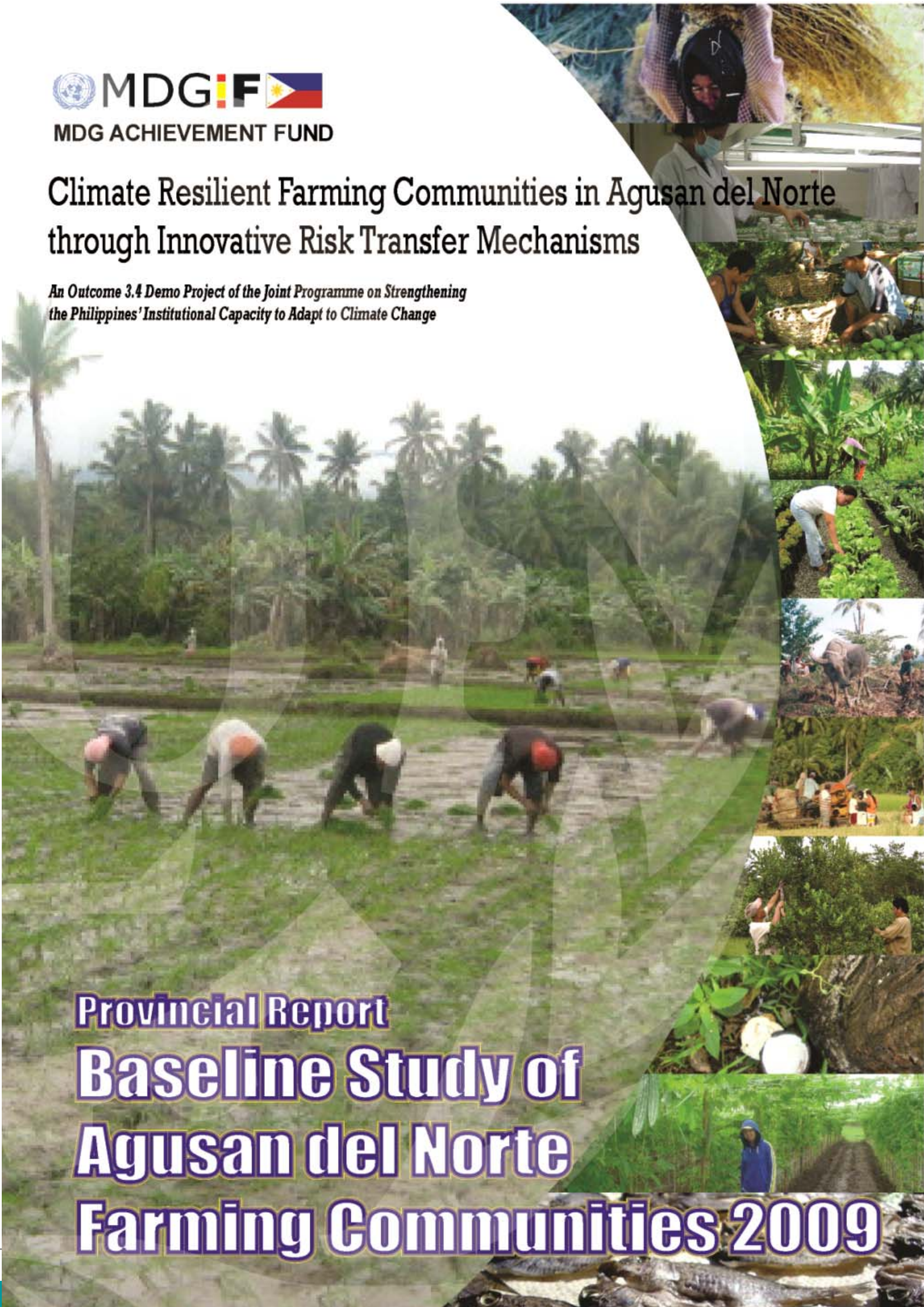
MDG ACHIEVEMENT FUND

Climate Resilient Farming Communities in Agusan del Norte through Innovative Risk Transfer Mechanisms

An Outcome 3.4 Demo Project of the Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change



Provincial Report

Baseline Study of Agusan del Norte Farming Communities 2009

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The Provincial Report

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International Labour Organization

In partnership with:

DEPARTMENT OF TRADE AND INDUSTRY PHILIPPINES

In collaboration with:

Propegemus Foundation, Inc.

The Provincial Report

Baseline Study of Agusan del Norte Farming Communities 2009

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This Provincial Profile forms part of the **Baseline Study Report on Agusan del Norte Farming Communities** prepared by the Millennium Development Goal Achievement Fund (MDG-F) 1656 Climate Change Adaptation Project (CCAP).

