KGMC operating as a duly registered fisherfolk organization, the members prioritized the replanting of mangroves and the patrolling of the bay to provide and support their livelihood. However, illegal fishing, illegal logging, and piracy were still prevalent during this time, undermining the efforts of the organization. KGMC thus bolstered their efforts, including sea patrolling, which they did in partnership with the LGU the Office of the Mayor, the Municipal Environment and Natural Resource Office (MENRO), the Municipal Agriculture Office (MAO), and the police. They also pursued projects (e.g., oyster production) by partnering with key agencies like the Department of Trade and Industry.

It must be noted however that the relationship between KGMC and the LGU was not always amiable. In 2018, KGMC filed a case against the Local Government Unit of Kabasalan (represented by the Mayor) at the Office of the Ombudsman for negligence and diversion of public funds. At another point, an incumbent mayor also wanted to realign KGMC's patrol boat to municipal assets, which was heavily resisted by the organization. Thus, even if KGMC's goal is to be a potent arm of the LGU, it has demonstrated that it does not support local officials if they violate laws or behave ways that contradict KGMC's principles and values. This is all the more reason to dig deeper into KGMC's construction and understanding of "true empowerment" beyond their goal in relation to the LGU.

Bantay Dagat

In English, Bantay Dagat means "Sea Patrol." It is a community-based volunteer group that was created for participatory coastal law enforcement. Leading and supporting Kabalasan's Bantay Dagat are two of KGMC's most important roles.

Bantay Dagat patrollers are deputized by the local government so that they can arrest offenders and impose fines. However, as civilian volunteers, they are not technically allowed to carry firearms. When KGMC started as Bantay Dagat in 2002, *illegalistas* (a catch-all word for people doing illegal activities like mangrove cutting, dynamite fishing, and piracy) belittled them for being a mere fisherfolks' organization with neither the support of the police nor access to firearms (interview with R. Ballon, November 20, 2019). To address this situation, KGMC endeavored to have a transmitter radio that they can use to immediately notify enforcers about illegal activities. The police, the mayor, and other listeners were always tuned in. Once alerted, the police deployed troops to the bay.

KGMC also upped its Bantay Dagat efforts when its leaders spoke to the Citizen Armed Force Geographical Unit (CAFGU), an auxiliary (civilian) force of the Armed Forces of the Philippines. They had asked if certain KGMC members could become members of the CAFGU, who would then be deployed in their area after training. This request was granted by the CAFGU. Thus, with the CAFGU and the presence of the local police, KGMC was able to patrol the mangrove areas 24/7 with licenses to carry firearms that deter gun-wielding *illegalistas*.

From 2002 until 2007, KGMC's Bantay Dagat received no honorarium. It was only afterward when the local government recognized and deputized KGMC that each patroller received PHP 7,000 as an honorarium. When *illegalistas* are caught, KGMC and the police can also enforce fines. In the past, the sharing of fines was as follows: 50 percent to the local government and 50 percent to KGMC, which it splits by giving half of it, or 25 percent, to the police. KGMC again went to the LGU to ask for a higher percentage of the fines they imposed. At present, KGMC gets 50 percent, the LGU gets 25 percent, and the police, 25 percent.

Ka Dodoy kept emphasizing that it is important for them as a fisherfolk organization not to be a burden to or cause problems for the LGU. This is a motivation for their efforts to look for means to implement their patrolling efforts in partnership with the LGU and law enforcement agencies. This motivation went as far as turning one *illegalista*—Arturo “Turing” Borja—into a law enforcer (see Box 3).

BOX 3: Ka Turing Borja and Mangroves of Change

Arturo “Turing” Borja is a fisherman from Alicia, Zamboanga Sibugay since the 1990s. When the fish stocks in

the bay were depleted around the year 2000, he moved to Lipyasin in Kabasalan and became a mangrove logger and seller who chopped wood from Kabasalan to Siay, Payao, and Naga. The mangrove timbers were sold as *panggatong* (firewood and charcoal) and *pambahay* (construction materials). He had been doing this from 2000 to 2009.

An immigrant Ilonggo, he is the only non-Muslim in his community. Ka Turing shares that he knew it was illegal to cut mangroves, his conscience bothered him, but there was no other livelihood available. One time, “Pagkagaling ko sa bayan, nasa bangka ako, nakakakita ako ng fisherman, mga mananagat. Nagtanong ako sa kanila, ‘Paano ang huli nyo?’ Sabi nila, ‘Ang hirap talaga, kakaunti lang ang isda natin kasi kakaunti lang ang mangroves natin.’ Dun ako nakokonsensya sa ginagawa ko. Ang salita na galing sa kanila, ako ang tinatamaan. Kasi ako ang namumutol.” (“I was in a boat coming from the town center when I saw some fishermen whom I asked, ‘How is your catch?’ They said, ‘It is really difficult because our fish stock dwindled because of lesser mangroves.’ I was conscience-stricken because I was a logger.”)

This moment was a turning point for him. But left with little choice, he continued his illegal cutting of mangroves. When laws became stricter, especially with KGMC enforcing mangrove protection effectively, he and other *illegalistas* would get caught.

One day, all the mangrove cutters were called and were offered to get organized to receive mangrove planting projects. KGMC committed to helping them organize so they can avail of the projects. Seven of his colleagues initially joined him to become mangrove planters; however, Ka Turing shares that since the payout was quarterly, five of them decided to stop planting. He recalls how he and his family experienced two years of difficulty, especially because he had children still in

school. When his honorarium would finally come, he would still share this with the five who stopped planting. He says it is because he wanted to give them incentive to continue (“*para mahikayat ko sila*”). He would also sell the polybags (plastic planter bags) at a cheaper rate (from Php 1 to Php 11) so that the fishers who buy them have some savings.

Eventually, with the help of KGMC and the MENRO, Ka Turing was able to organize seven fisherfolk groups in Alicia. His story as a former *illegalista*, his sacrifices when he started planting mangroves, and the benefits he eventually reaped were inspiring.

In 2016, he was able to get a permanent job as a forest protection officer at the regional DENR¹⁶ and catch those who transport timber without permits. Ka Turing talks about the concern or *malasakit* that KGMC shows to those who do illegal activities: “kung basa, bigyan ng damit” (“if they are drenched, give them clothing”). He says that they set the example for him when he polices illegal loggers with his current role: “Mabuti naman ang pakiusap ko sa kanila bago ko hinuli. May pasensya talaga. Sa simula, pakiusap lang” (“I speak and reason with illegal loggers first before apprehending them”). He also realized that illegal loggers in the mountains do not get permits because it takes time to process documents, which was time that could have been used to earn a living. He said his office in the DENR made efforts to hasten the issuance of permits.

16 But new challenges face him in this role; he says many loggers offer bribes. But this is another point of pride for Ka Turing: he retains his integrity: “Ang mga kamay ay nakabukas, siyempre pag tumanggap ka, pag dumaan yan, tatalikod ka.” It is interesting to point out that the permits for the logging are only PHP 80~ and the penalties are around PHP 5000~. This reveals that the bribe is less than the risk of getting caught, hassle and time spent going through bureaucracy, and having to pay the penalty. Ka Turing shares that now with him there, the DENR has assigned someone to sign permits.

Ka Turing was not the only one converted by KGMC. For years, KGMC had problems with illegal mangrove cutters from other municipalities, who have been cutting the trees that KGMC belabored to plant. When they “apprehended” the illegal loggers, KGMC leaders brought them to their office, gave them food, and gave them materials to read. Ka Dodoy can no longer count how many times he and his fellow leaders gave clothing and food to those who cut their trees. Ka Dodoy wanted to show the loggers that KGMC people are kind, but still get across that what they were doing was wrong (“pinapamukha ko talaga”).

Pursuit of Projects

KGMC received a breakthrough in the mid-2000s when the Philippine Tropical Forest Conservation Fund (PTFCF) reached out to nongovernmental organizations in rolling out their Forest Conservation Program. KGMC’s partner, XAES, submitted a proposal to PTFCF and was granted a project to plant mangroves. XAES tapped KGMC to implement this project resulting in KGMC’s mangrove expansion.

