

■ FOOD SECURITY PROGRAM

Policy Coherence of Food and Nutrition Security Policies across Food Systems in the Philippines

The Case of Victoria, Oriental Mindoro

*Jennifer Marie S. Amparo, Aileen R. De Juras, Alma Katrina Blesilda
M. Gonzales, Allysa Mae P. Gargarino, Samantha Gabrielle Baril,
Maria Angeles O. Catelo, and Christian Anthony C. Agutaya*

■ FOOD SECURITY PROGRAM

Policy Coherence of Food and Nutrition Security Policies across Food Systems in the Philippines

The Case of Victoria, Oriental Mindoro

*Jennifer Marie S. Amparo, Aileen R. De Juras, Alma Katrina Blesilda
M. Gonzales, Allysa Mae P. Gargarino, Samantha Gabrielle Baril,
Maria Angeles O. Catelo, and Christian Anthony C. Agutaya*

UP CIDS Discussion Paper 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



cids.up.edu.ph

Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955

Email: cidspublications@up.edu.ph

Website: cids.up.edu.ph

Copyright 2024 by the
UP Center for Integrative and Development Studies.

The views and opinions expressed in this discussion paper 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 2619-7448 (Print)

ISSN 2619-7456 (Online)

Cover image credit

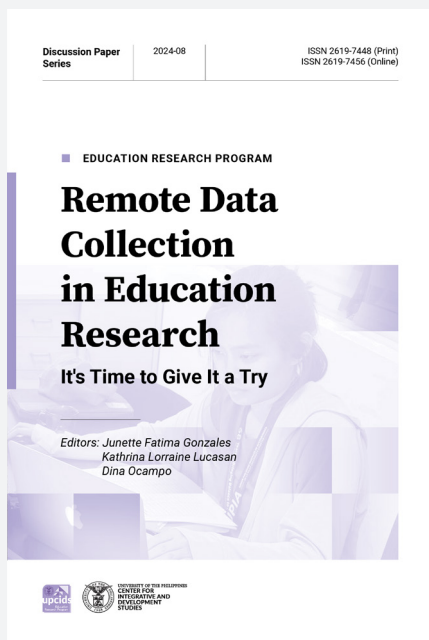
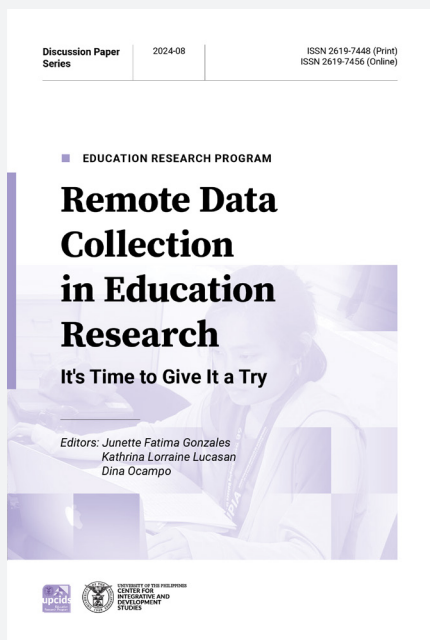
"Kadayawan Festival 2016 Photos - Kadayawan Festival celebrated in Davao City eve

Table of Contents

1	Policy Coherence of Food and Nutrition Security Policies across Food Systems in the Philippines
	The Case of Victoria, Oriental Mindoro
2	Highlights
2	Introduction
4	Unpacking Concepts: Understanding Food and Nutrition Security, Food Systems, and Policy Conference
4	<i>Food and Nutrition Security</i>
7	<i>Food Systems</i>
8	<i>Policy Coherence</i>
10	Materials and Methods
14	Context: Victoria, Oriental Mindoro - An Island Province
18	Content: Results and Discussion
18	<i>Food and Nutrition Security Defined</i>
20	<i>Vertical Alignment of FNS Policies in Victoria, Oriental Mindoro</i>
23	<i>Horizontal Alignment of FNS Policies in Victoria, Oriental Mindoro</i>
27	<i>Facilitating and Hindering Factors for FNS Policy Coherence</i>
28	Key Insights and Conclusions
29	Recommendations
31	References
36	Appendix A
36	<i>Discussion Guide</i>
37	Appendix B

Download related policy papers

for *free*



cids.up.edu.ph/collection-database

Get your policy papers published.

Download open-access articles.

The Philippine Journal of Public Policy: Interdisciplinary Development Perspectives (PJPP), the annual peer-reviewed journal of the UP Center for Integrative and Development Studies (UP CIDS), welcomes submissions in the form of full-length policy-oriented manuscripts, book reviews, essays, and commentaries. The PJPP provides a multidisciplinary forum for examining contemporary social, cultural, economic, and political issues in the Philippines and elsewhere. Submissions are welcome year-around.

For more information, visit cids.up.edu.ph.

All issues/articles of the PJPP can be downloaded for free.

**Get news and the
latest publications.**

Join our mailing list to get our publications delivered straight to your inbox! Also, you'll receive news of upcoming webinars and other updates.

bit.ly/signup_cids

**We need
your feedback.**

Have our publications been useful?
Tell us what you think.

bit.ly/dearcids

POLICY COHERENCE OF FOOD AND NUTRITION SECURITY POLICIES ACROSS FOOD SYSTEMS IN THE PHILIPPINES

The Case of Victoria, Oriental Mindoro¹

Jennifer Marie S. Amparo², Aileen R. De Juras³, Alma Katrina Blesilda M. Gonzales⁴, Allysa Mae P. Gargarino⁵, Samantha Gabrielle Baril⁶, Maria Angeles O. Catelo⁷, and Christian Anthony C. Agutaya⁸

-
- 1 This discussion paper is part of the research project, "Examining the Policy Coherence of Food and Nutrition Security along the Food Systems in the Philippines," under the Program on Food Security.
 - 2 Jennifer Marie S. Amparo (jsamparo@up.edu.ph) is an Associate Professor and the Dean of the University of the Philippines Los Baños (UPLB) College of Human Ecology. She is also a Project Leader of Food Security Program (FSP).
 - 3 Aileen R. de Juras (ardejuras@up.edu.ph) works as an Associate Professor at the Institute of Human Nutrition and Food, UPLB College of Human Ecology. She is also a Research Fellow of FSP.
 - 4 Alma Katrina Blesilda M. Gonzales (amgonzales4@up.edu.ph) is a Senior Office Assistant of FSP.
 - 5 Allysa Mae P. Gargarino (apgargarino@up.edu.ph) works as Junior Office Assistant of FSP.
 - 6 Samantha Gabrielle R. Baril (srbaril@up.edu.ph) is a Senior Office Assistant of FSP.
 - 7 Maria Angeles O. Catelo (mocatelo@up.edu.ph) is a Professor and the Dean of the UPLB College of Economics and Management. She serves is the FSP Convenor.
 - 8 Christian Anthony C. Agutaya (christian_agutaya@yahoo.com) is an Associate Professor and the Vice President for Research, Extension, and Development of Mindoro State University.

HIGHLIGHTS

- The authors attempted to look into the paradox of the modern food systems- food insecurity and nutrition issues remain a concern despite efforts in intensifying global food production.
 - Food and nutrition security policy alignment in island communities, such as Oriental Mindoro province, is more challenging.
 - This study embarked on examining the policy coherence of food and nutrition security (FNS) policies along the food system framework using Victoria, Oriental Mindoro as a case site.
 - The FNS policies in the case site exhibit strong vertical policy coherence (from national to municipal level), but a weak horizontal coherence of the policies across the food systems.
 - Policy recommendations include development of an FNS plan and framework, maximizing convergence, ensuring food security at the local level, and promotion of agripreneurship.
-

INTRODUCTION

Our modern food system (FS) is a paradox. We are producing enough for the entire global population yet food issues remain to be a persistent concern (Pawlak and Kołodziejczak 2020, 5488). Food issues include malnutrition due to lack of sufficient and quality food as well as unhealthy diets. These food issues have environmental, social, and economic costs. How do we address this complexity?

According to the 2023 National Nutrition Survey, 31.4% of the Philippines' population face moderate or severe food insecurity (DOST- FNRI 2024). Results from the October 2022 survey conducted by the World Food Programme (WFP) showed that one out of ten households in the Philippines are food insecure. The three most food-insecure regions (BARMM, Region VIII, and XII) are among the poorest regions in the Philippines. The poorest region in the country, the Bangsamoro Administrative Region in Muslim Mindanao

(BARMM), is also the only area that recorded food insecurity levels above 30% (WFP Philippines 2022). Households that rely on agricultural systems are significantly more food insecure compared to households that have other livelihood opportunities. Approximately 25% of households in agriculture experience food insecurity, while only 9% of households in non-agricultural sectors face this issue (WFP Philippines 2022).

One way to address food security is to develop an integrated food policy framework that promotes healthy and sustainable FS (De Schutter et al. 2020, 101849). This integrated approach could help address multiple scales, sectors, and food systems phases (FAO 2013). Nevertheless, synergies, trade-offs, and feedback across multiple scales and levels need to be considered. A concept that helps tackle this challenge is policy coherence. De Schutter et al. (2020, 4) argue that “building coherence between different levels of governance is a crucial aspect of the shift towards effective, integrated food system governance.” Policy coherence is defined by the Organisation for Economic Cooperation and Development (OECD) (2018) as “the systematic promotion of mutually reinforcing policy actions across government departments and agencies to create synergies towards achieving agreed objectives.” Policy coherence is reflected and emphasized in the Sustainable Development Goal (SDG) 17 for a more systemic approach to mobilizing different sectors and stakeholders towards achieving SDGs.