The Baseline Study Report presents a general profile of the farming communities in the province and its municipalities providing basis for the selection of priority vulnerable areas and/or sectors for the CCAP. It provides an account of the socio-economic profile of the communities including agricultural production, value chains-players and support institutions providing support in terms of training, technology and markets. It also presents environmental conditions, exposure to natural/climatic risks and discusses coping mechanisms employed by farming communities in response to these risks. Moreover, the report contains information on financial institutions, structures and schemes including attitude and perception of farmers to the same.

The report consists of the following parts:

Part 1- Provincial General Profile and Farming Communities Profile
Part 2-Muncipal Profiles (11)

Additionally, several accompanying documents to the Baseline Study Report are available. These include: (a) the baseline study instruments; (b) consolidated secondary data; and (c) consolidated results of the KIs and FGDs.

The CCAP is implemented by the International Labour Organization, a specialized agency of the United Nations, with GOP partners, DOLE, DTI and Province of Agusan del Norte.

The baseline study was conducted by the CCAP in collaboration with the Propegemus Foundation, Inc. from August-December 2009.

The Project Brief

The International Labour Organization (ILO), a specialized agency of the United Nations, in partnership with the Department of Labor and Employment (DOLE), Department of Trade and Industry (DTI) and the Province of Agusan del Norte is implementing a three-year Climate Change Adaptation Project (CCAP) entitled, **"Climate Resilient Farming Communities in Agusan del Norte through Innovative Risk Transfer Mechanisms".** This is under Outcome 3 of the **Joint Programme on "Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change",** a joint programme of the United Nations and the Government of the Philippines implemented with support from the Spanish Government through the UN Millennium Development Goals- Achievement Fund (MDG-F) Thematic Window on Environment and Climate Change.

This CCAP in Agusan del Norte aims to showcase key determinants of adaptive capacity at work [economic conditions as well as availability and access to financial and productive resources], where target vulnerable populations are provided access to financial and productive resources for purposes not only of helping them cope in the event of climate change triggered disasters but of improving their socio-economic lot, especially through diversified livelihoods schemes. Livelihood diversification is deemed critical as new types of livelihoods are often required to effectively adapt to disasters and climate change vulnerabilities

The Project Objective and Expected Outputs

Project's specific objectives are two-folds: (1***) To develop and test financial safety nets for vulnerable population, especially women***, and (2***) To develop the capacities of vulnerable populations to participate and avail of the benefits under economic diversification and a democratized governance system.***

To these ends, under the project, innovative financing and insurance schemes will be developed, tested together with viable climate change adaptation options and documented to aid replication and up-scaling. Specifically, the Project's SMART outputs are:
(1) Guidelines for the Innovative Financing;
(2) Agreement with a Financing Institution to implement the Financing scheme;
(3) Climate Change Adaptation Insurance Fund; and
(4) Knowledge Management products & Policy Paper on possible up-scaling/replication

The Project Site

The CCAP is implemented by the ILO and its partners in Agusan del Norte, one of the four provinces in the Caraga Region (Northeastern Mindanao) in Southern Philippines which economy is primarily based on agriculture. It is the region's leading rice producer and other major crops include coconut, banana, corn, mango and an emerging crop-abaca. The province continues to be a major timber producer, with plywood plants operating in Butuan City, Buenavista and Magallanes. It has a land area of 273, 024 hectares and a population of 314,027 (2007 Census), 49% of which are women. Approximately 31,913 or more than half of the households (55.6%) live below poverty line, [more than twice higher than the national average of 24.4%].

Four priority municipalities in the Province of Agusan del Norte have been selected namely: Buenavista, Jabonga, Las Nieves and Remedios T. Romualdez (RTR). These areas were selected on the basis of a set of criteria which included: (a) contribution to provincial agricultural production in terms of area/yield and number of families dependent on farming as a main income; (b) general environmental condition and history of climate risk exposure based on incidence of extreme events and proportion of farming families affected by these events; (c) availability and access to support providers of training, markets and technology; (d) availability and access to financing institutions; (e) availability and access to insurance schemes and other risk transfer mechanisms; (f) level of pertinent knowledge and skills for agribusiness, environmental and resource management; climate and disaster risk management; (g) existence of GO-LGU -NGO/PO and/or collaborative initiatives relating to agribusiness and climate/disaster risk reduction; (h) poverty incidence; and (i) peace and order issues and concerns.

The priority areas cover 52.39% of the land area in the province or 143,045 hectares which is home to 37.03% of the provincial population or 116,289 people. Likewise the home of 38.97% of the households living below poverty line (12,440 households) and 67.35% of the food-poor in the province (2,046 households). 106 NGOs/POs, including Financing Institutions, are reported to operate within these areas (39.70% of the reported 267 provincial data).

Acknowledgments

This baseline study benefits from the collaborative efforts of the implementers of the Climate Change Adaptation Project (CCAP) which comprise the Baseline Technical Working Group, the collaborators comprising the Baseline Study Group, the stakeholders in Agusan del Norte from the local government units and the communities.