The year after, PTFCF funded KGMC directly (while also funding XAES) so it could further expand mangrove planting in Sibuguey Bay. KGMC first decided to help organize the Muslim fisherfolks in the Municipality of Naga, most of whom are members of the Moro National Liberation Front (MNLF). Eventually, KGMC’s case for fisher organization became so convincing that they were able to help organize the fisherfolks in six other municipalities in the bay.

KGMC’s choice of projects must always relate to the 3Es; whether these are concerned with environmental conservation, livelihood, or strengthening of their organization or the coalition. No project should violate any of their values and goals. In one instance, the Kabasalan LGU together with BFAR wanted to implement a marine sanctuary zone in Sibuguey Bay to further protect the environment. While this was good for the environment, this would displace the *baklad* (fish corral) of 20 fisherfolks, all of whom were KGMC members. To address this, KGMC partnered with DOST to develop a new technology for oyster culturing, the beneficiaries of which are the displaced fishers.¹⁷

17 Acknowledgements are due Alfred John M. Escaño of the Peace and Equity Foundation for these thoughts, which he wrote as a reflection memo. Alfred, like Jan Andrew Oroca, was part of the EMIT C4C-PEF impact team that gathered data in Kabasalan.

To be able to create project proposals, KGMC seeks the help of its partners including the local government. Over the years, the Municipal Agriculture Office (MAO) helped them draft proposals and fulfill documentary requirements (interview with W. Roldan, November 19, 2019). As a result, KGMC was able to develop proposals that were more and more appropriate to their needs. Their working relationship with key people in government, particularly with the MAO and the Municipal Environment and Natural Resource Office (MENRO) proved to be instrumental in accessing resources for capacity building. With KGMC taking on projects, it became an arm of the government in providing basic and support services to the people. In turn, these livelihood and enterprise activities fuel the local economy through consumption and taxes.

KGMC's targeting mechanisms are also exceptional, which makes them an effective partner in government project implementation. According to Ka Dodoy, the criteria for choosing beneficiaries for externally funded projects are mainly: (1) their household's existing economic assets and activities; (2) their household economic standing and demographics; and (3) their household's contribution to KGMC.¹⁸ This way, government projects and external funds are channeled to members who are the worst off, which facilitates redistributive efforts for the LGU.

Time, Treasure, and Talent: True Empowerment

KGMC leaders believe that their willingness to share time, talent, and treasure ushers a virtuous cycle that propels the organization forward. They believe that as they invest their 3Ts, they gain legitimacy, trust, and support of members. For instance, the initial investment of the leaders on the consolidators solidified the latter's commitment to finance fishers, even when some incur high debts. It is their interest-free loans that sustains the consumption and livelihood of the small fisherfolks.

The giving of 3Ts is also seen as an explanation for the members' active participation in the activities of KGMC. They attend meetings and participate in discussions, follow agreements (e.g., cut only the trees that they will need for their house construction), and they do not renege on their commitment to delivering their harvest to their consolidators. The investment of 3Ts helped improve the relationships of individuals and enhanced cooperation and coordination through trust. In other words, the

18 It seems from the interviews that although the contribution can either be monetary or labor, labor contributions weigh more heavily in terms of their reputation in the group.

3Ts enhanced social capital (cf. Putnam 1993). The cooperation and trust of KGMC members are essential for the sustainability of the commons and the achievement of other collective outcomes (cf. Ruttan 2006).

True empowerment becomes apparent when there is “values change” among the leaders and members of KGMC. In succeeding parts of this chapter, empowerment is operationalized in terms of organizational enterprise, fund management, membership, and the establishment of COMFAS. Empowerment is also operationalized in the distinct process of leadership observed in the case study (see Box 3 and Box 4).

Organizational Enterprise and Fund Management

The value chains presented in the *Enterprise* chapter described the value chains of individual member consolidators and their suki fishers. However, KGMC also runs an ‘organizational enterprise’ that is run as a cooperative—the profits of which are distributed among members (Figure 18). Seventy percent of the net profits from this enterprise is funneled to beneficiaries (as mentioned above). The remaining 30% goes to the KGMC Sustainable Development Fund (SDF), which is the fund that allows KGMC to finance their environmental and special projects, such as enforcement, travel expenses to attend training sessions, and solid waste management campaigns.

Besides acting as a revenue-generating scheme to fund the organization’s projects, the enterprise was set up to act as a safety net. It was to ensure that even without externally funded projects, KGMC would still be able to support the poorest members of the community. The profit distribution is staggered for six months following the sale of their product. This feature allows beneficiaries financial certainty for at least half of the year. In other words, it is an innovative but simple consumption smoothing mechanism (Schaffner 2013) that is agreeable to the organization.¹⁹

The organizational enterprise was set up so that KGMC and its poorest members are able to benefit from the sale of fishery products. However, there is a built-in policy that in the scenario where the value chain collapses and the products cannot be sold due to shocks, the fishery is able to adapt quickly. For example, following the COVID-19 lockdowns and subsequent supply chain bottlenecks, KGMC members started growing

19 During the virtual validation session with KGMC on 10 June 2021, Ka Dodoy affirmed this principle by commenting, “Oo, dapat walang mase-zero” (“nobody should be empty-handed”).

out mangrove snappers to sell more locally, which was more affordable and produced more biomass per unit input. In the worst-case scenario, fishery products that are meant to be sold in the market are instead allotted to KGMC members as food aid. It can be seen from these operational decisions that KGMC does not limit itself to monetary income as a performance metric.

	January	February	March	April	May	June
Harvesting Season 1						
Fry/fingerlings (hatchery/members)						
Nursery (members consolidators)						
Grow Out						
Harvest						
Distribution of 70% of Net Profits from Harvest Season 1						
Harvesting Season 2						
Fry/fingerlings (hatchery/members)						
Nursery (members consolidators)						
Grow Out						
Harvest						
Distribution of 70% of Net Profits from Harvest Season 2						
July						
August						
September						
October						
November						
December						
January						
February						
March						
April						
May						

FIGURE 19. Yearly cycle of organizational enterprise harvest and pay out

Membership

At the beginning, each member was required to pay a membership fee of PHP 25 to be able to join KGMC. However, the leaders realized that asking for cash as a form of capital build-up was inconsistent with their values. The members were expecting projects out of the cash they provided. This prompted a change in the mechanism for allowing entry into the organization: aspiring members must plant mangroves. In return, new members benefit by having access to the fishing area, which continues to be abundant because of the trees. In other words, their labor contribution literally becomes their investment.

Inadvertently, this system made it easy to monitor extraction and encouraged members to make each other accountable for their mangrove trees. They would tell each other, "Saan ka pumutol ng puno? Baka doon sa itinanim ko ha, nasugat paa ko pagtatanim doon." ("Where did you get your trees? I hope not the ones I planted; my feet were wounded out of planting those trees.")

Membership also changed from individual to household, which means that every household only has one share of the project. This also means that household members can substitute for each other in meetings and projects.

Moreover, even though members are free to act independently from KGMC within their respective fishery value chains, KGMC holds them accountable for their actions. No matter how successful they become, members are expected to actively contribute to the communal activities of KGMC. Otherwise, they would be cast out and would not be allowed to participate in collective efforts in the enterprise. Members' removal or dismissal from KGMC is also a communal decision.

COMFAS

At one point, the illegal loggers that KGMC apprehended revealed their rate of extraction: they have been cutting for nine years and their average volume per day was 40 trees. KGMC thus estimated that around 40 trees x 30 days x 12 months x 9 years = 130,000 trees were cut during this time, which could have covered approximately 100 hectares. Unfortunately, after KGMC "releases" a batch of illegal loggers (with food, clothes, and slippers to bring home to their families), another batch would again be caught. KGMC decided that this needed a more long-term solution.