Apart from synergies across governance scales and levels, policy coherence should likewise consider the whole-of-system approach in discussing food and nutrition. Food is not at the consumption level alone, the variety and diversity of food that we produce, distribute, and access also matters. In 2019, the International Institute of Rural Reconstruction (IIRR) conducted a workshop to map out the Research and Development Agenda of Food Systems in the Philippines. One of the key findings is “there is research and current data on food and nutrition situations in the Philippines but the FS approach still needs to be integrated into the research agenda” (IIRR 2019, 3–4). Several research and reports highlighted the value of integrating food and nutrition into the FS concept to address issues on equity, nutrition, and sustainability (Simmanee et al. 2022, 174; Jiménez et al. 2022, 0273241; Amparo et al. 2017, 274–275; Davila et al. 2018, 30–35; FAO 2013, 6–10). Despite the numerous food and nutrition interventions in the Philippines, Goloso-Gubat et al. (2024) argued that “most

of these policies and programs have been implemented in isolation...sectors function in silos via different and uncoordinated strategies.”

Given these contexts, the authors embarked on examining the policy coherence of food and nutrition security (FNS) policies along the FS framework in the country. Specifically, this discussion paper sets out to describe the policy coherence of FNS policies in one of the most critical island provinces of the Philippines, Oriental Mindoro. This paper is divided into concepts, context, and content. The first section unpacks the concepts of FNS and policy coherence to serve as anchors of the analysis and discussion. Next, the paper focuses on context discussing the state of FNS and describing the case site of Victoria, Oriental Mindoro. Lastly, the paper discusses key findings of the case study and puts forward research and policy recommendations to promote policy coherence for FNS in the case site including insights for the Philippines.

UNPACKING CONCEPTS: UNDERSTANDING FOOD AND NUTRITION SECURITY, FOOD SYSTEMS, AND POLICY CONFERENCE

Food and Nutrition Security

We envision a world free of hunger with a healthy population. SDG 2 encapsulates this by targeting the end of hunger by 2030 and as the UN describes the target, “ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round” (United Nations, 2023). Until 2015, the United Nations (UN) and its agencies like Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), United Nations International Children’s Emergency Fund (UNICEF), World Health Organization (WHO), and WFP have produced the State of Food Insecurity Report. In 2017, this multi-agency global report became the State of Food Security and Nutrition in the World. This change was brought about by the 2030 Agenda for Sustainable Development that calls for collaboration and sustainability across and among social-ecological sectors. The UN Decade of Action on Nutrition (2016–2025) was also launched during this time reinforcing the need to look at food and nutrition.

First, let us look at the individual concepts. Food security has numerous definitions and iterations. Jones et al. (2013) argued that this is due to the “multi-disciplinary and multi-sectoral nature of food security.” The most common definition cited is from the 1996 World Food Summit: “Food security, at the individual, household, national, regional, and global levels [is achieved] when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO 1996). Food insecurity could be chronic or transitory. There are a number of standardized protocols and tools to assess food insecurity (Jones et al. 2013). In more recent years, the Integrated Phase Classification (IPC) was developed which is “a set of standardized protocols (tools & procedures) to classify the severity of food insecurity situations for evidence-based strategic decision-making” (IPC 2015).

Next is nutrition security. It is defined as “a situation that exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, in order to ensure a healthy and active life for all household members” (Clapp et al., 2022). According to Simelane and Worth (2020), nutrition security was only included in the definition, discussions, policy, and practice of food security in the 1990s. The deliberate inclusion of nutrition in food security discourse ensures that nutrition is intentionally considered in policy and programs addressing food issues. Although food security and nutrition security are used interchangeably, nutrition security is broader and involves material and non-material components of access, availability, equity, and justice (Simelane and Worth 2020).

Taken together, here are two common definitions of food and nutrition security:

“a condition when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (CFS- FAO 2012); and

“a condition under which adequate food (quantity, quality, safety, socio-cultural acceptability) is available and accessible for and satisfactorily utilized by all individuals at all times to live a healthy and happy life” (Weingartner 2009).

The food and nutrition security definition integrates the dimensions of when and until when it exists (at all times), for whom (all people, all individuals), what food (sufficient, safe, nutritious, and culturally appropriate food), for what (active, healthy, and happy life). Clapp et al. (2022) expands this by identifying six dimensions: agency, stability (short term), sustainability (long term), access, availability, and utilization. Table 1 indicates these six (6) dimensions of the food and nutrition security definitions.

TABLE 1. SIX DIMENSIONS OF THE FOOD AND NUTRITION SECURITY DEFINITIONS

DIMENSIONS	FOOD SECURITY (1996 WORLD FOOD SUMMIT)	NUTRITION SECURITY (CLAPP ET AL. 2022)	FOOD AND NUTRITION SECURITY (CFS-FAO 2012)
Agency	All people	All household members	All people
Stability (short term)	At all times	At all times	
Sustainability (long term)			
Access	Physical and economic access	Secure access	Physical, social, and economic access
Availability	Sufficient, safe, and nutritious food	Appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care	Sufficient, safe, and nutritious food
Utilization	An active and healthy life	A healthy and active life	Safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life

Lastly, it is also important to highlight what Pérez-Escamilla (2024) argues that “Food and nutrition security sits right at the intersection of public health and human rights, as reflected in articles from the UN Charter on the Right to Adequate Food.” This rights-based lens provides a wider and deeper anchor on the need to advocate for the value of universal food and nutrition security.

Food Systems

Goloso-Gubat et al. (2024) emphasized the importance of recognizing the FS approach in promoting food and nutrition security given that it will “promote collaboration and exchange of information, determine the underlying issues, and identify potential leverage and trade-offs for sustainable nutrition security.” Food systems are defined as “the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption, and disposal of food products that originate from agriculture, forestry, or fisheries, and parts of the broader economic, societal, and natural environments in which they are embedded” (Nguyen 2018). The modern FS is complex and goes beyond local to more regional and global in scale. Traditional fragmented initiatives on food production, health, and nutrition initiatives handled by separate and distinct disciplines and agencies have proven to be limiting. Pinstrup-Andersen (2012) argues that evidence suggests that an integrated approach in agriculture, health, and nutrition yields more effective and efficient solutions in these areas. In their study, Goloso-Gubat et al. (2024) highlighted the value of a food system lens in better understanding the interrelationship of food system indicators—food affordability and availability, food nutrient adequacy, ecosystem stability, waste and loss reduction, food safety, resilience, and socio-cultural wellbeing. The FS are composed of five (5) main components: production, processing, distribution and marketing, consumption, and waste, defined in Table 2.

TABLE 2. COMPONENTS OF THE FOOD SYSTEMS

FOOD SYSTEMS COMPONENT	DESCRIPTION
Production	This component encompasses different methods and practices used to grow crops, raise livestock, and produce seafood. This includes different agricultural methods to ensure the continuous demand for food supply to meet the needs of a growing population (Gladek et al. 2017)
Processing	Food processing involves the methods and techniques used to create and process raw materials and commodities into food products for consumption. Some of the common methods used in processing include washing, chopping, grinding, freezing, fermenting, packaging, cooking, and preserving (EUFIC 2017). This has different purposes including extending the shelf life of the food product, improving the raw material to enhance taste. The purpose of food processing is to improve food safety, pro-long shelf life, enhance taste, and transform raw materials into value-added products for consumption.
Distribution and Marketing	Food distribution is the process of moving food from food production to the tables of the consumers (Jadranka et al. 2015, 1). This is crucial in ensuring that food is properly monitored for quality assurance and food safety. It covers different stages, including packaging, marketing, transportation, storage, and logistics management.
Consumption	Food consumption refers to the food intake of individuals and communities. Food consumption is highly determined by socio-demographic factors, cultural norms, economic status, and individual preferences (Roudsari et al., 2017).
Waste	This component refers to the stage of disposal and also the last stage of the food systems. Proper food waste management leads to improving health and sanitation. It also impacts the environment when not properly addressed.

Policy Coherence

The last concept that we will unpack is policy coherence. Policy coherence is defined by OECD as the “systematic promotion of mutually reinforcing policy actions across government departments and agencies creating

synergies towards achieving the agreed objectives”. Further, Nilsson et al. (2012) describes policy coherence as the “existence or promotion of mutually reinforcing policies or objectives and the related governance synergies this produces.” Policy coherence has been applied in different sectors such as marine policy studies (Brugere et al. 2021; Meijers and Stead 2004; Underdal 1980), climate studies (Meijers and Stead 2004; Underdal 1980), development studies (Fukusaku and Hirata 1995; Picciotto et al. 2005; Koff et al. 2020; May et al. 2006; Shawoo et al. 2022) and, in recent years, in food policy studies (De Schutter et al. 2020; Morgan and Fanzo 2020; Billings et al. 2021; Monticone et al. 2023; Thow et al. 2018), though limited, is becoming a burgeoning field in food policy studies (Monticone et al. 2023). Parsons and Hawkes (2019) offered a definition of food policy coherence, “food policy coherence can be defined as the alignment of policies that affect the food system with the aim of achieving health, environmental, social and economic goals, to ensure that policies designed to improve one food system outcome do not undermine others.” These definitions manifest how policy outcomes and impacts complement and reinforce each other for common goals rather than offsetting and setting trade-offs.

A number of studies implicate the risks and negative impacts of what Morgan and Fanzo (2020) term as *siloed policy actions*. In their study of national food policies in Nigeria, Morgan and Fanzo (2020) argued that each of the policies assessed is limited by their singular objectives of either nutrition, climate change, or agriculture and may have limited impact on the sustainability of the country’s food system. Thow et al. (2018) posits that nutrition and food security policy objectives are not articulated in economic policies and the latter focus on economic commodities. Nevertheless, the current policy developments in South Africa provides an opportunity to highlight nutrition and food security in health and agricultural as well as economic policies (Thow et al. 2020). In another study of regional food policies in Italy, Monticone et al. (2023) argued that the regional food policy coherence in Italy has resulted in positive economic impacts. However, they proposed the strengthening of institutional policy coherence to ensure sustainability of these gains. These studies reflect the value of policy coherence in sustainable food and nutrition security. As Monticone et al. (2023) argue food matters are “addressed at more than one level of governance and across several policy domains.”