Acknowledgments are due to the members of the **Baseline Technical Working Group** who worked closely with the ILO Project Manager in establishing the requirements and guidelines for the conduct of the study as well as the final structure of the Baseline Study Report, who provided inputs into the development of the instruments for the Key Informant Interviews and the Focus Group Discussions, gave comments to primary results and draft baseline study results. The TWG included. ***Brenda B. Corvera, Joy C. Dedel and Carl Yebes*** of the **DTI-Caraga**, ***Annie C. Tangpos*** of the **DOLE-Caraga**, ***Rofel C. Cabaltera, Lauro G. Hinaloc, Tomas Tener and Alvin P. Aclan*** of the **Province of Agusan del Norte (AdN)-PPDO, ENRD and PAO**. Additionally, the DTI Team provided technical assistance particularly in the analysis and mapping of value chains of identified crops across the eleven municipalities of the province.

Actual data collection, key informant interviews and focus group discussions, writing of the baseline study report were conducted by the team created by **Propegemus Foundation, Inc (PFI)**, the **Baseline Study Group** commissioned by the ILO. Thanks are due ***to Arnold L. Tapere***, Executive Director of PFI and his team of researchers (cluster heads), technical writers, data encoders and map preparers. Cluster heads include: ***Ma. Vilma C. Nadala, Nancita Cullano, Leila Beray, Ma. Albina Hontiveros and Analyn Bernal***. Special thanks to ***Mr. Winston Salvador*** who worked closely with Mr. Tapere and the ILO Project Manager in the finalization of the report.

Further assistance to packaging the Baseline Study Report into the format that it is now was provided by the Documentation Team of the **Caraga Learning Service Provider's Network (LSPN).** Special mention need to be made of ***Ronnel Lemuel Michael Val Calo, Kurt Chino A. Montero, Jane B. Huqueriza and Sharika Mae L. Maandig.***

Special thanks are also due to the local governments of the eleven municipalities of Agusan del Norte namely: Buenavista, Cabadbaran, Carmen, Jabonga, Las Nieves, Magallanes, Nasipit, Remedios T. Romualdes, Santiago and Tubay. Without their support, this report would also not have been possible. The conduct of secondary data collection, key informant interviews and focus group discussions were facilitated through the various Municipal Mayor's Offices, Municipal Agriculture Offices (MAOs) and the Municipal Planning and Development Offices (MPDOs).

Lastly and most important, our deep gratitude to the farmers in these municipalities, representatives of the farmers associations/rural based organizations, around 2000 of them, who as key informants and poll respondents, provided the information and bases for this baseline study report of the farming communities in Agusan del Norte.

To everyone who attended the validation workshop conducted in Butuan City, 3 December 2009, who helped enrich the information contained in this report, thanks are also given.

Lurraine Baybay Villacorta
Project Manager
ILO MDG-F 1656 Climate Change Adaptation Project

Acronyms

ABC	Association of Barangay Captains
ADN	Agusan del Norte
ADN-EMP	Agusan del Norte Environmental Management Plan
AGS	Agricultural Grade Salt
AT	Agricultural Technician / Technologist
ARC	Agrarian Reform Community
Barangay	The smallest socio-political/government unit (equivalent to a village)
BFAR	Bureau of Fisheries and Aquatic Resources
BSG	Baseline Study Group
CBMS	Community-Based Monitoring System
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
DOH	Department of Health
DOLE	Department of Labor and Employment
DTI	Department of Trade and Industry
EDCADS	Educational Discipline in Culture and Area-based Development Services
EMS	Environmental Management Specialist
FGD	Focus Group Discussion
FMR	Farm-To-Market Road
GO	Government Organization
HVCC	High Value Commercial Crop
ILO	International Labour Organization, a specialized agency of the United Nations (UN)
KI	Key Informant
LBP	Land Bank of the Philippines
LGU(s)	Local Government Unit(s)
LRED	Local and Regional Economic Development
MAO	Municipal Agriculture Office/r
MARO	Municipal Agrarian Reform Office/r
MDG-F	Millennium Development Goal-Fund
MENRO	Municipal Environment and Natural Resource Office/r
MHO	Municipal Health Office/r
MLGU	Municipal Local Government Unit
MPDC	Municipal Planning and Development Coordinator
MSWDO	Municipal Social Welfare and Development Office/r
NFTS	Natural Farming Technology System
NIA	National Irrigation Authority
NGO	Non-Government Organization
NSO	National Statistics Office
OTOP	One Town One Product
PACAP	Philippines-Australia Community Assistance Program
PCA	Philippine Coconut Authority
PCIC	Philippine Crop Insurance Corporation
PCPP	Philippine Coconut Productivity Program
PFI	Propegemus Foundation, Incorporate
PIDS	Philippine Institute for Developmental Studies
PPFP	Provincial Physical Framework Plan
RHU	Rural Health Unit

TESDA	Technical Education Skills Development Authority
TOR	Terms of Reference
TWG	Technical Working Group

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Executive Summary

The Baseline Study of the Farming Communities of Agusan del Norte is anchored on the perspective that community development and initiatives should start at the local level where the local perceptions and judgment of the local populace are hatched and inspired towards crafting informed policy decisions for possible interventions by any development agencies and organizations.