When KGMC received more funding support from PTFCF for mangrove planting and protection in 2008, they decided to use the funding to help organize these illegal loggers. Starting with the fisherfolks from the neighboring municipality of Naga, KGMC made an effort to convince the fishers of Sibuguey Bay to get organized. Eventually, seven years of organizing saw six other municipalities establish their fisherfolk organizations. By then, PTFCF was ending its support for its current projects. Thus, these fisherfolk organizations brainstormed on ways to support themselves and decided to build what is now known as COMFAS.

The effort to build a coalition of small fisherfolk organizations that share municipal waters is very important since marine resources and ecological processes know no political and organizational boundaries (Rossen and Olsson 2013). Remaining fragmented and uncoordinated creates a situation where one concerned party, in this case, KGMC must always increase its monitoring and protection efforts and costs. Otherwise, it would result in the eventual degradation of Sibuguey Bay and loss of income for the fishers who rely on these resources.²⁰

20 Technically, we can argue that the provincial government or regional agencies like the DA and DENR could also lead this effort of organizing the different resource users. This, however, runs

KGMC thus took on the role of “institutional entrepreneur” in creating new institutions or upgrading existing ones (Rossen and Olsson 2013). They promoted the use of their 3Es as guiding principles or goals in the groups they helped organized. At present, COMFAS member organizations continue the work of planting mangroves and the enforcement of their protection. Along with other partners like XAES and RARE, KGMC helps the various fisherfolk groups develop projects and upgrade their fisheries’ value chains. In fact, while the impact team was in Zamboanga Sibugay, COMFAS was having capacity building activities and strategic planning sessions with RARE as facilitator.

BOX 4: Chairperson Ka Dodoy’s Legacy

The story of KGMC would not be complete without the perspective of its chairman. Ka Dodoy’s several traits and values help explain the leadership that has steered the organization even before its official founding in 1986.

Ka Dodoy is a fisher just like his father and grandfather. He was not able to finish school because around that time, the fish stocks started dwindling and the transaction costs of having to go to school were high. Freddie Chu would become the mayor of Kabasalan in 1992, whose family happened to be the first fishpond owners there in the 1970s. He would contract Ka Dodoy to manage his fishponds and his oyster production.

By the 1990s, the former chairman of the board of KGMC, Mr. Frederico de Pio, was starting to become tired of addressing challenges and was looking for someone to replace him. The board and the members decided that Ka Dodoy would be the perfect successor—at the time, he was their secretary and was in the best position to continue their ongoing initiatives. He was young, energetic, and eager to

counter to the literature that harps on the importance of allowing resource users themselves to organize, something that KGMC has undertaken with COMFAS. However, government agencies have important roles to play e.g., issuance of enabling CPR policies, provision of scaling up infrastructure, adjudication, coordination, and making available strategic projects.

participate in training and seminars. Ka Dodoy's knowledge, experience, and network would continue to grow. He would then be contacted as a resource person for forums, as a consultant for fisheries development projects in other areas, and sometimes to represent Kabasalan in seafood expos.

Many stakeholders recognize that prior to KGMC, particularly before Ka Dodoy's chairmanship, marine resources and the governance at the barangay level were not as developed. Ka Dodoy shares that when he assumed the chairpersonship, he became stricter with the rules. He immediately implemented a zero-tolerance for vices—board members cannot attend meetings while drunk or hungover. People were also starting to say that he had become a dictator, to which he would reply that the rules are set by the members and his only role is to implement them.

Much of our interview focused on his opinions on what leadership entails. One of the first things that are noticeable about Ka Dodoy and the other leaders in KGMC is that they are warm, their voices are well-modulated to reach the number of people in their audience, and they have many jokes and stories to tell. He says that it is important to do things passionately; in his words, one must be “aggressive *mag-participate*” (aggressively participate).

Negotiation skills are at the top of the list when it comes to Ka Dodoy: “Ang ginawa namin, nag-coordinate kami sa barangay officials. Nagdala kami ng mga snacks. Panahon yun ng Ramadan. Timing. Dala kaming snacks sa hapon.” He would time a negotiation with a Muslim community during Ramadan, which is a religious time for fasting and doing good works. By bringing food to share, Ka Dodoy was able to step into the community, the first base in any negotiation process.

Ka Dodoy also has a strong affinity to rights, which drives him to counter those in authority that cross the

line on rights. Knowing your rights, for Ka Dodoy, gives a people's organization its inherent power, and forces them to stand on their two feet.

Religion also often comes up in Ka Dodoy's interviews: he mentions that Eli, their board secretary, is a religious leader and that it is good when leaders of a people's organization have values that are rooted in their spiritual background. These values—humility, servanthood, leadership, and compassion—are more important than any inherent title, position, family name, or even education that usual leaders have. For him, skills and talent should be accompanied by “values change.”

We see this in the way Ka Dodoy talks about the role of the family, both as a participant in value chain activities and as a beneficiary of one's values (he explained once to his wife that his efforts will reap dividends someday when their children are respected by the community). In his opinion, the family is an indicator of how successful one is as a leader: if one cannot provide food for his/her family, or if s/he cannot keep them disciplined from doing illegal activities, then it is likely that s/he is unable to lead. Ka Dodoy shares that he has tried to convince all 32 leaders of KGMC to each have a fish cage to be self-sufficient and feed their families. Otherwise, they cannot lead the group if they are busy thinking of the next meal for their family. He asked them, how can they grow as leaders if they are not financially secure? This also feeds into his belief in financial discipline—a value that has been operationalized in the staggered distribution of KGMC project benefits.

KGMC's investment in aquaculture is the praxis to their growth mindset. Ka Dodoy stands out because he develops his economic and human capital for the purpose of sharing it with other members. In the short film Ka Dodoy, the MAO is quoted as saying that KGMC is very generous and that they share all that they know. This goes hand-in-hand with his value in self-reliance—that the community must

be ready and organized to receive and nurture anything that the government gives them.

His relationship to monetary compensation is also an interesting finding in the interviews with him. In 2011, Ka Dodoy was tapped for the livelihood component of USAID's Growth with Equity in Mindanao (GEM) project. In lieu of compensation, he had a fish landing and processing building²¹ built for KGMC (Figure 11). Below is a direct quote from Ka Dodoy about his interaction with the foreign aid staff.

“Yes! Kasi natanto-tanto ko, hindi naman ako Fisheries, hindi ako Engineer, hindi ako Abogado. Bakit ba 'ko magpapabayad?”

Nilatagan ako ng kontrata. Sabi, “Pirmahan mo ito kasi magbabayad sayo ang GEM Program.”

Sabi ko, “Hindi, kung magbabayad kayo sa akin dahil magtuturo ako, maghanap na lang kayo ng consultant. Kasi baka ma-pressure ako. Mape-pressure ako d'yan kasi binabayaran n'yo ako.”

“Sir, because I'm hesitant to go to your beneficiaries if I'm receiving an amount from communities.”

“No, no this is not money from the communities. This is our money.”

21 It is interesting to note that this fish landing site is found in the middle of estuary/mangrove forest, at the mouth of the river, and next to the fish cages. Fish landing sites are usually found along the coastline, on land, at a port, or in a river. This could be because it was an actual fisher who decided where to place the building to fit their needs. It may also be because of the unique shelter that the thick mangrove forest offers.

“Yes, Sir, I understand, but that is not my principle; to receive any amount coming from my fellow fisherfolk. Instead, it is better that you pay me in other way. But not compensation or honorarium.”

“What do you want?”

“Maybe if you have some facilities like training center or concrete tanks to facilitate lapu-lapu culture or *lapu-lapu* consolidation.”

“Oh,” tapos tinawag n’ya yung mga engineer. “Anong meron tayo d’yan?”

“Sir, isang building, yung parang market.”

“What else?”

“Yun na lang, Sir.”

“Can you give one unit to Mr. Ballon?” (*laughs*)

“That is not mine, Sir, that is for KGMC, my association. That is the one we need for grouper harvesting, facility where we can stabilize our production or harvesting.”

“Okay, okay, no problem. Just go to our fishermen and teach what you are doing here.”