Policy coherence has different dimensions. Koff, Challenger, and Portillo (2020) presents four dimensions namely normative, institutional, operational, and financial. These categorizations integrate both internal and external dimensions of policy coherence as well as policy phases including implementation and monitoring and evaluation. Nilsson et al. (2012) also puts forward four dimensions: internal, external, vertical, and horizontal. Monticone et al. (2023) describes each dimension as:

- Internal coherence reflects the congruence of the policy objectives and policy implementation.
- External coherence looks at the complementation of two or more different policies in achieving similar policy objectives.
- Horizontal coherence looks at policies at the same governance level and how they feedback with one another.
- Vertical coherence reflects how policies at different governance levels relate to one another.

For this study, we will focus on the vertical and horizontal policy coherence. Vertical policy coherence considers coordination and alignment of policies across governance levels (Evans et al. 2023, Hsu et al. 2017). We looked at FNS policies enacted from the national to the local levels (municipal and barangay). Horizontal policy coherence focuses on the interactions of policies in a particular level of governance or sector of policy making (Howlett and Del Rio 2015). We investigated FNS policies across the food system (from production to waste management).

MATERIALS AND METHODS

The research methods of our study are divided into two parts: systematic review of literature and a case study. First is the systematic review of literature. A structured web-based search in the policy database of the National Nutrition Council (NNC) and LawPhil Project of the Arellano Law Foundation were carried out from May to September 2024. The NNC database, also known as the Compendium of Local Ordinances and Issuances on Nutrition, is an electronic knowledge-sharing platform developed by the NNC in partnership

with the Nutrition Officers Association of the Philippines. On the other hand, the LawPhil Project is a databank of Philippine laws, jurisprudence, and other legal materials. Food and nutrition policies were selected using the keywords ‘food and nutrition security,’ ‘policies,’ and ‘guidelines.’ The results of this literature review are fully discussed in our discussion paper titled “Scaling Up and Scaling Wide: Food and Nutrition Policies Across the Food Systems in the Philippines.”

The second part of the study focused on a case study using qualitative research methods and is the focus of this discussion paper. A series of focus group discussions (provincial and municipal levels) were conducted.

The provincial level stakeholder workshop was conducted in Calapan City, Oriental Mindoro’s capital, on August 28, 2024. This was attended by leaders and representatives from regional and provincial and local offices of the National Economic and Development Authority (NEDA) Region 4B, Department of Science and Technology (DOST) 4B, Office of the Governor, Office of the Municipal Mayor of Victoria, Department of Health (DOH) Oriental Mindoro and Victoria, Office of the Provincial Agriculturist, Provincial Cooperatives Development Office, District Nutrition Coordinator and City Nutrition Action Office, and the Research and Extension Office of the Mindoro State University, among others.

The next focus group discussion was held in Victoria, Oriental Mindoro (Figure 1) to determine the FNS policies and programs at the municipal level. Local executives and representatives of the municipality of Victoria such as the municipal agriculturist, planning and development officer, municipal health officer, Sangguniang Bayan and barangay health workers and barangay nutrition scholars together with the heads and representatives of the Mindoro State University’s research, extension and development, and planning departments attended the August 29, 2024 workshop and the succeeding validation workshop last October 15, 2024.



■ **Figure 1.** FGDs (1-2 above) with different stakeholders of Victoria, Oriental Mindoro in August 2024 in Mindoro State University (3-4-5 bottom) Data presentation and validation workshop last October 2024

Source: Authors

TABLE 3. FGD/RTD GUIDE MATRIX ON POLICY COHERENCE OF FOOD AND NUTRITION SECURITY IN VICTORIA, ORIENTAL MINDORO

CURRENT STATUS OF FOOD AND NUTRITION SECURITY					
DEFINITION OF FNS	COMPONENTS				
	PRODUCTION	PROCESSING	DISTRIBUTION	CONSUMPTION	WASTE
Programs/ Projects					
Relationships of food systems					
STRENGTHS AND WEAKNESSES IN FOOD AND NUTRITION SECURITY					
FACTORS	PRODUCTION	PROCESSING	DISTRIBUTION	CONSUMPTION	WASTE
Facilitating Factors					
Hindering Factors					

POLICY COHERENCE AND RECOMMENDATIONS				
IMPLEMENTATION STATUS	POLICIES	GOVERNANCE STRUCTURE	CAPACITY DEVELOPMENT	OTHERS
Currently being implemented				
Recommendations				



■ **Figure 2.** Workshop sessions during the FGDs in Victoria (photo 1) and Calapan City (photo 2), Oriental Mindoro showing the inputs from participants (photos 3-6)
Source: Authors

The PPAs were further reviewed and aligned with FNS policies (national and local levels). The initial outputs were then sent back to the for review and additional inputs specifically on the related national and local policies including agencies working on the specific PPAs. The updated and consolidated data were later presented to the stakeholders last October 15, 2024 in Victoria, Oriental Mindoro to review and validate the initial analysis and outputs.

Results of this study were consequently presented in two RTDs: one in UP Los Baños on October 21, 2024, and a high-level RTD/Workshop in UP Diliman on November 15, 2024. Participants to these RTDs were food security and nutrition experts and were involved in drafting and operationalization of local and national FNS policies, programs, and projects. They were from government, non-government, and international development institutions. These RTDs helped draw out substantive summaries and recommendations to the study.

CONTEXT: VICTORIA, ORIENTAL MINDORO - AN ISLAND PROVINCE

The province of Oriental Mindoro, specifically the Municipality of Victoria, was selected as a study site for the project for two reasons: the initial partnership project of the university in the area as well as its food and nutrition security status. In 2017, the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) supported a research project in Victoria, Oriental Mindoro through its program, “Piloting and Upscaling Effective Models of Inclusive and Sustainable Agricultural and Rural Development (ISARD) in the Philippines.” The study aims to identify the historical dynamics of the development of smallholder farming systems in the pilot sites; provide a platform for collaborative, integrative modeling of smallholder farming systems with multi-stakeholder groups; and present best practices in developing and integrating smallholder farming systems into commodity systems (Amparo et al. 2017). The study highlighted the important role of systems thinking and engaging different stakeholders in sustainable commodity development.

Next, Victoria, Oriental Mindoro is a valuable keystone site to reflect food and nutrition security challenges and opportunities in island provinces. The

municipality of Victoria (Figure 3) is popularly known as the “Fruit Basket of Oriental Mindoro” as it is one of the major producers of calamansi, bananas, and numerous fruit trees like lanzones, mangosteen, and rambutan. The agricultural area in Victoria is primarily devoted to rice production (54% of the total agricultural land), while the area being used for fruit trees plantation follows second at 16.26% (data from Victoria Municipal Agriculture Office, 2022, *pers. comm.*).

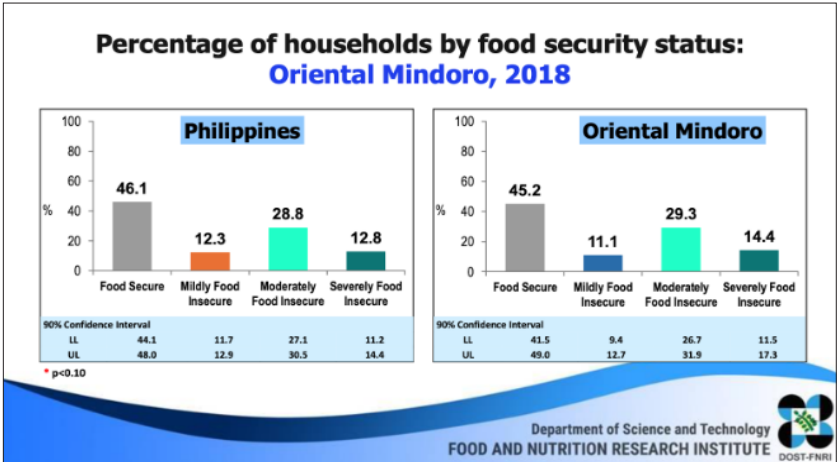


■ **Figure 3.** Location Map of Victoria, Oriental Mindoro

Image source: <https://www.mapsofworld.com/where-is/victoria.html>

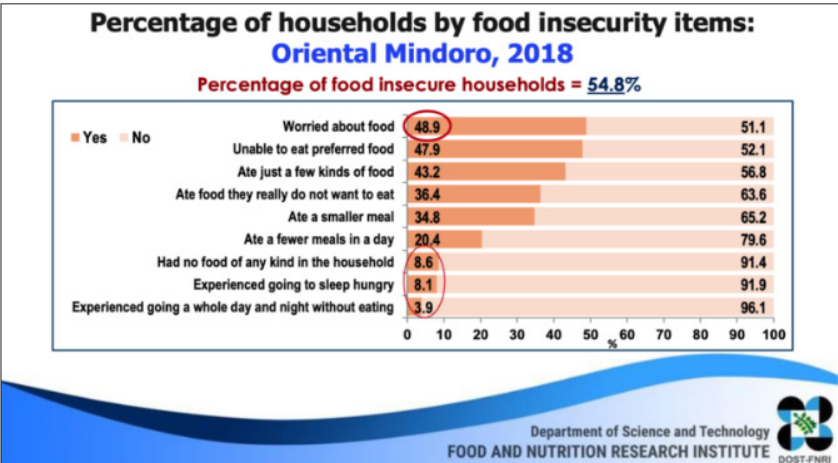
Despite the vastness of land and inland water for food production, however, food and nutrition insecurity remain a challenge. Based on the study of DOST-FNRI (2018, 2019 and 2021), the percentage of households in Oriental Mindoro who are experiencing food insecurity (mild, moderate, and severe) is 54.8% (see Figures 4 and 5). MIMAROPA remains to be part of the top 5 regions with problems on stunting at 33.4% (Figure 6) and wasting at 7.2% (Figure 7) among children 0–59 months old (below 5 years old). Oriental Mindoro has the highest prevalence rate of underweight and severely underweight (0–59

months) from 2020–2022 in the MIMAROPA Region. Malnutrition information in Victoria from the 2024 data of the Municipal Health Office revealed that among children 0–59 months of age, 1.82% are underweight, 3.56% are stunted, and prevalence of wasting is at 0.93% (Figure 8).