The baseline study is in line with the implementation of the Millennium Development Goals-Fund (MDG-F) Climate Change Adaptation Project, Climate Resilient Farming Communities in Agusan del Norte through Innovative Risk Transfer Mechanism implemented in the province of Agusan del Norte by the International Labour Organization (ILO) as its pilot area with possible up-scaling and replication in other areas in the country. The Project aims to attain two major objectives and that is to develop and test financial safety nets for vulnerable populations, especially women and to develop the capacities of vulnerable populations to participate and avail of the benefits under economic diversification and a democratized governance system.

Objectives

The baseline study aims to achieve the following objectives: (1) to identify and map farming communities in Agusan del Norte according to crop/sector per municipality and the players in the major farming value chains in relation to their respective crops in these farming communities; (2) to establish and validate the ecological profile of the province and its farming communities, as well as their social, economic, environmental, political and security conditions; (3) to identify the general environmental conditions and climate risk exposure including but not limited to extreme events or disasters along with coping strategies employed; (4) to identify GO, LGU, NGO/PO and/or collaborative initiatives, projects and programmes related to agri-business as well as climate or disaster risk reduction and enhanced coping mechanisms; (5) to identify support institutions pertaining to training, markets and technology; (6) to identify financial institutions, structures and schemes including existing informal financing schemes; to identify existing insurance schemes and other risk transfer mechanisms; (7) to assess the knowledge and skills as well as training needs of farmers, especially women farmers, in existing and alternative lines of work and/or business and (8) to be able to draw up conclusions and recommendations on priority areas by taking into consideration the interplay of the factors mentioned above as well as on priority training needs vis-à-vis thrust for economic diversification.

Methodology

Aside from relevant secondary data derived from the offices of PPDO, PAO, MPDO MAO and regional line agencies, other research instruments and processes were formulated, implemented and validated to supplement the secondary data. These are Focus Group Discussions[FGDs], particularly on Resource Access Mapping, Trend Analysis, Production Calendar and Value Chain Mapping and Analysis; Key Informant Interviews and the General Poll. There were 300 key informants and 1200 poll respondents and about 2000 participants for the FGDs, who were from the 126 rural farming barangays in Agusan del Norte, conducted from August to December 2009.

Agricultural production per municipality

As indicated in the value chain mapping and analyses conducted in the eleven municipalities across the province, the farming communities in Agusan del Norte are largely dependent on its major crops such as coconut, rice, corn, mango, banana and on fish products. Coconut farmers are spread-out in all the municipalities of the province while rice-producing activities can be found largely in the municipalities of Remedios T. Romualdez, Buenavista, Kitcharao, Cabadbaran, and Kitcharao. For the most part, corn farming activities are located in Las Nieves, Remedios T. Romualdez, Nasipit, Tubay, Santiago, and Jabonga. The production of mango is concentrated in the municipalities of Carmen, Nasipit, Buenavista and Tubay; while banana production activities and banana farmers are located in the municipalities of Jabonga, Kitcharao, Santiago, Cabadbaran, and Buenavista. Activities related to fish production are located in the coastal municipalities of Magallanes, Buenavista, Nasipit, Carmen, Tubay and in lakeshore communities of Jabonga and Kitcharao.

The number of households engaged in farming in relation to the total number of households differs in every municipality in the province. Cabadbaran City has the most number of households engaged in farming (18.5%), followed by Buenavista(18%), Las Nieves (12.7%), Nasipit(11.4%),

Jabonga (10.1%), Tubay (6.6%), RTR(6.1%) and Santiago(5.7%). There are few farming households engaged in municipalities with coastal areas, like Carmen (3.9%) and Magallanes (1.3%). For the sources of irrigation in these farms, 76% of the informants identified the National Irrigation Authority [NIA] as their main supplier of water, 15% have self-help irrigation system while 9% are into water impounding. In addition, it helps that major river channels exist across the province.

On the other hand, the number of households engaged in fishing activities in relation to the total number of households also differs in every municipality. Magallanes, the municipality with the least number of farming-households, have the most number of fishing-households (30.1%). It is followed by Cabadbaran (17.8%), Nasipit(16.4%), Buenavista and Carmen (both 12%). There are very few households engaged in fishing in Jabonga (2.7%) and Kitcharao (1.4%) and none in Las Nieves, RTR and Santiago.

In terms of agricultural landownership of the farming households in the province, 56% of the key informants interviewed indicated that they are owners of the lands they are tilling while 44% indicated that they are non-owners. For the non-owners of lands, many have tenurial arrangements with their landlords (45.5%) while some are tenants(21.8%) ; some are engaged in fixed rental (19.8%) and some are borrowing the land without rent (13.9%). It was indicated that the average farm area is about 2.43 hectares per household.