Having values extends to Ka Dodoy’s perception of the level of an organization. If the assistance that an organization receives is one of organizing and livelihood, he says that it is of a low level (“mababang antas”). However, when trainings are about values, Ka Dodoy believes it shows that an organization is mature.

Ka Dodoy is often asked about succession in KGMC. He and other leaders believe that mechanisms are in place and second liners are being trained in case he and other leaders need to be replaced. He believes that they have inculcated their values and the need for “values change” to the ones they are mentoring as upcoming leaders.



FIGURE 20. KGMC fish landing and processing center is found next to the fish cages in the middle of the mangrove forest and right at the mouth of the river.

Framework and Evaluation

Institutions are the written and unwritten rules, norms, and constraints that reduce uncertainties in (market) exchange. They are the “rules of the game” that “determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity” (North 1991, 97).

Formal institutions can come in two forms. They can be public order (i.e., policies from the government). For example, the tripartite comanagement agreement between the DENR, LGU, and KGMC recognizes that KGMC can lawfully protect their own mangrove forests. However, formal institutions can also be private orders (i.e., contracts of people with one another), and they can either be written or unwritten. In KGMC, these include the unwritten agreements between the kumpradors (consolidators) and the fisherfolks on the credit arrangements and product (fish) specifications.

What is more interesting for this chapter are KGMC’s informal institutions. Informal institutions refer to social norms, customs, and traditions that specify what actions are regarded by a set of people as proper or improper and their accompanying rewards or punishments. Social norms and networks facilitate collective action (Woolcock 1998), and these are important in the formation and continuous operation of fisherfolk organizations like KGMC. For Scott (1976), many social arrangements, patterns of reciprocity, and work sharing mechanisms serve as insurance to tide rural

dwellers who live on subsistence (see also Lipton 1969, 341). For fisherfolks, social units and mutual assistance provide help during difficult times.

Informal rules within KGMC help induce cooperation and reduce shirking from agreements (e.g., contributing to collective efforts). The following sections detail the themes that emerged from codifying the interviews, which we understand to be the institutions that are most relevant to the KGMC value chain. Each theme may refer back to evidence from all three chapters for stronger support.

Because we are looking for design principles that provide context to the value chain, the institutions coded as themes below are hypothesized to be exogenous to empowerment actions. In other words, they represent some aspects of the culture of the fisherfolk in Barangay Concepcion that may not be replicable in other areas. Hence, their suitability as design principles.

Patak-patak

One of the most prominent and unique terms used consistently by Ka Dodoy was *patak-patak*. In Filipino, *patak-patak* literally translates to small droplets of liquid, usually water. Taken within context, it translates to the “small” contributions of each member that pool together to achieve a common goal. This is one of the most important values to take note of in understanding the KGMC value chain.

Everyone is expected to contribute to what they call the *patak-patak*; hence, the term appears in all three E chapters to describe joint patrolling activities, mangrove planting in lieu of membership fees, capital pooling, procurement of inputs, and purchase order sharing. All of these are examples of collective action that require a very high level of trust among members.

Particular to this chapter on Empowerment, we surfaced how pooled contributions form the foundation for (1) their role as civil society in governance; and (2) their decisions about the distribution and/or allocation of benefits. Because of this system of collective contribution, everyone is likewise expected to share in the gains. For example, the membership fee to join KGMC is planting mangroves, which signifies their contribution and commitment to the group’s environmental activities. However, with permission from the rest of the group and an updated inventory of the mangroves, KGMC members are also allowed to cut mangrove trees for their personal needs, especially those who are deemed the worst-off in the group.

This kind of policy empowers the members of the organization and users of the natural resource to participate in different aspects of governance beyond its environmental management aspect (cf. Freeman et al. 2018).

Relationship to Money and Compensation

As evidenced more clearly in the anecdotes of Ka Dodoy and Ka Turing, monetary compensation implies several meanings for the stakeholders involved in this case study.

In Ka Dodoy's story in Box 4, large monetary compensation seems to be understood as reserved for "professionals": the educated and the certified. He instead preferred to be compensated with something the rest of the members can also use, such as the landing and processing center.

In Ka Turing's story in Box 3, some members of the original mangrove planting group shirked from their responsibilities due to long pay-off periods. However, Ka Turing still offered to share the compensation once it was available. Ka Turing explicitly says that it is to encourage the shirkers to continue working. Ka Dodoy also offers to allocate his salary to two board members, so that they too would be encouraged to work ("Si Chairman nga, walang suweldo pero nagtatrabaho, kami pa kaya?"). In fact, the rejection of monetary compensation is seen as the equivalent in some cases to "pay for" the commitment and future labor of the other members of the group, as mentioned by both Ka Dodoy and Ka Turing.

We hypothesize therefore that the members and honorary members of KGMC view monetary compensation as something to be shared, and that the reallocation of one's salary to another implies that that person is obligated to contribute to the group.²² In fact, though this relationship to money is more explicit in the two leaders' interviews, we see traces of this relationship to money in the informal financing system between the consolidators and their suki fishers as well. The consolidators' willingness to shoulder loans without interest may be evidence to suggest that they too regard their margins as something communal.²³ After all, although consolidators finance the primary activities up to wholesale and marketing, it is KGMC that collectively

22 Note that in the theory of reciprocity, the obligation is to the one lending or giving money. However, in this case study, the implied obligation is towards the group.

23 This reflects what Abraham and Platteau (1987) observed in the fishing communities of India: being detached from formal banking institutions necessitates innovative ways of keeping income—literal bank notes—secure besides "hiding the cash under a pillow." We can hypothesize therefore that fishers in fact (1) entrust the consolidators to keep their money secure and (2) to utilize it in a way that it becomes "interest-earning" until such time that it is needed.

fulfills the support activities, such as coordination and ecosystem maintenance. Seen this way, in the context of patak-patak, members' labor contributions have at least the same value as monetary contributions.

Understanding of Formal Public-Order Institutions

When asked about what makes a good leader, Ka Dodoy says, "It's what you do on the ground that matters," and not so much the (government) position, educational degree, or professional license one holds. He mentions that a leader must be "luto sa values," which can be translated as being principled. For Ka Dodoy, leaders' decisions, and in effect the way they implement group rules, must be consistent with their principles.

This understanding of formal rules also shows in the way they assert their rights—they have demonstrated instances when laws can be bent to protect basic human rights. For example, though they have a comanagement agreement to protect mangroves, they would not hesitate to allow the cutting of mangroves when members are in need of timber to build their homes.

However, this does not mean that they can be lax about the rule of law. In fact, one metric of success for KGMC is if they are able to professionalize their skills and services, as evidenced by the pursuit and display of certifications on the walls of their headquarters. They have shown meticulous attention to detail when it comes to filing contracts, agreements, and certifications, as these have proven useful in resolving conflicts with external parties, e.g., the conflict with a Kabasalan mayor on the use of municipal land and water.

Summary and Design Principles

One of KGMC's core pillars is the Empowerment of its members. They have identified that a mechanism to achieve empowerment is to "serve as a potent arm of the local government unit," which they have done through enforcement, organizing, and special projects.

In the context of their value chain, KGMC's active leadership in the formation and cultivation of these values can be considered "firm infrastructure" activities. Recall that KGMC's firm infrastructure was first introduced in the Environment section as environmental management and rehabilitation. A second way KGMC provides support for its members' value chains through firm infrastructure is designing and implementing their overall "strategy," ensuring that they align with values, liaising with government, adapting organizational design to ensure social inclusion and resiliency, and facilitating adaptive management.

For practitioners who seek to apply the best practices of KGMC in their own fisheries, some questions must be surfaced:

1. What is the relationship of the fishery with the local government unit? Are the policies on the LGU level coherent with the policies on an organizational level?
2. What technical support are they able to access/have accessed?
3. What are the values of the group? How are these values operationalized in their value chains?
4. Are there safety nets or redistribution mechanisms in place?
5. How is the membership structured, and what are expected of the members?