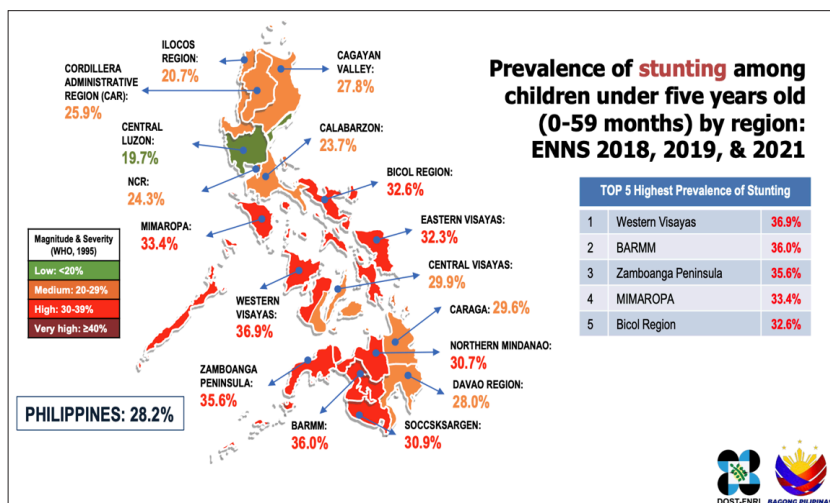
■ **Figure 4.** Percentage of Oriental Mindoro households by food security status in the 2018–2019 DOST-FNRI’s Expanded National Nutrition Survey

Image source: <https://enutrition.fnri.dost.gov.ph>



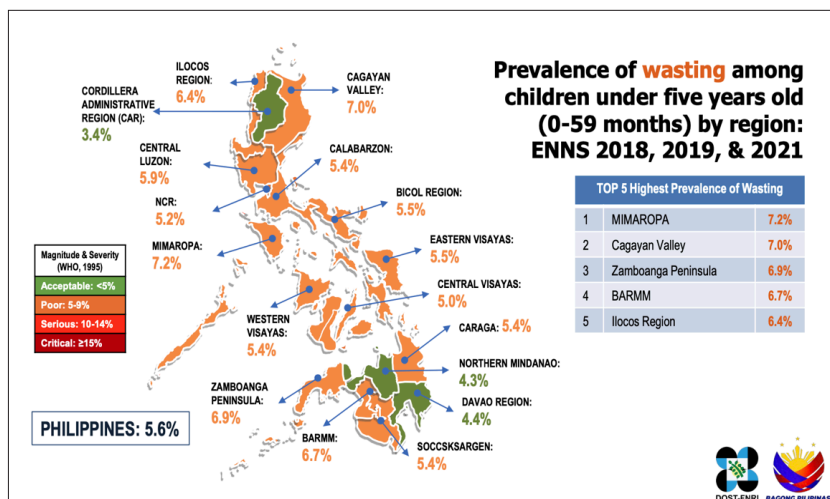
■ **Figure 5.** Percentage of Oriental Mindoro households by food security status in 2018 DOST-FNRI’s Expanded National Nutrition Survey

Image source: <https://enutrition.fnri.dost.gov.ph>



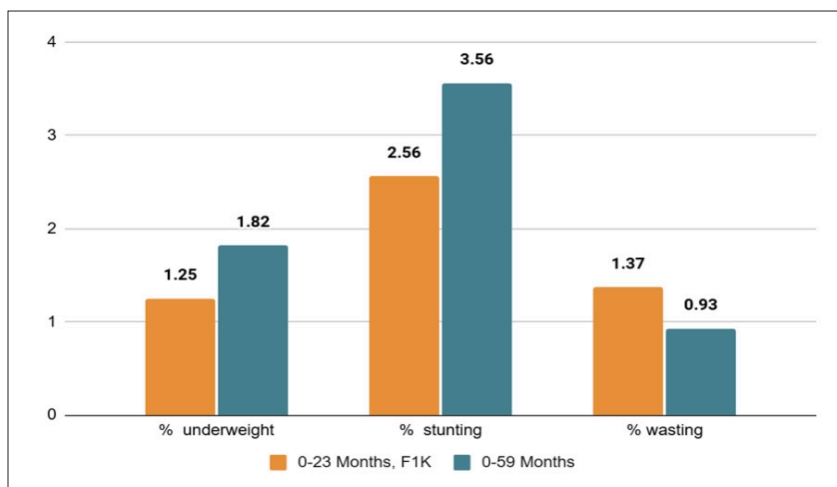
■ **Figure 6.** Prevalence of stunting among children under five years old (0-59 months) by region: ENNS 2018, 2019, 2021

Image source: DOST-FNRI 2022. <https://enutrition.fnri.dost.gov.ph>



■ **Figure 7.** Prevalence of wasting among children under five years old (0-59 months) by region: ENNS 2018, 2019, 2021

Image source: DOST-FNRI, 2022. <https://enutrition.fnri.dost.gov.ph>



■ **Figure 8.** Prevalence rate (in %) of underweight, stunting, and wasting among children 0-23 months and 0-59 months in Victoria, Oriental Mindoro
Data source: Victoria Municipal Health Office, 2024

The region and area present both development opportunities and challenges. Island provinces are home to both unique and diverse landscapes making them ideal for tourism and agriculture. However, island provinces require more demands for greater logistical facilities and infrastructure for access and mobility due to its geographical location. It also is more vulnerable to climate change extremes like flooding, sea level rise, among others. Thus, development planning and intervention for food and nutrition security also requires a more deliberate and systematic policy and program interventions.

CONTENT: RESULTS AND DISCUSSION

Food and Nutrition Security Defined

During the Focus Group Discussion in Victoria, Oriental Mindoro, the participants were asked how they define ‘food and nutrition security’ (See Table 4). Based on the keywords shared by the participants, we identified four key themes - food dimensions, food characteristics, agency, and outcome. The first theme focuses on food dimensions that should be affordable, accessible, available, and also sustainable. Also, the participants highlighted the unique context of Victoria given that they also emphasized the minorities’ households.

According to PSA (2020), Victoria, Oriental Mindoro is home to the Indigenous Peoples (Mangyan) - Tadyawan Mangyan (4.6%), Alangan Mangyan (0.56%), Bangon Mangyan (0.4%), and Hanunuo Mangyan (0.3%) (PSA MIMAROPA Region, 2024). The participants also shared that they may be the fruit basket and rice granary of the MIMAROPA region but they perceive that most of the best produce are targeted for external markets rather than local consumers. Thus, they emphasized that local consumers and the population should have direct access to affordable, accessible, safe, and nutritious food.

The second theme highlights the food characteristics of being nutritious, adequate and sufficient, and diversified or varied. The FGD participants emphasized that the priority support is skewed to high value crops and commodities which are usually for external markets. In addition, the government’s penchant for food self-sufficiency is focused on rice (Clarete 2015; Goloso-Gubat et al. 2024). The third and fourth themes highlight both agency and outcome in which the participants emphasized the empowerment of smallholder producers given that the area’s primary livelihoods are agriculture-based. They also recognized that food and nutrition security is critical for a healthy population and for overall economic growth and development of the area.

TABLE 4. FOOD AND NUTRITION SECURITY DEFINITION OF THE FGD PARTICIPANTS

SPECIFIC KEYWORDS SHARED BY PARTICIPANTS	THEMES
<ul style="list-style-type: none"> ■ Affordability of food ■ Quality food always available ■ 3As for all; accessible, available, affordable ■ Having affordable and accessible supply of food ■ Physical and economic access to nutritious food ■ Food availability and affordability toward attaining its safety , nutrition, and sustainability for the people ■ Long term availability of nutritious foods in the community especially for the minorities household of the family 	<p>3A & S of Food</p> <p>Affordable</p> <p>Accessible</p> <p>Available</p> <p>Sustainable</p>

SPECIFIC KEYWORDS SHARED BY PARTICIPANTS	THEMES
<ul style="list-style-type: none"> ■ <i>Masustansyang pagkain sa hapag kainan para sa lahat na permanente</i> ■ Nutritious food to lead healthy life ■ <i>Pagkaing tama, masustansya at sapat</i> ■ Sufficient food ■ Diversified ■ Variety and diversity in food 	Food Characteristics Nutritious Adequate and sufficient Diversified and varied
<ul style="list-style-type: none"> ■ Empowered farmers & fisherfolks ■ Masaganang agrikultura ■ Economic growth/ development ■ Healthy living 	Agency and Outcome Empowerment of smallholder producers Productive agriculture Economic growth and development Healthy living

Vertical Alignment of FNS Policies in Victoria, Oriental Mindoro

The FGD participants were asked to identify FNS policies implemented in their province and municipality. The participants have initially identified thirteen FNS policies that are mostly focused on nutrition interventions (n=8), nutrition governance (n=3) and food systems (n=2) (See Appendix B for the full list).

According to the FGD participants, the majority of the municipal policies (Table 5) are anchored on or adoption of national FNS policies (n = 9 out of 13). There are three national policies that are adopted at the barangay level. The municipal FNS policies focused more on implementation mechanisms of the national policies such as distribution protocols, fund allocation, and provision of livelihood inputs. The FNS policies that are adopted even at the barangay level included the direct health and nutrition interventions specifically for mothers, infants, and young children. These included the Maternal, Newborn, and Child Health and Nutrition (MNCHN), Infant and Young Child Feeding (IYCF), and the National Immunization Program (NIP).

The Municipality of Victoria enacted its Comprehensive Nutrition Program (Municipal Ordinance 40-2024) which upholds the right to food, health, and nutrition; recognizes multi-level and multistakeholder approach to address food and nutrition issues; values evidence-based approaches; and prioritizes vulnerable population like mothers, infants, young children, among others. This FNS policy is a concrete example of how local policies could vertically align with international development commitments like the SDGs, national development framework - AmBISYON Natin 2040 and FNS national plans and policies to develop an integrated and systematic policy to address FNS issues.