The farming households' sources of income

Seventy six percent of respondents in the province derived their main sources of income from farming while the other 24.4% derived it from fishing. Other sources of income of the farming households in the province come generally from wages of doing non-domestic work within their respective municipalities (48.0%); small business (29.0%) and farm labor (22.6%). Few farmers derived it from pension (4.3%) and domestic work (3.6%). On their average daily income, many of the key informants have an average income of at least P200.00 (63.3%) and some have at least P300.00 (25.3%). The remaining 11.2% have income from P300.00 to P500.00 and above. This shows that many farmers are living below the minimum wage rate set in Caraga Region, which is at P220. On their daily spending, two thirds of the key informants were spending at least P200.00 daily while 24.6% were spending up to P300.00 , which means that little or none is left for saving of money.

Production trend

In terms of agricultural production and trend of major crops, the farmers, as indicated by 54% of the KI responses, have observed a decrease in production in the past five years while 39% indicated that the production trend is fluctuating. Another 6% observed that there is an increase in the production while very few(1%) observed a static movement.

Moreover, the production trend for fish catches in the past five years has decreased as indicated by 44% of the key informants involved in fishing activities across the province while 28% of them observed a fluctuating trend. Ten percent have observed an increase in fish catches in the past five years. A sizable 17 % have observed that there was neither increase nor decrease in fish catches trend over the past five years.

There were many factors that led to the production trend of major crops and fish catch. As indicated in the results, a total of 73% of the key informants indicated that climate change greatly affected their production; 46% indicated that lack of financial or capital also affected their production; 19% attributed that production was affected by lack of markets and 11% said it was due to technology. Some 6% indicated that agricultural production was affected by inputs.

Observed climatic changes

In terms of the observed climatic changes across the province, a multiple response analysis showed that increase temperature was one of the most resoundingly felt changes, as observed by 85% of the respondents while 64% have observed drought; 47% have observed flooding and 44% have observed heavy rainfall. Some 38% have observed pest infestation on crops; 7% have observed salt intrusion in water and another 5% have observed siltation.

Observed effects of climatic changes and coping mechanisms

A multiple response analysis showed that the observed effects of climatic changes were the decrease in production with 77%; 51% indicated that it led to cropping failure; 45% indicated that it led to incidence of crops and fish diseases while 34% indicated that it led to illness of family members. Other 23% indicated that it led to decrease in fish catch.

In order to cope with the effects of climatic changes, 72% of the respondents have engaged in paid labor, mostly doing non-domestic work; 71% have engaged in other productive activities while 37% have engaged in organic farming. Some 32% of them have also indicated that they have accessed loans.

Access to assistance and support providers

The main support providers are government offices and non-government organizations. There are significant differences in terms of the amount of support received, of which government support is greater than those given by the NGOs. Thirty four percent of the key informants say that trainings, as form of production assistance, were provided by government offices while 9.55% say that these are provided by NGOs. In terms of cash inputs, 34.36% of the informants indicated that they have received it from the government and 5.27% have received it from NGOs. In terms of technology assistance,18.73% of the informants indicated that they have received it from the government while 2.91% indicated that it was provided by NGOs. Financing assistance was mainly provided by the government as indicated by 18.55% of the informants while only about 0.18% of them said these came from NGOs. In terms of equipment assistance, 1.82 % said they have received it coming from the government and non from NGOs. In terms of marketing assistance, 1.27 % of the respondents received it from NGOs and .82% of them received it from the government.

The informants also provided that they have received assistance from both LGUs and NGOs in relation to their basic needs such as food (29.9%) , water(8.4%), educational (2%), medical (1%), housing (1%), and other assistance like animal dispersal and clothing (3.2%).

Availability and access to financial support providers

Availability and access to financial support providers is relatively adequate as indicated in the KI and GP responses. On savings and its financing schemes, a multiple response analysis shows that 34% of the respondents said they were saving for their retirement age and for medical and emergency needs. Another 40% of the informants were saving for the capital of their business and faming; 33.91% were saving for their children's education and 6.09% were saving for house repair finances. Other purposes of having savings include family consumption.

The majority of the informants and poll respondents indicated that they put their savings in their respective houses (53%). Some put it on banks (32%), cooperatives (7%) and MFIs(4%).

The consolidated KI and GP results show that more than half (55%) of the key informants and poll respondents indicated that they could not save money because their income is enough only for their subsistence and while another 53% of them also attributed it to income insufficiency. Another 3% also indicated that they could not save due to absence of financing institutions operating in their respective municipalities. Other reasons included were : income is prioritized for their children's education, loans that are yet to be paid and that their income is enough for farming and fishing expenses (2%).