An Evaluation of System Operation²⁴

Tara Alessandra S. Abrina (EMIT C4C) and Jane Lynn D. Capacio (EMIT C4C)

This chapter is meant to provide a synthesis of the data and analyses presented in the preceding sections and to formally answer the research questions:

1. What does the value chain (VC) look like?
2. How are margins distributed in the value chains?
3. What motivates stakeholders to be involved in particular agricultural (fisheries) value chains?
4. What indicators do VC actors use to measure their own and other actors' performance?
5. What conditions enable intermediaries to continue operating?

What does the value chain look like?

The four value chains described in the Enterprise chapter are illustrated diagrammatically in Figure 21. There are a few interesting observations about this value chain. First, consolidators reinvest their profits into inputs for the fisher's production process. There is thus a backward financial linkage between the two most primary players, from consolidator to fisher. In other words, there is strong evidence of

24 This title of this chapter is inspired by the chapter of the same name found in Siy (1984). It is meant to allude to its genealogy of Philippine community resource management literature.

interlinked contracts (Abrina 2020; Platteau and Abraham 1987; Bell 1988), which are complex social arrangements between fisher and trader wherein they simultaneously trade in more than one market. In the case of KGMC, the interlinked markets are credit (monetary or input) and fish.

Second, the value chains of different consolidators and different products can be linked via the input procurement and purchase orders. Because there can be thirty or so fisher sukis to one consolidator at a time, and because all these fishers adhere to the same production (harvest) standards, it makes administrative sense to coordinate input procurement on the level of the consolidators. In this way, the consolidators collectively provide value to the fishers in fulfilling a service that is essential to their fisher's own value chains. A simple arrangement is when two consolidators who sell the same product choose to consolidate their input order or products for sale. Within KGMC, this is arranged ad hoc. There is no evidence of a consolidator profiting from their fellow consolidator in these kinds of arrangements; however, the gains from being the coordinating consolidator come in the form of cost-sharing.

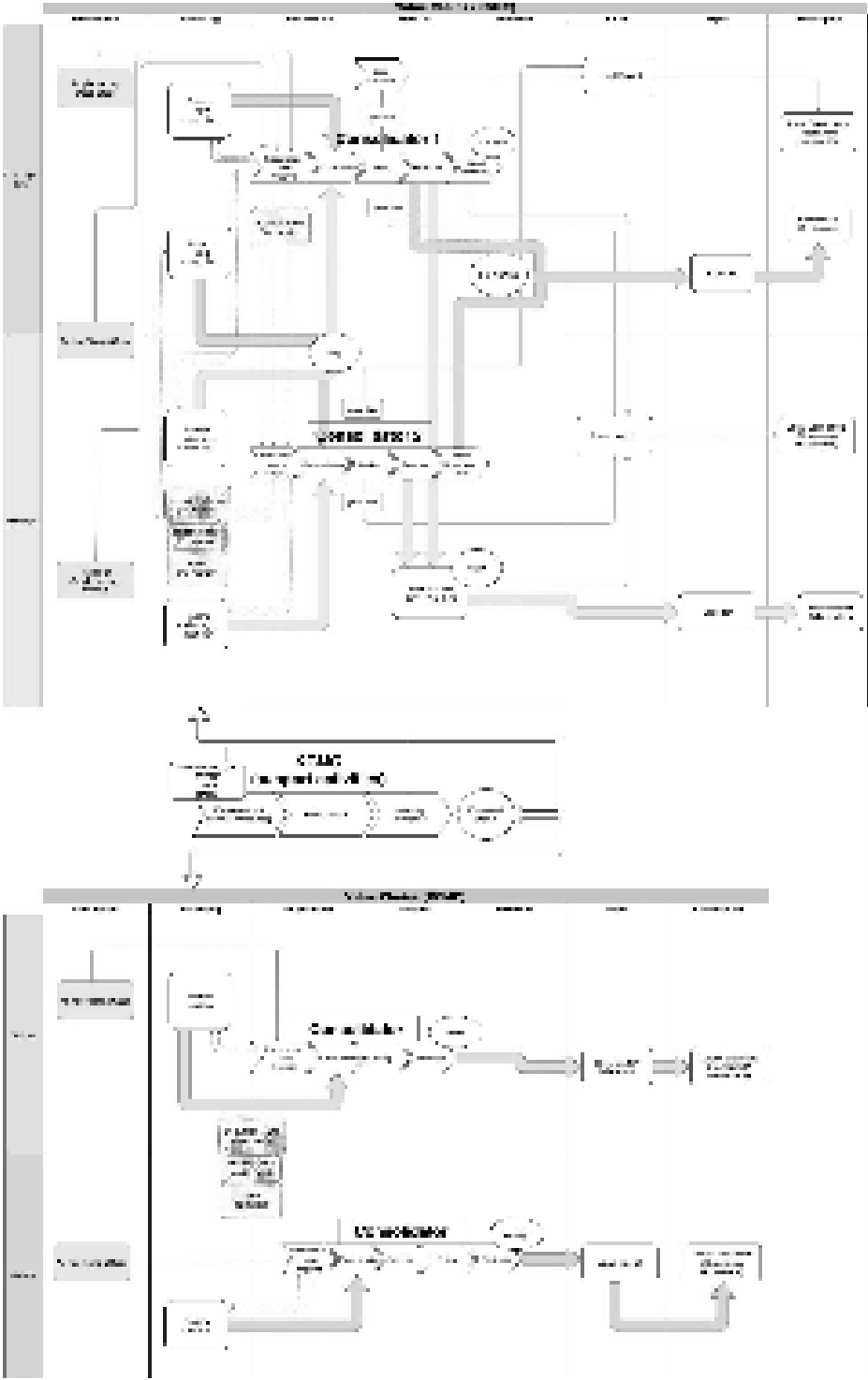


FIGURE 21. Value Chains of KGMC

At this point, the data based on the accounting books of the consolidators are insufficient to provide a picture of the margins of both the fishers and consolidators. There are rough estimates available for some value chains which were discussed in the Enterprise chapter. However, due to the data limitations for the downstream actors, value retention (i.e., relative margins) among vertically linked actors cannot be estimated for this case study.

If we were to assess the average income of fishers, their daily transactions do not seem to be enough to provide them with at least the daily minimum wage for Region IX agricultural workers (PHP 303). However, referring to the slide shown in Figure 22, Ka Dodoy takes note of the difference between the two satellite images of Barangay Concepcion. Not only is mangrove cover larger, but there are more houses with roofs, indicating an improvement in the financial capability of households. This shows how material needs within the community are still addressed and are being met outside individual incomes.



FIGURE 22. Satellite images of Barangay Concepcion, Kabasalan comparing mangrove cover, fishpond, fish cage, and roofing material for households, in 2003 and 2013. (Satellite images from Google Maps; slide lifted from KGMC)

As mentioned in the chapter on Enterprise, relational governance best describes the relationship between consolidators and fishers. This feature of the value chain is important for small-scale fishing communities because it means fishers can be accommodated as suppliers despite not having fully developed skills and productive assets. Further down the chain, the relationship between consolidators and their buyers is likely to fit the modular type of value chain. Although more data are needed

to substantiate this hypothesis, we can hypothesize that value chains need not be limited to one of Gereffi et al.'s (2015) value chain governance types; rather, some value chains may exhibit hybrid governance.

What motivates stakeholders to be involved in particular agricultural (fisheries) value chains?

For the members and leaders of KGMC, there is enough evidence pertaining to their benefits and incentives in the Empowerment chapter. For partners beyond the chain, their motivation for involvement lies in the fact that KGMC is empowered and motivated to fill their own institutional voids.

For PTFCF and XAES, their aim was to rehabilitate forests such as mangroves, implement development policy, and launch community-based development projects. Working with a people's organization that had inherent initiative for such projects would be motivation enough for these organizations to be involved.

For the LGU, the partnership with KGMC benefits them because their work could be delegated on the ground and monitored. Because KGMC was more knowledgeable about who were in need of support, the partnership between the LGU and KGMC led to better targeted development projects.