TABLE 5. VERTICAL ALIGNMENT BASED ON FNS POLICIES THEMES (VICTORIA, ORIENTAL MINDORO)

VERTICAL ALIGNMENT	FOOD SYSTEMS	NUTRITION GOVERNANCE	NUTRITION INTERVENTIONS	GRAND TOTAL
Municipality			1	1
National to Barangay			3	3
National to Municipality	2	3	4	9
Grand Total	2	3	8	13

Table 6 illustrates the different international, national, municipal, and even barangay offices that are identified by the FNS policies as implementing units. Since the preponderance of the municipal FNS policies are focused on implementation, the most identified level of implementing units is the municipal level, specifically the RHU (n = 5), followed by MNAO (n = 4) and MHO (n = 3). Most of the municipal counterparts of the national agencies were also identified in the implementation of the policies such as the MSWD with DSWD, MAO with DA, MHO with DOH and RHU, among others.

TABLE 6. AGENCY/OFFICE IMPLEMENTING THE FNS POLICIES

NAME OF AGENCY/OFFICE	NO. OF POLICIES WITH AGENCY/OFFICE AS IMPLEMENTER
International Agency	
WHO	1
National Agencies	
DSWD	2
DEPED	1
DA	1
DOH	3
ATI, BPI	1
LBP, DBP	1
PHILRICE	1
PCPDM	1
Municipal Offices	
MSWDO	2
MAO	2
MHO	3
RHU	5
MNAO	4
SB/LGU	2
Barangay Unit	
BNS/BHW	1

It should be noted that the Municipality of Victoria, Oriental Mindoro enacted the Municipal Ordinance No. 40-2024, An Ordinance Institutionalizing the Victoria Comprehensive Nutrition Program through integrated, strengthened, and sustained strategies to safeguard the nutritional well-being of the people, appropriating funds thereof and for other purposes in the Municipality of Victoria, Oriental Mindoro (Victoria Office of the Sangguniang Bayan. 2024). The said FNS policy cited various national FNS policies which served as its basis in the development of a local comprehensive nutrition program. These FNS policies include RA 11148 First 1000 Days Act, RA 11223 Universal Healthcare Law, and DILG MC 2918042 Adoption and Implementation of the PPAN 2017–2022.

Horizontal Alignment of FNS Policies in Victoria, Oriental Mindoro

The horizontal alignment of the FNS policies identified by the Victoria FGD participants was relatively weak compared to the vertical alignment. Only three FNS policies were identified to address at least two (2) phases of the food system namely production and distribution (n = 1) and processing and distribution (n = 2) (See Table 7). The former is the adoption of the national policy on convergence (i.e., National Convergence Initiative for Sustainable Rural Development (NCI-SRD) while the latter has policies on Philippine Package of Essential Noncommunicable Disease Interventions (PhilPEN) and on Food Safety. Majority (n = 8 out of 13) of the FNS policies identified focused on consumption, followed by policies on production (n = 3) and FNS policies on distribution (n = 3).

In terms of implementing agencies and offices, production is mostly the domain of DA/MAO while processing, distribution, and consumption focused policies are mostly the domain of DOH/MHO/RHU. The policies that aim to integrate more than one FS are still covered by distinct agencies or offices per policy or program.

TABLE 7. HORIZONTAL ALIGNMENT OF FNS POLICIES OF VICTORIA, ORIENTAL MINDORO (FOOD SYSTEM AND IMPLEMENTING AGENCIES/OFFICES)

FOOD SYSTEM PHASE	NO. OF POLICIES (N = 13)	DA/MAO	DSWD/MSWD	DOH/MHO/RHU	DEPED	MNAO/BNS	SB/LGU
Production	3	2	1	0	0	0	0
Processing	2	0		2	0	0	1
Distribution	3	1	0	2	0	0	0
Consumption	8	0	1	6	1	5	1
Waste	0	0	0	0	0	0	0
Production and Distribution	1	1	0	0	0	0	0
Processing and Distribution	2	0	0	2	0	0	0

During the FGD workshop, the participants have identified critical high value commodities of Victoria, Oriental Mindoro which include calamansi, banana, rice and fish (goby) (See Table 8). The participants shared that land-based commodity policies and programs from production to distribution are in place but they could identify policies and programs only from production to processing for marine-based commodities like fish. This could reduce the positive and direct impact of interventions in these commodities if other food system phases like consumption and wastes are not covered or prioritized. Fish is an important component of sustainable and healthy diets (Troell et al. 2019). In the same study, Troell et al. (2019) argues that a potential production-consumption gap could ensue if waste is not significantly addressed. In addition, production to consumption gap in the province and municipality could be an issue if high-value commodity crops like calamansi, banana, and staple crops like rice are being exported to outside markets (Davila 2018; Dunaway and Macabuac 2022).

TABLE 8. COMMODITY-BASED HORIZONTAL COHERENCE OF PPAS IN VICTORIA, ORIENTAL MINDORO

COMMODITY	FOOD SYSTEM PHASES				
	PRODUCTION	PROCESSING	DISTRIBUTION	CONSUMPTION	WASTE
Calamansi					
Banana					
Rice					
Fish (Goby)					

Table 9 highlights how the FGD participants identified the concentration of FNS policies across the Food System Phases based on sectoral concerns. The FGD participants shared that the agricultural sector and academe focus on policies and programs prioritizing production, processing, and distribution while the health and nutrition sector emphasizes distribution and consumption. Given the current focus on sustainable livelihoods programs in the 4Ps (the flagship social protection program of the country), the FGD participants view that social welfare programs on FNS focus on both production and consumption. This pattern could be seen as a limitation and an opportunity. The focus on selected phases could lead to fragmented initiatives but would help maximize

limited resources and reach. However, this could be an opportunity to work in a multi-stakeholder and multi-sectoral convergence approach in order to cover the entire food system. This would require engagement and co-production of FNS initiatives from co-creation, co-design and co-production.

**TABLE 9. SECTOR-BASED HORIZONTAL COHERENCE OF PPAS
IN VICTORIA, ORIENTAL MINDORO**

SECTORS	FOOD SYSTEM PHASES			
	PRODUCTION	PROCESSING	DISTRIBUTION	CONSUMPTION
Agriculture				
Health and Nutrition				
Social Welfare				
Academe (MinSU)				

During the second phase of the FGD and validation, the FGD participants identified additional FNS policies. A total of 43 programs were identified in this round of discussion (Table 10). Two-thirds (n = 29 out of 43) were policy-based FNS initiatives focusing on production (n = 11), processing (n = 5). In this phase, they have identified policies under waste management (n = 2). Policy-based here means there is a national or municipal policy that informs the program while the program-based FNS initiatives are mostly programs, projects, and activities. Table 11 reflects the vertical alignment of FNS policies in Victoria, Oriental Mindoro. Three-fourths (n = 32 out of 43) of the FNS policies identified are vertically aligned from national to municipal ordinances or guidelines. Nevertheless, there are also municipal level policies that originated and were developed based on the local context of Victoria, Oriental Mindoro (n = 11).

**TABLE 10. FNS POLICIES IN VICTORIA, ORIENTAL MINDORO
ACROSS THE FOOD SYSTEM (POLICY OR PROGRAM-BASED)**

FOOD SYSTEM PHASE	POLICY-BASED	PROGRAM-BASED	GRAND TOTAL
Consumption	6	2	8
Distribution	5	2	7
Processing	5	3	8
Production	11	6	17
Waste	2	1	3
Grand Total	29	14	43

**TABLE 11. VERTICAL ALIGNMENT OF FNS POLICIES
IN VICTORIA, ORIENTAL MINDORO**

FOOD SYSTEM PHASE	MUNICIPALITY	NATIONAL TO MUNICIPALITY	GRAND TOTAL
Consumption	1	7	8
Distribution	2	5	7
Processing	3	5	8
Production	4	3	17
Waste	1	2	3
Grand Total	11	32	43

In addition, the majority (n = 35 out of 43) of the identified FNS policies and programs are classified under food systems policies, while the remaining ones focus on nutrition intervention (See Table 12).

**TABLE 12. CATEGORIES OF FNS POLICIES IN VICTORIA,
ORIENTAL MINDORO**

FOOD SYSTEM PHASE	FOOD SYSTEMS	NUTRITION INTERVENTION	GRAND TOTAL
Consumption	1	7	8
Distribution	6	1	7

FOOD SYSTEM PHASE	FOOD SYSTEMS	NUTRITION INTERVENTION	GRAND TOTAL
Processing	8		8
Production	17		17
Waste	3		3
Grand Total	35	8	43

Facilitating and Hindering Factors for FNS Policy Coherence

The FGD participants were also asked of the facilitating and hindering factors for FNS policy coherence. The participants identified *agripreneurship* and program prioritization as key facilitating factors for FNS policy coherence. De Mesa et al. (2022) argued that *agripreneurship* is one of the strategies to scale up the country's agricultural sector. *Agripreneurship* requires the understanding and command of the agricultural value chain in order to thrive. Thus, the development of *agripreneurship* could facilitate food systems lens thinking. In addition, the participants identified program level prioritization and focusing on integrative strategies for FNS could be facilitating factors to promote policy coherence. Across the food system phases, the FGD participants have identified other assets and opportunities that could promote FNS policy coherence. These include assets like presence of farm lands, experts like MINSU, and facilities like functioning MRF. They also identified external opportunities like the growing demand for healthy drinks like calamansi and support for innovations.