The farmers interviewed were favorable towards access of loans as 57% of them had incurred loans in the past five years. The KI results further show that majority of the informants have accessed loans from the banks (55%). Other got if from credit cooperatives(16%); MFIs(15%) and individual lenders (10%), the government (4%) and others such as barangays and NGOs (6%).

For those who reported to have a choice in their sources of loans, they indicated that they have chosen their respective sources because of its easy access (62%) and low interest rates (43%). Access to loans also was due to their membership with the institutions (23%) and personal connections (5%).

The terms of the incurred loans by the farmers also differ. Thirty eight percent of the informants preferred a 3-6 months amortized term payment while 36% of them pay it with monthly interest rate and monthly collection of interest. The other 17% have a one-year and above amortized payment while few (7%) are into 3-6 months lump sum payment term. The other 2% of the informants indicated that they have an annual interest rate and annual collection of interest.

Availability and access to insurance

Availability and access of the farmers to insurance is relatively adequate. In multiple responses, majority of the farmers interviewed (58%) have access to personal insurance such as medical and life insurances. Two of the most popular insurance institutions are PhilHealth (68%) and SSS (37%). Other sources of insurance are mortuary(10%), GSIS and Pag-Ibig (both 5%), and

cooperatives (4%). Also listed are private insurance agencies (13%) such as Standard Insurance, Eye Care Insurance and St. Peter Life Plans.

Many informants with insurance indicated that they have chosen their respective insurance sources because of its easy access (49%), their membership to the insurance institution (39%), its low interest rates (22%) and their personal connections (6%).

Results would indicate that more than half of those informants (53%) who have not enrolled in any insurance coverage are constrained to do so because of insufficient income and because their income is only enough for their subsistence (39%). A few informants (6%) reasoned out that the it is because there were no available institutions and while other say that enrolling in an insurance system is not among their priorities (4%).

Of those who have not enrolled in any insurance scheme, 51% are willing to obtain insurance while 49% are not willing. Of those who are willing to obtain insurance, 82% wish to enroll in personal insurance while the other 27% of the responses wish to enroll in crop insurance.

The KI results also show that only the key informants in the municipalities of Buenavista, Cabadbaran, Santiago and RTR have indicated that they have enrolled to crop insurance coming from the Philippine Crop Insurance Corporation [PCIC].

The Project Introduction

1.1 PROJECT BACKGROUND AND RATIONALE

A Climate Change Adaptation Project under Outcome 3: Coping Mechanisms improved through pilot schemes with national up-scaling potential of the "Millennium Development Goal –Fund (MDG-F) 1656 Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change" is implemented by the International Labour Organization (ILO), a specialized agency of the United Nations in partnership with the Department of Labor and Employment (DOLE) and the Department of Trade and Industry (DTI) to support vulnerable farming communities in Agusan del Norte.

A key premise of the Project is that economic condition of population, whether in terms of economic assets, capital resources, financial means, etc. is a very important determinant factor of the adaptive capacity to climate change impacts. Poor people are at a disadvantageous situation while the wealthy ones are better equipped to deal with the costs of adaptation.

Besides, access to and not only availability of resources, is also another important determinant factor which could spell the difference in a population's capacity to adapt to climate change and other similar phenomena. These resources include not only financial resources but also access to productive resources such as training, markets and technology. It is recognized that adaptive capacity of vulnerable communities will be greater if social institutions and arrangements governing the allocation of power and access to resources is more equitably distributed. A more integrated and comprehensive approach is required to ensure long-term preparedness for climate change.

The Project aims to showcase these determinants at work, where target vulnerable communities are provided access to financial and productive resources for purposes not only of helping them cope in the event of climate change triggered disasters but of improving their socio-economic lot, especially through diversified livelihood schemes. Risk transfer mechanisms like revolving funds and innovative insurance schemes are expected to help develop resiliency through flexible financial mechanisms. Providing the enabling conditions for livelihood diversification is critical as new types of livelihoods are often required to effectively adapt to climate change.

The Project aims to attain the following objectives: (1) to develop and test financial safety nets for vulnerable populations, especially women and (2) to develop the capacities of vulnerable populations to participate and avail of the benefits under economic diversification and a democratized governance system.

It is on this context that ILO is conducting a baseline study in the selected pilot province of Agusan del Norte with primary focus on its farming communities. The primary purpose of the study is to present a general profile of the farming communities of Agusan del Norte which will provide the basis for the selection of priority vulnerable areas and/or sectors for the Project.

1.2 THE BASELINE STUDY

1.2.1 OBJECTIVES OF THE BASELINE STUDY

The general purpose of the baseline study is to present a comprehensive profile of the farming communities of Agusan del Norte as the basis for the selection of priority vulnerable areas and/or sectors for the project.

The final output is the Baseline Study Report of Agusan del Norte Farming Communities pursuant to the basic structure stipulated in the Terms of Reference [TOR] provided by the ILO Project Manager.