Fisheries technician William Roldan's vision for the fishers is to achieve "free living." He defines freedom as the state of having enough resources to "free" themselves from the shackles of hard labor and have time for recreation and family. This is his motivation to continue working with KGMC, a motivation that is said to extend to the municipal agriculturist's office. With a grow out component to their business model, KGMC is able to allocate time for recreation while waiting for the fish to reach selling size.

What indicators do VC actors use to measure their own and other actors' performance?

Growth-for-Sharing Mindset

Based on the interviews from different stakeholders, the more people KGMC is able to share benefits with, the more successful their fisher group. We hypothesize that this institution was naturally born out of their CPR and collective action state. A concrete manifestation of this "growth-for-sharing" mindset is the pursuit of COMFAS. In order to be able to share with more people, they endeavor to grow, multiply, or develop what they have and what they are given. Organizing also becomes important.

This growth-for-sharing mindset applies to their capital: “Grow what you are given,” Ka Dodoy says in the vernacular, referring to whatever support or services the government gives. For KGMC, a concrete example of this is their organizational enterprise which ensures food security and a basic income for all. As stated in their Vision-Mission statement, growth-for-sharing also means growing the organization to have something to pass down to the younger generation.

During our visit, Ka Dodoy was always proud to introduce the impact team to people who used to be illegalistas but are now working for the goals of the group. The growth mindset also applies to this case because the shift from illegal to legal productive activities is always premised on the skillset and assets that people already have, e.g., pirates became coastal enforcers, illegal loggers became Forest Protection Officers, and religious leaders became community organization leaders.

Lastly, the growth for sharing mindset also applies to responsibility: as KGMC members “rise up” in the roles, such as becoming a leader in the organization or moving downstream in the value chain as consolidators, they are expected to be more accountable to and carry ever bigger responsibilities for the welfare of the group. Because consolidators take on activities that allow them to increase their value retention in the value chain, the informal institutions within KGMC guide them to use the margins they earn to provide financial support for their suki fishers. We note that KGMC even uses this metric to gauge the performance of their neighbors, their buyers, the LGU, and NGOs.

What conditions enable intermediaries to continue operating?

3Es: Environment, Enterprise, Empowerment

Here, we summarize the design principles found at the end of each E section. In particular, what are the special characteristics of the KGMC fishery that we hypothesize enable their participation in this value chain? Note here that these apply only to the upstream links in the value chains (fisher-consolidator).

1. Resources are common-pool (rival but non-excludable) and are compatible with a collective action regime of management (Wade 1989).
2. Environmental management is treated as a valuable support activity within the value chain.
3. There are many opportunities for collective action and coordination among the value chain links.

4. The industry structure of the chosen fishery product allows the fishery to retain a fair and just value.²⁵
5. The industry structure is such that allows a relational or modular governance of the value chain, thus flexible enough for adaptive and bottom-up management.
6. The organization receives sufficient technical and legal support from its LGU and other partners to implement laws and fill institutional voids.
7. The organization or community regards inclusivity as a value and a necessary condition for sustained success.

It should be noted that one of the limitations of this study is that intermediary organizations that did not continue operating, such as consolidators who were expelled from the group, were not interviewed.

25 Value retention here is not relative to the margins earned by other actors in the value chain, but whatever level of value retention that is enough to provide an enabling environment for the members of KGMC to continue operating within the value chain. Thus, the authors thought that 'fair and just value' would suffice.

Research and Policy Recommendations

Recommendations for Future Research

Despite the amount of information and insights that the current case study on KGMC already offers, the Enterprise chapter of this research could further be substantiated with the following recommendations:

1. *Expand the scope to cover the more downstream portions of the value chains.* Because of limitations on data collection, information was mainly derived from the upstream portion of the value chain through interviews and records from consolidators. Little to no information is known on the activities and accounting records of the next chain links up to final consumers, and this limits our understanding of the distribution of margins throughout the value chains. Moreover, intermediaries who exited the value chain can provide valuable information about enabling conditions.
2. *Consider an in-depth industry analysis for each product.* Also because of limitations on data availability, we draw our industry analysis from a “representative” value chain based on the general characteristics of the fishery enterprise in KGMC. This approach blurs out the nuances that make the markets for each product unique. Through expanded data collection from the most upstream to the most downstream actors in the value chain for each product, the analysis made in this research could benefit from further refinement, and this would allow us to draw a more conclusive depiction of Porter’s competitive forces as applied in the case of KGMC. Included in this industry analysis would be the following: substitution (elasticity) studies for inputs and products, barriers to entry and exit, industry rivalry, the bargaining power of buyers and sellers (i.e., the empirical ratios of buyer size to total purchases and/or seller’s revenues to total sales).
3. *Discuss KGMC in light of the literature on empowerment of CPR users.* In this paper, the discussion on empowerment revolved around KGMC’s implicit

and explicit definitions of empowerment. With this as a stepping stone, future research can also align with key frameworks that are being used in the literature like Sen's (1981) "entitlement analysis." Doing this can further dissect environmental endowments and the entitlements that can be generated from the endowments. It will also surface and include multiple users with multiple interests and their relational interdependency with other stakeholders (e.g., government).

4. *Involve partner practitioners in the data analysis.* One of the innovations that were pioneered in the KGMC action research is the use of reflection memos. The reflection memos were a step forward from prior data gathering efforts where reflection and deeper analysis of partner practitioners were sifted verbally during moments of reflection (usually after a long day of fieldwork). In the future, data analysis can be made more inclusive by involving, for instance, the impact-team members in the coding of data and writing of key sections.

Policy Recommendations

Explore interventions in the support activities. As shown in the Enterprise chapter of this text, there is much room for partners beyond the chain and fisher organizing in the support activities: technology development, firm infrastructure, procurement, and human resource. Interventions in financing also do not necessarily mean funding from external sources, but the institutions within the cooperative or group that will ensure equitable distribution of funds.

Establish a data collection system from fisherfolk and consolidators. More insights could further be derived from this study and future research by designing a more systematic method of data collection on revenues and costs. Information on prices and volume were primarily derived from consolidators' records; however, their records do not provide detailed information on the various expenditures incurred. Deep dive interviews and regular surveys could fill this gap, which the LGU, in partnership with KGMC, can facilitate. With this, the research question on margins and value retention could be answered more accurately.

Opportunities for the Next Generation. KGMC's vision of self-sufficiency and environmental management includes the next generation as the ultimate benefactor of their efforts. In the case study, we identified some opportunities for the next generation to be more engaged in the organization and enterprise. Delia's example of earning a bachelor's degree and still finding opportunities for livelihood in Barangay Concepcion and Potpot's example of developing negotiation skills shows how the youth can be motivated as long as there are opportunities and places for them in the

value chain. More than this, Ka Dodoy and other KGMC leaders believe that systems are in place for the next set of leaders to implement. Their rules-in-use, e.g., how to use and protect the mangroves, how to become a KGMC member, and how to make crucial decisions can guide succeeding sets of KGMC board members.²⁶

Mitigating Mechanisms for Inequality. For all its good policies, there are still inequalities within KGMC. This is evidenced by the need to allocate special projects for the poorest members of the community. Therefore, funding and projects can be granted to groups with safety nets and equity and distribution mechanisms (e.g., organizational enterprise), and clear values formation. Monitoring inequality thus becomes important to inform and bolster adaptive management. Tenure or security of access to the fishery and other means of production, or in the second-best situation where not all can have access to a rival common pool resource, that the distribution mechanisms are deemed fair by all and are institutionalized.

Codification for Scaling Up. Scaling up production to the COMFAS level may require certain processes to be codified. Within a relational VC governance, a VC can still be operational and feature equitable value retention opportunities despite low codification. However, scaling up and coordinating industry standards at the bay-wide scale may require certain production processes to be codified. In particular, it may require the organization to innovate their ‘indigenous approach’ to accounting for finances in a way that would make financial decisions transparent for all, including potential funders. This is not to say however that the relational aspect of their value chains would need to be traded off for scale; rather, aiming for modular governance in the downstream links may support upscaling.