Meanwhile, the FGD participants also identified cross-cutting limitations. These could be categorized into operational, environmental, and economic constraints. Operational issues that could inhibit FNS policy coherence include heavy workload and lack of technical staff that will prioritize convergence and collaboration, infrastructure limitations like electrical outages, and limited communication platforms across departments. Environmental issues like pandemics and climate extremes could also limit policy coherence due to priority of an emergency issue and mobility limits. Economic limitations include increasing cost of living and unbridled population growth which could reduce FNS initiatives. Other hindering factors identified by the FGD participants include presence of hazards and risks like extreme weather and pests, culture, and mindset like hesitancy on adoption of new technologies

and potential clash with indigenous knowledge and practices. Limited access to more markets remains to be a challenge for local producers of high value commodities since the market is concentrated in Metro Manila.

KEY INSIGHTS AND CONCLUSIONS

The five key insights that we want to highlight in this discussion paper are as follows:

1. The food and nutrition security definition of FGD participants from Victoria, Oriental Mindoro emphasized four themes: food dimension, food characteristics, and agency and outcome. It is critical to note that the indigenous peoples' contexts were considered by the participants given that Victoria is home to the Mangyan tribe. The participants also highlighted the agency of smallholder food producers and critical outcomes of FNS such as a healthy and developed population.
2. Based on the two FGDs, most of the FNS policies identified by the participants were nutrition interventions (8 out of 13 policies during the first FGD; See Table 5 for reference) and food systems policies (n=35/43 based on Table 12). The participants also identified FNS interventions in the municipality, most of which are policy-based relative to program-based (n=29/43; See Table 10).
3. The FNS policy landscape of Victoria, Oriental Mindoro has a strong vertical policy coherence. Most of the FNS policies in the municipality are anchored on national policies (see Table 5 and Table 11)
4. However, the FNS policy landscape of Victoria, Oriental Mindoro has a weak horizontal policy coherence across the food systems. Most of the FNS policies focus on a particular food system phase although there are existing FNS policies that try to integrate at least two food system phases (n=3/13; see Table 5). High-value commodity based FNS policies cover production to distribution but consumption and waste were not targeted (see Table 8). In terms of sectors, agriculture and academia tend to focus on FNS policies on production to distribution, while the health and nutrition sector focuses on distribution and consumption. The social welfare sector addresses production and consumption under

its Sustainable Livelihoods Program (see Table 7). Therefore, production remains to be the focus of FNS policies (see Table 8).

5. The FGD participants have identified both facilitating and limiting factors for FNS Policy Coherence. The facilitating factors include the focus on agripreneurship and presence of local assets (land, experts, innovations) and external opportunities (consumer demand and support for innovations like grants, facilities). Nevertheless, they also identified operational (limited HR, high workload, issues with electricity distribution), environmental (climate extremes), culture (low technology adoption, cultural differences) and economic limitations (poverty) that may hinder full promotion of FNS policy coherence and thus limit its positive impacts for FNS.

RECOMMENDATIONS

The following policy recommendations are suggested by the authors in order to further promote policy coherence for Food and Nutrition Security in Victoria, Oriental Mindoro.

1. Development of a Food and Nutrition Security Plan and Program Framework

The Municipality of Victoria, Oriental Mindoro has institutionalized its Comprehensive Nutrition Program (CNP) through the Municipal Ordinance No. 40-2024. The development of an FNS Plan and Program framework could expand and strengthen the positive impacts of the CNP in safeguarding the overall food and nutrition security and wellbeing of its populace. The presence of strong technical institutions like the academe (MinSU), linkages with national development agencies, and dynamic convergence practices of the different offices and agencies in the province and municipality could be maximized.

2. Maximize the convergence mindset

Convergence and systems thinking require a special skill set and mind set. Thus, building the capacity and appreciation of technical officers, policy makers, and local partners and organizations like cooperatives and

indigenous people's organizations on convergence and systems thinking should also be prioritized. Various government agencies like DOST and DILG can support training for technical officers on these concepts and topics. Universities like MinSu and UP through its Professional School on Agriculture and Environment could also bring courses to the area that would build the technical as well as management capacities of local officers and organizations.

- 3.** Ensure access, availability, affordability, and sustainability of nutritious, diverse, and culturally appropriate food at the local level

Based on the FGD and review of FNS policies, most of the food production policies are geared towards external markets. Production of locally important crops to support local FNS should also be prioritized. There are current initiatives on this level through community gardens and local food processing facilities that could be scaled up and utilized for this. The IPMR and local IP organizations could also be tapped to develop more inclusive FNS policies and programs for the IP communities in the area. Documentation of critical indigenous crops and cuisine could also be done in partnership with the local academic institution, NCIP, and IP communities.

- 4.** Promotion of agripreneurship as a platform to improve food systems policy coherence.

Agripreneurship is identified as a critical platform to enhance food and nutrition security policy coherence and program integration. Several national agencies including the academe, international development agencies, and civil society organizations including corporate foundations are supporting agripreneurship programs. The Municipality of Victoria has the assets (lands, crops, facilities) and people that could be further trained and developed for agripreneurship.

REFERENCES

- Amparo, Jennifer Marie S., Maria Theresa M. Talavera, Aimee Sheree A. Barrion, Maria Emilinda T. Mendoza, Marife B. Dapito. 2017. "Assessment of fish and shellfish consumption of coastal barangays along the Marilao-Meycauayan-Obando River System (MMORS), Philippines." *Mal J Nutr* 23 (2): 263–77.
- Billings, Lucy, Rebecca Pradeilles, Stuart Gillespie, Anna Vanderkooy, Dieynab Diatta, Mariama Toure et al. 2021. Coherence for Nutrition: Insights from nutrition-relevant policies and programs in Burkina faso and Nigeria. *Health Policy and Planning* 36 (10): 1–44. doi: 10.1093/heapol/czab108
- Brugere, Cecile, Max Troell, and Hampus Eriksson. 2021. "More than fish: Policy coherence and benefit sharing as necessary conditions for equitable aquaculture development." *Marine Policy*, 123: 104271. <https://doi.org/10.1016/j.marpol.2020.104271>
- Clapp, Jennifer, William G. Moseley, Barbara Burlingame, and Paola Termine. 2022. "Viewpoint: The case for a six-dimensional food security framework." *Food Policy* 106: 102164. <https://doi.org/10.1016/j.foodpol.2021.102164>
- Clarete, Ramon L. 2015. "Chapter 19- Philippine rice sufficiency program: pitfalls and remedies." In *Sustainable economic development:Resources, environment, and institutions*, edited by Arsenio Balisacan, Ujjayant Chakravorty and Majah-leah V. Ravago. Amsterdam, Elsevier. 329–48. <https://doi.org/10.1016/B978-0-12-800347-3.00019-4>
- Committee on World Food Security- FAO. 2012. "Global strategic framework for food security and nutrition, First version". In *Committee on World Food Security 39th Session*, Rome, Italy, October 15–20. <https://www.fao.org/4/ME498E/ME498E.pdf>
- Davila, Federico. 2018. "Human ecology and food systems: Insights from the Philippines." *Human Ecology Review* 27(1) 23–50. DOI:10.22459/HER.24.01.2018.02
- De Mesa, Maria Carmina M., Hwa Seok Hwang, and Dong Hyun Shin. 2022. "Limiting Factors Affecting the Value-Adding Capacity of Young Agripreneurs in the Philippines". *Journal of International Development Cooperation*, 17(1), 47-72. <https://doi.org/10.34225/jidc.2022.17.1.47>
- De Schutter, Olivier, Nick Jacobs, and Chantal Clément. 2020. "A 'Common Food Policy' for Europe: How governance reforms can spark a shift to healthy diets and sustainable food systems". *Food Policy* 96 (5): 101849. <https://doi.org/10.1016/j.foodpol.2020.101849>
- Department of Science and Technology - Food and Nutrition Research Institute (DOST-FNRI). 2022. Philippine Nutrition Facts and Figures: 2018-2019 Expanded National Nutrition Survey (ENNS). FNRI Bldg., DOST Compound, Gen. Santos Avenue, Bicutan, Taguig City, Metro Manila, Philippines.
- . 2024. 2023 National Nutrition Survey. FNRI Bldg., DOST Compound, Gen. Santos Avenue, Bicutan, Taguig City, Metro Manila, Philippines. <https://enutrition.fnri.dost.gov.ph/index.php>

- Dunaway, Wilma A. and Maria Cecilia Macabuac. 2022. "Globalized Food and Asian Hunger: The Philippine Case." In *Where Shrimp Eat Better than People*: 124–165. https://doi.org/10.1163/9789004522657_005
- EUFI. 2017. *Food processing: Understanding its methods, examples and importance*. <https://www.eufic.org/en/food-production/article/processed-food-qa>
- Evans, Nick, Mathias Duwe and Eike Karola Velten. 2023. "Policy Consistency: What it means, how to measure it, and links with other processes." In *Ecologic Institute*, Berlin. <https://www.ecologic.eu/19265>
- FAO 1996. "World Food Summit: Rome Declaration on World Food Security." Rome, Italy, November 13–17. <https://www.fao.org/4/w3548e/w3548e00.htm>
- FAO 2013. *The State of Food and Agriculture: Food Systems for Better Nutrition*. <https://www.fao.org/4/i3300e/i3300e00.htm>
- FAO, IFAD, UNICEF, WFP and WHO. 2023. *The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum*. Rome, FAO. <https://doi.org/10.4060/cc3017en>
- Fukusaku, Kiichiro and Akira Hirata. 1995. "The OECD and ASEAN: Changing Economic Linkages and the Challenge of Policy Coherence." In *OECD and the ASEAN Economies: the Challenge of Policy Coherence*. Edited by Kiichiro Fukusaku, Michael Plummer and Joseph Tan, OECD, Paris.
- Gladek, Eva, Matthew Fraser, Gerard Roemers, Oscar Sabag Muñoz, Erin Kennedy, Peter Hirsch. 2017. *The Global Food System: An Analysis*. The Netherlands: Metabolic. <https://www.metabolic.nl/publications/global-food-system-an-analysis-pdf/>
- Goloso-Gubat Maria Julia, Angelina dR. Felix, Nancy A. Tandang, Cecilia Cristina S. Acuin, Prudenciano U. Gordoncillo, Charmaine A. Duante. 2024. Sustainability of the Philippine food system. *Front. Sustain. Food Syst.* 8: 1278891. <https://doi.org/10.3389/fsufs.2024.1278891>
- Howlett, Michael and Pable del Rio. 2015. "The parameters of policy portfolios: vertically and horizontally in design spaces and their consequences for policy mix formulation." *Environment and Planning C.* 33(5): 1233–245. <https://doi.org/10.1177/0263774X15610059>
- Hsu, Angel, Amy J. Weinfurter, and Kaiyang Xu. 2017 "Aligning subnational climate actions for the new post-Paris climate regime." *Climatic Change* 142: 419–432.
- International Institute of Rural Reconstruction (IIRR). 2019. "Mapping the Research and Development Agenda of Food Systems in the Philippines." *Experts' Consultation on understanding the Philippine Food Systems for Better Food Security and Nutrition*, Y.C. James Yen Center, Cavite. February 27, 2019. <https://iirr.org/docs/mapping-the-research-and-development-agenda-of-food-systems-in-the-philippines/>