To secure the minimum information requirements pursuant to the basic structure of the Baseline Study Report, the following objectives are required to be accomplished by the contracted Baseline Study Group:

1. To identify and map farming communities in Agusan del Norte according to crop/sector and by municipality;
2. To establish and validate the ecological profile of the province and these farming communities to include social, economic, environmental, political and peace and order condition;
3. To identify the general environmental conditions and climate risk exposure including but not limited to extreme events or disasters along with coping strategies employed;
4. To identify GO, LGU, NGO/PO and/or collaborative initiatives, projects and programmes relating to agri-business as well as climate or disaster risk reduction and enhanced coping mechanisms;
5. To identify the players in the major farming value chains in these farming communities;
6. To identify support institutions pertaining to training, markets and technology;
7. To identify financial institutions, structures and schemes including existing informal financing schemes;
8. To identify existing insurance schemes and other risk transfer mechanisms;

9. To be able to assess the knowledge and skills as well as training needs of farmers, especially women farmers, in existing and/or alternative lines of work and/or business;
10. To be able to draw up conclusions and recommendations on priority communities, areas and/or sectors taking into consideration the interplay of the above factors as well as on priority training needs vis-à-vis thrust for economic diversification.

1.2.2 STUDY METHODOLOGY AND APPROACHES

The International Labour Organization (ILO) and the Technical Working Group (TWG) Composition

The MDG-F Climate Change Adaptation Project, implemented by the International Labour Organization [ILO] in the province of Agusan del Norte, is represented by its Project Manager, who exercises all decision-making actions and supervision in all of the activities pursuant to the conduct and delivery of the baseline study.

Additionally, the ILO organized a Technical Working Group (TWG) that is composed of selected senior technical personnel of its partners – the Department of Labor and Employment (DOLE - Caraga), Department of Trade and Industry (DTI-Caraga) and the Provincial Office of Agusan del Norte. The TWG also consists of representatives from selected institutions in the field of environment, micro-finance and/or insurance.

The TWG worked closely with the ILO Project Manager to carry out the following tasks:

- Establishing the minimum information requirements and guidelines for the conduct of the study as well as the final structure of the Baseline Study Report;
- Participation in the technical orientation/briefing to be conducted by the ILO with the contracted Baseline Study Group to share insights on the methodology for the Focus Group Discussions (FGDs), Key Informant Interviews (KIs) as well as on its subsequent analysis;
- Review and validation of outputs of the Baseline Study Group
- Facilitation of the provincial validation workshop to discuss the results of the study and draw general conclusions and recommendations for a priority community, area and/or sector as well as priority training needs.

The Baseline Study Group

Propegemus Foundation, Inc. (PFI) had been engaged to undertake the Baseline Study of the Farming Communities of Agusan del Norte pursuant to the Service Contract entered with the International Labour Organization effective August 12, 2009 to December 10, 2009. PFI was recommended to execute the work and/or services pertaining to the conduct of "Baseline Study on Agusan del Norte Farming Communities" of the MDG-F Climate Change Adaptation Project.

PFI is a non-stock, non-profit and non-governmental organization committed to the two-fold task of preserving the environment and promoting social equity. Since its establishment in 1994, it has been engaged in services geared towards addressing the twin problems of rural poverty and ecological destruction, specifically of rainforests and watersheds. It has been a partner of the Australian Agency for International Development (AusAID), Save the Children, Department of Agrarian Reform/International Fund for Agricultural Development- Northerm Mindanao Communities and Resource Management Project (DAR/IFAD-NMCIREMP), Heifer Philippines International among others, in several projects in the Caraga Region in undertaking focused in assessments, monitoring and evaluation, capacity-building for rural populations and on environment and natural resources management.

PFI is also affiliated with the Caraga Learning Service Providers Network (LSPN) and has a large pool of in-house and accredited consultants necessary for the conduct of the baseline study.

The Baseline Study Group Composition

Propegemus Foundation, Inc. as the Baseline Study Group (BSG) has created an interim Research Team from its in-house and accredited consultants that worked and carried out the research tasks as stipulated in the Terms of Reference (TORs) contracted and signed between the Foundation and the International Labour Organization (ILO).

The following people and their respective functions are responsible for the over-all delivery of the research output, as follows:

1. The Research Core Group –this is composed of One (1) Over-all Team Leader and (5) Cluster Heads
   - Exercises over-all supervision over the study and acts as the policy-making body of the Baseline Study Group;

- Plans activities and evaluates the implementation of the whole research;
- Provides analyses on the results of the research;
- Reviews and finalizes the Baseline Study Report

2. Over-all Team Leader (1)
   - Exercises over-all supervision of field work
   - Undertakes local networking and coordination
   - Coordinates training of survey team
   - Participates in the conduct of analysis of project results
   - Hires the required personnel of the study
   - Mobilizes financial resources based on the approved budget