Department of Fisheries. Ka Dodoy’s aspiration for the fisheries sector in the Philippines is the Department of Fisheries. William Roldan, the fisheries technician of Kabasalan, agrees with this. This is because the resources of the DA are shared among the different bureaus that are run by agriculture professionals, while fisheries is a completely different field altogether.

True Fisher Representation in Government. Ka Dodoy also says that fishers deserve a true fisher representing them in Congress, and that they should change the way people see fishers: as uneducated, poor, and struggling. It is important for Ka Dodoy that the “mababang tingin sa fisher” be changed because fishers have proven that they can innovate and think of ways to conduct business despite their low level of formal

26 Grateful to Julian Thomas B Alvarez for raising this comment.

education. He acknowledges that as fishers, they are used to performing and doing and that their interest in documentation is limited; however, he mentions that this is a partnership that he is open to exploring with the academe.

Conclusion

This case study on KGMC was undertaken mainly to answer the following questions: what does the value chain look like, and to what extent is it inclusive of its most primary producers? The authors endeavored to present the data collected along their three core pillars (three Es): *Environment, Enterprise, and Empowerment*. Based on this case study, KGMC is an exceptional (nonrepresentative) case because of its numerous natural, social, and political endowments. Replication would thus be premised on these contexts. Nevertheless, this case study offers some methodological lessons for small-scale fishing value chain analysis.

There are at least some contexts where collective action among the primary producers drives inclusivity in the value chain. In KGMC's case, institutions such as the *patak-patak* were what underpinned the rules of engagement and distribution mechanisms among the members in all three aspects. The fact that KGMC shares a CPR facilitates collective action, but it is not the only means of achieving a collective action regime.

Relational governance, at least in the upstream linkages, is the most accommodating type of value chain as fisher groups start to organize and form a competent supplier base for their buyers. However, after organization, fisher groups would be able to upgrade their value chains by aiming towards a modular governance type. In order to do so, they can opt to codify complex processes.

That said, beyond mapping actors and their relative value retention, industry analysis and institutional design in the support activities should form an integral part of value chain analysis. This is especially important for studies that aim to prescribe inclusivity mechanisms for value chain upgrading and governance type.

The KGMC model teaches us that inclusive, grassroots enterprises exist where environmental management and people empowerment can, not only be considered, but be operationalized by value chain design.

References

- Abraham, Anita, and Jean Philippe Platteau. 1987. "An Inquiry into Quasi-Credit Contracts: The Role of Reciprocal Credit and Interlinked Deals in Small-Scale Fishing Communities." *The Journal of Development Studies* 23 (4): 461–90. <https://doi.org/10.1080/00220388708422044>
- Araral, Eduardo. 2009. "What Explains Collective Action in the Commons? Theory and Evidence from the Philippines." *World Development* 37 (3): 687–97. <https://doi.org/10.1016/j.worlddev.2008.08.002>
- ADB (Asian Development Bank). 2014. *Economics of Fisheries and Aquaculture in the Coral Triangle Economics of Fisheries and Aquaculture in the Coral Triangle Economics of Fisheries and Aquaculture in the Coral Triangle*. <https://www.adb.org/sites/default/files/publication/42411/economics-fisheries-aquaculture-coral-triangle.pdf>
- Balaoing-Pelkmans, Annette. 2020. "Going Against the Grain: The Unifrutti Transformational Business Partnership Model." Quezon City.
- Brown, E. O., M.L. Perez, L.R. Garces, R.J. Ragaza, R.A. Bassig, and E.C. Zaragoza. 2010. "Value Chain Analysis for Sea Cucumber in the Philippines." Penang: The WorldFish Center.
- BFAR (Bureau of Fisheries and Aquatic Resources). 2019. *Regulation on the Catching, Transporting, Selling and Trading of the Wild Juvenile Groupers (Serranidae)*. Fisheries Administrative Order, Philippines.
- Case, Peter, Louisa Evans, Michael Fabinyi, Philippa Cohen, Christina Hicks, Murray Prideaux, and David Mills. 2015. "Rethinking environmental leadership: The social construction of leaders and leadership in discourses of ecological crisis, development, and conservation." *Leadership* 11 (4): 396–423.
- Cinner, Joshua E., Tim R. McClanahan, M. Aaron MacNeil, Nicholas A. J. Graham, Tim M. Daw, Ahmad Mukminin, David A. Feary, et al. 2012. "Comanagement of Coral Reef Social-Ecological Systems." *PNAS* 109 (14, April 3): 5219–22. <https://doi.org/10.1073/pnas.1121215109>

- Courtney, Catherine A., Nayna J. Jhaveri, Robert Pomeroy, and Stephen H. Brooks. 2016. "Marine Tenure and Small-Scale Fisheries: Learning from the Philippines Experience." Washington, D.C.
- Duijn, Arie Pieter van, Rik Beukers, and Willem van der Pijl. 2012. "The Philippine Seafood Sector; a Value Chain Analysis." The Hague. <https://www.researchgate.net/publication/241868371>
- Freeman, Edward Robert, Chiara Civera, Damiano Cortese, and Simona Fiandrino. 2018. "Strategising Stakeholder Empowerment for Effective Co-Management within Fishery-Based Commons." *British Food Journal* 120 (11): 2631–44. <https://doi.org/10.1108/BFJ-01-2018-0041>
- Grant, Keith. 2005. *Leadership: Limits and Possibilities*. New York: Palgrave Macmillan.
- Gereffi, Gary, John Humphrey, and Timothy Sturgeon. 2005. "The Governance of Global Value Chains." *Review of International Political Economy* 12 (1): 78–104. <https://doi.org/10.1080/09692290500049805>
- HK Fish Net. 2017. "Wholesale Prices." Accessed March 24, 2021. http://hk-fish.net/english/fisheries_information/wholesale_prices.php#2
- Jacinto, Eusebio R. 2004. "A Research Framework on Value Chain Analysis in Small Scale Fisheries." In *The Commons in an Age of Global Transition: Challenges, Risks and Opportunities, the Tenth Biennial Conference of the International Association for the Study of Common Property*. https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/2248/Jacinto_Research_040824.pdf?sequence=1
- Kaplinsky, Raphael, and Mike Morris. 2001. *A Handbook for Value Chain Research*. http://asiandrivers.open.ac.uk/documents/Value_chain_Handbook_RKMM_Nov_2001.pdf
- North, Douglass C. 1991. "Institutions." *Journal of Economic Perspectives* 5 (1): 97–112.
- Nunan, Fiona. 2006. "Empowerment and Institutions: Managing Fisheries in Uganda." *World Development* 34 (7): 1316–32. <https://doi.org/10.1016/j.worlddev.2005.11.016>
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press. <https://doi.org/10.5958/2321-5860.2017.00001.7>
- Ostrom, Elinor. 1994. "Institutional Analysis, Design Principles and Threats to Sustainable Community Governance and Management of Commons." *Community Management and Common Property of Coastal Fisheries in Asia and the Pacific: Concepts, Methods and Experiences. ICLARM Conference Proceedings* 45 (189): 34–50.
- Petersen, E., and G. Muldoon. 2006. "Wholesale and Retail Price Integration in the Live Reef Food Fish Trade." <https://doi.org/10.22004/ag.econ.139891>