- Integrated Food Security Phase Classification (IPC). 2015. "Philippines: Chronic Food Insecurity Situation 2015-2020." IPC Analysis portal. <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1044577/>
- Jadranka, Bendeković, Dora Naletina, Nola Iva. 2015. "Food safety and food quality in the supply chain." In *Trade Perspectives 2015: Innovations in Food Retailing*, University of Zagreb, Croatia, November 18–19. https://www.researchgate.net/publication/324389840_Food_safety_and_food_quality_in_the_supply_chain/
- Jiménez Joan Campmany, Iza Romanowska , Romina Raja, Eivind H. Seland. 2022 "Food security in Roman Palmyra (Syria) in light of paleoclimatological evidence and its historical implications." *PLoS ONE* 17 (9): e0273241. <https://doi.org/10.1371/journal.pone.0273241>
- Jones, Andrew D., Francis M. Ngure, Gretel Pelto, and Sera L. Young. 2013 "What are we assessing when we measure food security? A compendium and review of current metrics." *Advances in nutrition* 4(5): 481-505. DOI: 10.3945/an.113.004119
- Koff, Harlan, Antony Challenger and Israel Portillo. 2020. "Guidelines for operationalizing policy coherence for development (PCD) as a methodology for the design and implementation of sustainable development strategies." *Sustainability*, 12(10), 4055. <https://doi.org/10.3390/su12104055>
- May, Peter J., Joshua Sapotichne and Samuel Workman. 2006. "Policy coherence and policy domains." *Policy Studies Journal*, 34(3), 381-403. DOI:10.1111/j.1541-0072.2006.00178.x
- Meijers, Evert and Dominic Stead. 2004. "Policy integration: what does it mean and how can it be achieved? A multidisciplinary review." In *German Political Science Ass. 2004 Berlin Conference on the Human Dimensions of Global Environmental Change: Greening of Policies - Interlinkages and Policy Integration*, Freie Universität Berlin. Corpus ID: 167629785
- Monticone, Francesca, David Barling, Kelly Parsons and Antonella Samoggia. 2023 "Identifying food policy coherence in Italian regional policies: The case of Emilia-Romagna." *Food Policy* 119: 102519.
- Morgan, Alexandra E. and Jessica Fanzo. 2020. "Nutrition transition and climate risks in Nigeria: Moving towards food systems policy coherence." *Current Environmental Health Report* 7(10217):1-12. DOI: 10.1007/s40572-020-00292-3
- National Nutrition Council. Compendium of Local Ordinances and Issuances on Nutrition. Taguig City, Philippines. <https://www.nnc.gov.ph/>
- Nguyen, Hanh. 2018. Sustainable Food Systems. Food Agriculture Organization (FAO) of the United Nations <https://openknowledge.fao.org>
- Nilsson, Måns, Tony Zamparutti, Jan Erick Petersen, Björn Nykvist, Peter Rudberg, Jennifer McGuinn. 2012. "Understanding Policy Coherence: Analytical Framework and Examples of Sector-Environment Policy Interactions in the EU." *Envi Pol and Govern* 22(6): 395-423 <https://doi.org/10.1002/eet.1589>

- OECD. 2018. *Policy Coherence for Sustainable Development 2018: Towards Sustainable and Resilient Societies*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264301061-en>
- Pawlak, Karolina, and Małgorzata Kołodziejczak. 2020. "The role of agriculture in ensuring food security in developing countries: Considerations in the context of the problem of sustainable food production." *Sustainability* 12 (13), 5488. doi: 10.3390/su12135488
- Parsons, Kelly and Corinna Hawkes. 2019. *Policy Coherence in Food Systems*. Centre for Food Policy, City University, London. <https://researchprofiles.herts.ac.uk/en/publications/policy-coherence-in-food-systems>
- Pérez-Escamilla Rafael. 2024. "Food and nutrition security definitions, constructs, frameworks, measurements, and applications: global lessons." *Frontiers in public health*, 12: 1340149. <https://doi.org/10.3389/fpubh.2024.1340149>
- Philippine Statistics Authority. 2024. Philippine Food Security Information System (PhilFSIS). PSA OpenSTAT. <https://openstat.psa.gov.ph/Featured/philfsis>
- Philippine Statistics Authority MIMAROPA Region. 2024. Special Release: Ethnicity in Victoria, Oriental Mindoro (2020 Census of Population and Housing). <https://rssomimaropa.psa.gov.ph/content/ethnicity-victoria-oriental-mindoro-2020-census-population-and-housing>
- Picciotto, Robert. 2005. "The Evaluation of policy coherence for development." *Evaluation* 11(3): 311-330. <https://doi.org/10.1177/1356389005058479>
- Pinstrup-Andersen, Per. 2012. "The food system and its interaction with human health and nutrition." In *Reshaping Agriculture for Nutrition and Health*, edited by Shenggen Fan and Rajul Pandya-Lorch. International Food Policy and Research Institute. DOI: 10.2499/9780896296732
- Policy coherence for sustainable development. In: OECD [website]. Paris: Organisation for Economic Co-operation and Development. 2018 (<http://www.oecd.org/gov/pcsd/>).
- Rivera, Ana Kriselda B.m Ernani R. Bullecer, Raycha Lei Concess M. Rama, Rowel C. Malimban. 2023. Food and nutrition security in the Philippines during the COVID-19 Pandemic." *J Rural Med* 18(3): 162-167. <https://doi.org/10.2185/jrm.2022-049>
- Roudsari, Arezoo H., Abouali Vedadhir, Parisa Amiri, et al. 2017. "Psycho-Socio-Cultural Determinants of Food Choice: A Qualitative Study on Adults in Social and Cultural Context of Iran." *Iran J Psychiatry* 12(4): 241-50. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5816913/>
- Shawoo, Zoha, Aaron Maltais, Adis Dzebo and Jonathan Pickering. 2022. "Political drivers of policy coherence for sustainable development: An analytical framework." *Environmental Policy and Governance*, 33(4): 339-50. <https://doi.org/10.1002/eet.2039>
- Simelane, Kwanele Siyabonga and Steve Worth. 2020. "Food and nutrition security theory." *Food and Nutrition Bulletin*, 41(3), 367-379. doi: 10.1177/0379572120925341

- Simmance, Fiona A., Gianluigi Nico, Simon Funge-Smith et al. 2022. "Proximity to small-scale inland and coastal fisheries is associated with improved income and food security." *Commun Earth Environ* 3: 174. <https://doi.org/10.1038/s43247-022-00496-5>
- Thow Anne Marie, Shauna M. Downs, Christopher Mayes, Helen Trevena, Temp Waqanivalu, John Cawley. 2018. "Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action." *Bull World Health Organ*. 96(3): 201–10. doi: 10.2471/BLT.17.195982
- , Alexandra Jones, Carmen Huckel Schneider, Ronald Labonté. 2020. "Increasing the public health voice in global decision-making on nutrition labelling." *Global Health* 16 (3). <https://doi.org/10.1186/s12992-019-0533-3>
- Troell, Max, Malin Jonell, and Beatrice Crona. 2019 "The role of seafood in sustainable and healthy diets: The EAT-Lancet Commission report Through a Blue Lens." *Beijer Discussion Paper Series* No. 266, The Beijer Institute, Stockholm. <https://www.researchgate.net/publication/335397520>
- Underdal, Arild. 1980. "Integrated marine policy: What? Why? How?" *Marine Policy* 4(3): 159–69. [https://doi.org/10.1016/0308-597X\(80\)90051-2](https://doi.org/10.1016/0308-597X(80)90051-2)
- United Nations. 2023. The Sustainable Development Goals Report: Special Edition. <https://unstats.un.org/sdgs/report/2023/>
- Victoria Municipal Health Office. 2024. *Operation Timbang Plus 2024. Nutritional Status of Children 0-59 and 0-23 months old.*
- Victoria Office of the Sangguniang Bayan. 2024. Municipal Ordinance No. 40-2024. An Ordinance institutionalizing the Victoria Comprehensive Nutrition Program through integrated, strengthened and sustained strategies to safeguard the nutritional well-being of the people, appropriating funds thereof and for other purposes in the Municipality of Victoria, Oriental Mindoro.
- Weingärtner, Lioba. 2005. "The Concept of Food and Nutrition security." In *Achieving food and nutrition security actions to meet the global challenge- A training course reader* 2nd ed., edited by Klaus Klennert. InWent, Feldafing. www.eeas.europa.eu
- . 2009. "The Concept of Food and Nutrition security." In *Achieving food and nutrition security actions to meet the global challenge- A training course reader* 3rd ed., edited by Klaus Klennert. Bonn, InWent. www.eeas.europa.eu
- World Food Programme Philippines. 2022. The Philippines Food Security Monitoring: Remote Household Food Security Survey Brief. <https://www.wfp.org/publications/wfp-philippines-food-security-monitoring-october-2022>

APPENDIX A.

Discussion Guide

Note: Please read or share the participant information sheet and informed consent form before starting the interview.