- Petersen, Elizabeth Helen, Geoffrey Muldoon, and Brian Johnston. 2004. "Economic Modelling of the Live Reef Fish Trade in Asia-Pacific: Developing an Approach and Preliminary Analysis." In *IIFET 2004 Japan*.
- PSA (Philippine Statistics Authority). 2020. "Fisheries Statistics of the Philippines 2017-2019." Quezon City.
- PCIC (Philippine Crop Insurance Corporation). "Revised Implementing Guidelines on the Utilization of Government Premium Subsidy (GPS) to the Philippine Crop Insurance Corporation Under FY 2017 General Appropriations Act, RA 10924." Philippine Crop Insurance Corporation. Accessed March 5, 2021. <https://pcic.gov.ph/rsbsa/>
- Pomeroy, Robert S., Renato Agbayani, Marietta Duray, Joebert Toledo, and Gerard Quintio. 2004. "The Financial Feasibility of Small-Scale Grouper Aquaculture in the Philippines." *Aquaculture Economics and Management* 8 (1–2): 61–83. <https://doi.org/10.1080/13657300409380353>
- Pomeroy, Robert S., John E. Parks, and Cristina M. Balboa. 2006. "Farming the Reef: Is Aquaculture a Solution for Reducing Fishing Pressure on Coral Reefs?" *Marine Policy* 30 (2): 111–30. <https://doi.org/10.1016/j.marpol.2004.09.001>
- Porter, Michael E. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press.
- Primavera, J. H. 2000. "Development and Conservation of Philippine Mangroves: Institutional Issues." *Ecological Economics* 35: 91–106. www.elsevier.com/locate/ecolecon
- Primavera, J. H., and J. M.A. Esteban. 2008. "A Review of Mangrove Rehabilitation in the Philippines: Successes, Failures and Future Prospects." *Wetlands Ecology and Management* 16 (5): 345–58. <https://doi.org/10.1007/s11273-008-9101-y>
- Putnam, Robert. 1993. "The prosperous community: Social capital and public life." *The American Prospect* 13 (4, Spring): 35–42.
- Rosales, Rina Maria, Robert Pomeroy, Ina Judith Calabio, Mabel Batong, Kimakarla Cedo, Nestor Escara, Vivien Facunla, et al. 2017. "Value Chain Analysis and Small-Scale Fisheries Management." *Marine Policy* 83 (September): 11–21. <https://doi.org/10.1016/j.marpol.2017.05.023>
- Rosen, Franciska, and Per Olsson. 2013. "Institutional entrepreneurs, global networks, and the emergence of international institutions for ecosystem-based management: The Coral Triangle Initiative." *Marine Policy* 38: 195–204.
- Ruttan, Lore M. 2006. "Sociocultural Heterogeneity and the Commons." *Current Anthropology* 47 (5): 843–53. <https://doi.org/10.1086/507185>

- Sadovy, Yvonne, T.J. Donaldson, T.R. Graham, F. McGilvray, G.J. Muldoon, M.J. Phillips, M.A. Rimmer, A. Smith, and B. Yeeting. 2003. "While Stocks Last: The Live Reef Food Fish Trade." Manila: Asian Development Bank.
- SEAFDEC (Southeast Asian Fisheries Development Center) and APEC (Asia-Pacific Economic Cooperation). 2001. "Husbandry and Health Management of Grouper." Iloilo: Aquaculture Department, SEAFDEC.
- Sen, Amartya. 1999. *Development as Freedom*. Oxford: Oxford University Press.
- Siy, Robert Y. 2011. *Community Resource Management: Lessons from the Zanjera*. 2nd edition University of the Philippines Press.
- The Nature Conservancy. 2004. "Pacific Live Reef Food Fish Trade (LRFFT) Project: Project Review." South Brisbane. www.conserveonline.org.
- Thompson, Benjamin S., Jurgenne H. Primavera, and Daniel A. Friess. 2017. "Governance and Implementation Challenges for Mangrove Forest Payments for Ecosystem Services (PES): Empirical Evidence from the Philippines." *Ecosystem Services* 23 (February): 146–55. <https://doi.org/10.1016/j.ecoser.2016.12.007>.
- Wade, Robert. 1987. "The Management of Common Property Resources: Finding a Cooperative Solution." *World Bank Research Observer*. <https://doi.org/10.1093/wbro/2.2.219>.
- Yin, Robert K. 2018. *Case Study Research and Applications: Design and Methods*. 6th edition. Thousand Oaks: SAGE Publications.



EDITORIAL RESPONSIBILITIES

The Editor-in-Chief, the Deputy Editor-in-Chief, and the Program Editors ensure that monographs contain findings on issues that are aligned with the core agenda of the research programs under the University of the Philippines Center for Integrative and Development Studies (UP CIDS).

The Editor-in-Chief, the Deputy Editor-in-Chief, and the Program Editors are responsible for maintaining high standards of scholarship, and for generating and disseminating new knowledge that can be utilized for the public good.

ABOUT UP CIDS

Established in 1985 by UP President Edgardo Angara, the **UP Center for Integrative and Development Studies (UP CIDS)** is a policy research unit of the University that connects disciplines and scholars across the several units of the UP System. It is mandated to encourage collaborative and rigorous research addressing issues of national significance by supporting scholars and securing funding, enabling them to produce outputs and recommendations for public policy.

The UP CIDS partakes in the University's leadership in knowledge creation and public service. This is carried out through the dissemination of research-based knowledge through activities such as fora, symposia, and conferences, and through its public policy-oriented publications. These research activities are initiated by the Center's twelve (12) research programs.

ABOUT THE PROGRAM

The **Program on Escaping the Middle-Income Trap: Chains for Change**, looks into the overall problem of the Philippines' lack of competitiveness as a result of low and stagnant productivity and the dysfunctional supply chains in the agricultural sector. The

program aims to examine the nexus of inclusion and competitiveness in the country's efforts to achieve sustainable growth by looking at inclusive business models in agricultural value chains and by addressing the marginalization of smallholder farmers and producers.

The **UP CIDS Public Policy Monograph Series** is published by the **University of the Philippines Center for Integrative and Development Studies**.

Editorial Office: Lower Ground Floor, Ang Bahay ng Alumni, Magsaysay Avenue, University of the Philippines, Diliman, Quezon City 1101
Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955
Email: cids@up.edu.ph / cidspublications@up.edu.ph

EDITORIAL BOARD

Teresa S. Encarnacion Tadem
EDITOR-IN-CHIEF

Janus Isaac V. Nolasco
DEPUTY EDITOR-IN-CHIEF

PROGRAM EDITORS

► EDUCATION AND CAPACITY BUILDING CLUSTER

Dina S. Ocampo
 Lorina Y. Calingasan
 Education Research Program

Fernando dIC. Paragas
 Program on Higher Education Research and Policy Reform

Marie Therese Angeline P. Bustos
 Kevin Carl P. Santos
 Assessment, Curriculum, and Technology Research Program

Jalton G. Taguibao
 Program on Data Science for Public Policy

► DEVELOPMENT CLUSTER

Annette O. Balaingo-Pelkmans
 Program on Escaping the Middle-Income Trap: Chains for Change

Antoinette R. Raquiza
 Political Economy Program

Eduardo C. Tadem
 Benjamin B. Velasco
 Program on Alternative Development

Antonio Miguel L. Dans
 Jose Rafael A. Marfori
 Program on Health Systems Development

► SOCIAL, POLITICAL, AND CULTURAL STUDIES CLUSTER

Maria Ela L. Atienza
 Jorge V. Tigno
 Program on Social and Political Change

Darwin J. Absari
 Islamic Studies Program

Herman Joseph S. Kraft
 Strategic Studies Program

Marie Aubrey J. Villaceran
 Frances Antoinette C. Cruz
 Decolonial Studies Program

EDITORIAL STAFF

Virna Liza O. Guaño
 George G. Deoso
 Angeli P. Lacson
SENIOR EDITORIAL ASSOCIATES

Mika Andrea O. Ramirez
EDITORIAL ASSOCIATE

Thea Paez
 Zylkyra Gendraule
LAYOUT ARTISTS

The **UP CIDS PUBLIC POLICY MONOGRAPH SERIES** features original scholarly work on themes relevant to Philippine public policy that aims to provide research-based advice and recommendations in addressing national issues and concerns.



**UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES**

Lower Ground Floor, Ang Bahay ng Alumni
Magsaysay Avenue, University of the Philippines
Diliman, Quezon City 1101

Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955
Email: cids@up.edu.ph / cidspublications@up.edu.ph
Website: cids.up.edu.ph