P1. INTERVIEWEE PROFILE

- a. Name
- b. Designation and Institution/Organization

P2. CURRENT STATUS OF FOOD AND NUTRITION SECURITY

- a. In your understanding, what is food and nutrition security (FNS)?
- b. What is the current FNS status in your area?
 - ☐ In production?
 - ☐ In processing?
 - ☐ In distribution?
 - ☐ In consumption?
 - ☐ In food waste?
- c. Food and nutrition security is a '*condition when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preferences for an active and healthy life*' (1996 World Food Summit)

What are the programs/projects implemented in your area to address FNS?
- d. What do you think is the role of your organization/institution in ensuring food and nutrition security across the food systems?
- e. Do you think the various components of food systems are interconnected? In your area, how would you describe the interconnectedness of various components of the FNS?

P3. STRENGTHS AND WEAKNESSES IN THE FOOD AND NUTRITION SECURITY

- a. What are the strengths or facilitating factors you see in our current food systems that positively affect food and nutrition security?
- b. What are the major challenges/hindering factors you see in our current food systems that affect food and nutrition security?

P4. POLICY COHERENCE AND RECOMMENDATIONS

- a. In your perspective, what policies currently being implemented are essential for enhancing food and nutrition security across the food systems?
- b. What are your recommended policies and programs for enhancing food and nutrition security across the food system?
 - Policies
 - Governance structure
 - Capacity development
- c. How could we better promote policy coherence for FNS? (At what governance level)

APPENDIX B.

LIST OF PPAS IN VICTORIA, ORIENTAL MINDORO RELATING TO FOOD AND NUTRITION

POLICY	AGENCY/ ACTOR	NATIONAL POLICY	VERTICAL ALIGNMENT	SPECIFIC COMPONENTS	THEME
Convergence Area Development Plan (CADP)	MAO	National Convergence Initiative for Sustainable Rural Development (NCI-SRD)	National to Municipality	Production (production and distribution)	Food Systems
Rice Competitiveness Enhancement Fund (RCEF)	MAO, DA, ATI, BPI, PCPDM, PHILRICE, TESDA, LBP, DBP	Rice	National to Municipality	Production (inputs)	Food Systems
Nutrition Action Plan (NAP)	RHU/ MNAO	DILG MC No. 2024-071 Adoption and Implementation of the Philippine Action Plan for Nutrition 2023–2028	National to Municipality	Fund allocation and activity interventions (i.e., IDF, GAD funds)	Nutrition Governance
Philippine Package of Essential Non-Communicable Diseases Intervention (PhilPEN)	WHO, DOH, LGU	Philippine Package of Essential Noncommunicable Disease Interventions (Phil PEN); DOH Administrative Order No. 2011-0003 - National Policy on Strengthening the Prevention and Control of Chronic Lifestyle Related Non Communicable Diseases	National to Municipality	Essential, Non-communicable disease interventions	Nutrition Governance

POLICY	AGENCY/ ACTOR	NATIONAL POLICY	VERTICAL ALIGNMENT	SPECIFIC COMPONENTS	THEME
Food Handler's Training	MHO	RA 10611 An Act to Strengthen the Food Safety Regulatory System in the Country to Protect Consumer Health and Facilitate Market Access of Local Foods and Food Products and for Other Purposes	National to Municipality	Capability building, Capacity building	Nutrition Governance
Maternal, Newborn and Child Health and Nutrition (MNCHN)	RHU/ MNAO/ BNS/ BHW	RA 11148 An Act Scaling up the National and Local Health and Nutrition Programs Through a Strengthened Integrated Strategy for Maternal, Neonatal, Child Health and Nutrition in the First One Thousand (1,000) Days of Life, Appropriating Funds Therefor, and For Other Purposes.	National to Barangay	Activity based; National downloads supplies to local areas	Nutrition Interventions
Infant and Young Child Feeding (IYCF)	RHU/ MNAO/ BNS/ BHW	EO 51 National Code of Marketing of Breastmilk Substitutes, Breastmilk Supplements and Other Related Products, RA 10028 An Act Expanding the Promotion of Breastfeeding, Amending for the Purpose Republic Act No. 7600, Infant and Young Child Feeding (IYCF) Strategic Plan of Action for 2011-2016	National to Barangay		Nutrition Interventions
National Dietary Supplementation Program (NDSP)	DCC/ MSWDO/ DepEd	RA 11037 Masustansyang Pagkain Para sa Batang Pilipino Act	National to Barangay		Nutrition Interventions
PIMAM Philippine Integrated Management on Acute Malnutrition	DOH/RHU	DOH Administrative Order 2015-0055 National Guidelines on Management of Acute Malnutrition for Children under five years	National to Municipality		Nutrition Interventions

POLICY	AGENCY/ ACTOR	NATIONAL POLICY	VERTICAL ALIGNMENT	SPECIFIC COMPONENTS	THEME
National Immunization Program	RHU	RA 101 52 An Act Providing for Mandatory Basic Immunization Services for Infants and Children, Repealing for the Purpose Presidential Decree No. 966, As Amended	National to Municipality		Nutrition Interventions
Sustainable Livelihoods Program	DSWD, MSWD	DSWD MC 2019-022 Comprehensive Guidelines on the Implementation of the Sustainable Livelihoods Program	National to Municipality	Livelihoods	Nutrition Interventions
Comprehensive Nutrition Program	SB/LGU/ MHO/ MNAO	RA 11148; RA 11223; DILG MC 2918-42; RA 8172	Municipality	Comprehensive nutrition program - PIMAM	Nutrition Interventions
MAPALAD Program (Medisina Para sa Lahat Dapat)' (Monitoring of NCDS and Maintenance medicine Distribution)	DOH, MHO	Provincial and municipal adoption of DOH AO 2011-003- Strengthening the prevention and control of chronic lifestyle related NCDs; AO 2012-0029 Implementing guidelines of the institutionalization of PhilPEN of the integrated management of hypertension and diabetes for primary health care facility	National to Municipality	Academe	Nutrition Interventions

THE UP CIDS DISCUSSION PAPER SERIES

The UP CIDS Discussion Paper Series features preliminary researches that may be subject to further revisions and is circulated to elicit comments and suggestions for enrichment and refinement. They 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).

CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

Established in 1985 by University of the Philippines (UP) President Edgardo J. Angara, the UP Center for Integrative and Development Studies (UP CIDS) is the 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 currently has twelve research programs that are clustered under the areas of education and capacity building, development, and social, political, and cultural studies. It publishes policy briefs, monographs, webinar/conference/forum proceedings, and the Philippine Journal for Public Policy, all of which can be downloaded free from the UP CIDS website.

THE PROGRAM

Like many developing countries in Southeast Asia, food security in the Philippines remains a tall order. Challenges continue to abound in food availability, access, utilization and their stability over time. The adverse weather condition, political instability and economic factors such as unemployment, eroding income levels and rising food prices have proven to impact negatively on food security. Interventions to improve the food systems' resilience and farm production of a more diverse mix of food, as well as attempts to increase farm income necessary for purchases of vital and wider array of food have generally fallen short of targets especially among vulnerable and marginalized groups.

The **Food Security Program** currently houses faculty and staff based in or affiliated with the University of the Philippines Los Baños.

EDITORIAL BOARD

Rosalie Arcala Hall
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 dLC. Paragas
PROGRAM ON HIGHER EDUCATION
RESEARCH AND POLICY REFORM

Romylyn Metila
Marlene Ferido
ASSESSMENT, CURRICULUM, AND
TECHNOLOGY RESEARCH PROGRAM

Ebinezer R. Florano
PROGRAM ON DATA SCIENCE FOR
PUBLIC POLICY

■ SOCIAL, POLITICAL, AND CULTURAL STUDIES CLUSTER

Rogelio Alicor L. Panao
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

■ DEVELOPMENT CLUSTER

Annette O. Balaoing-Pelkmans
PROGRAM ON ESCAPING THE
MIDDLE-INCOME TRAP: CHAINS FOR CHANGE

Antoinette R. Raquiza
Monica Santos
POLITICAL ECONOMY PROGRAM

Eduardo C. Tadem
Ma. Simeona M. Martinez
PROGRAM ON
ALTERNATIVE DEVELOPMENT

Leonila F. Dans
Iris Thiele Isip-Tan
PROGRAM ON HEALTH
SYSTEMS DEVELOPMENT

■ NEW PROGRAMS

Maria Angeles O. Catelo
FOOD SECURITY PROGRAM

Weena S. Gera
URBAN STUDIES PROGRAM

Benjamin M. Vallejo, Jr.
CONSERVATION AND BIODIVERSITY

Rosalie B. Arcala Hall
LOCAL AND REGIONAL STUDIES NETWORK

EDITORIAL STAFF

Lakan Uhay D. Alegre
SENIOR EDITORIAL ASSOCIATE

Kristen Jaye de Guzman
Leanne Claire SM. Bellen
JUNIOR EDITORIAL ASSOCIATE

Jheimeel P. Valencia
COPYEDITOR

Jose Ibarra C. Cunanan
Jessie Feniquito
Mikaela Anna Cheska D. Orlino
LAYOUT ARTISTS

Get your policy papers published. Download open-access articles.

The Philippine Journal of Public Policy: Interdisciplinary Development Perspectives (PJPP), the annual peer-reviewed journal of the UP Center for Integrative and Development Studies (UP CIDS), welcomes submissions in the form of full-length policy-oriented manuscripts, book reviews, essays, and commentaries. The PJPP provides a multidisciplinary forum for examining contemporary social, cultural, economic, and political issues in the Philippines and elsewhere. Submissions are welcome year-around.

For more information, visit cids.up.edu.ph. All issues/articles of the PJPP can be downloaded for free.

Get news and the latest publications.

Join our mailing list: bit.ly/signup_cids to get our publications delivered straight to your inbox! Also, you'll receive news of upcoming webinars and other updates.

We need your feedback.

Have our publications been useful? Tell us what you think: bit.ly/dearcids.



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