3. Cluster Heads (5)
   - Provide technical guidance and expertise to his/her research members;
   - Facilitate the conduct of the research tools to his/her area of responsibility;
   - Assist in the formulation of the research guide questions;
   - Lead the research team in the conduct and over-all delivery of the research in his/her assigned area;
   - Submit periodic report to the Over-all Team Leader;
   - Attend consultation meetings with the Over-all Team Leader

4. Technical Writers (2)
   - Take the lead in the analyses and writing of the Baseline Study Report;
   - Assist in the preparation of the research instruments;
   - Do other functions as may be required by the Over-all Team Leader

5. Researchers (15)
   - Gather data from LGUs, NGOs and Pos;
   - Coordinate with local offices and key informants;
   - Document/record proceedings of the Focus Group Discussions;
   - Perform other functions as may be directed by the Cluster Head and the Over-all Team Leader;
   - Submits periodic report to the Over-all Team Leader

6. Data Encoders/ Collators (7)
   - Encode gathered data from the field researchers and data from, secondary sources;
   - Coordinate with the Technical Writers on the data needed for the Baseline Study Report;
   - Attend meetings called by the Over-all Team Leader;
   - Perform other functions as required by the Over-all Team Leader

7. Map Preparer (1)
   - Prepares thematic maps per crop and per municipality of the province;
   - Coordinates with the Local Assessors to get needed maps of the study;
   - Performs other functions required by the Over-all Team Leader

To facilitate research activities for the whole province of Agusan del Norte, the Baseline Study Group employs clustering of the municipalities based on their geographical contiguity, similar ecosystems and common crops.

Clustered Areas are the following:

Cluster 1: Kitcharao, Jabonga, Santiago
- Located along the immediate Lake Mainit Basin

Cluster 2: Tubay, Cabadbaran, RTR
- Influenced by the rich and well-watered Cabadbaran plain

Cluster 3: Buenavista, Nasipit, Carmen
- Characterized by a narrow coastline and hills of western Butuan Bay

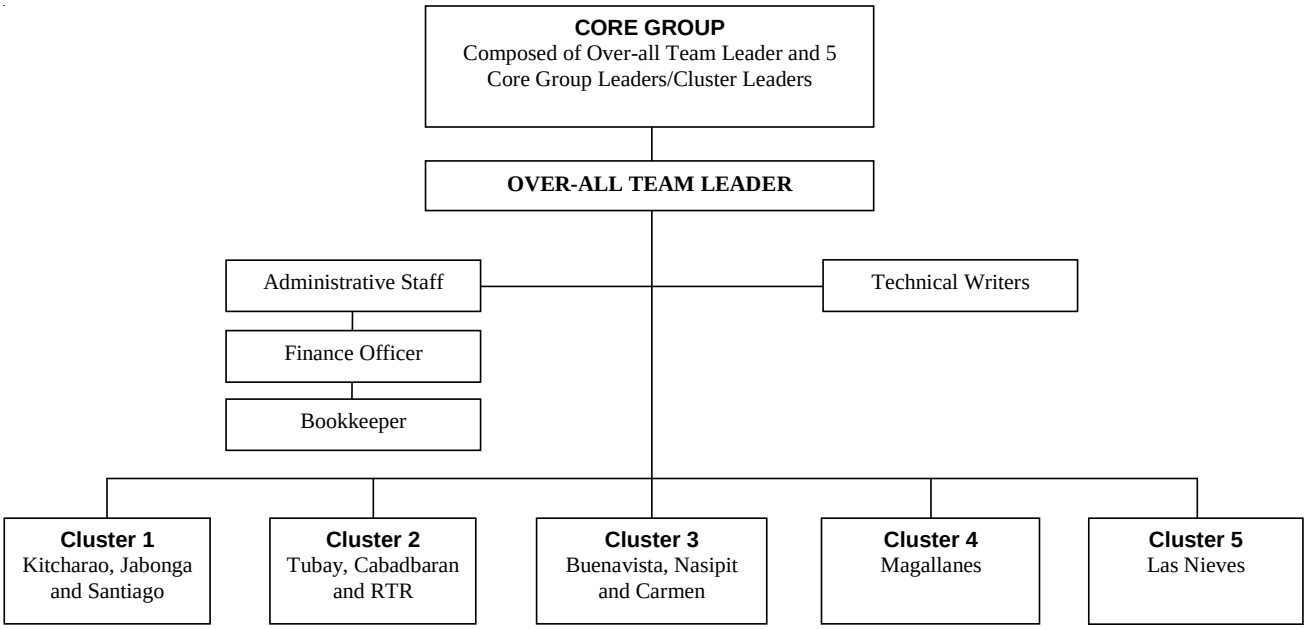
Cluster 4: Magallanes*
- Situated on the deltaic wetland at the estuary of Agusan River

Cluster 5: Las Nieves*
- An alluvial valley at the lower end of the middle basin of Agusan River

Based on the created clusters, five (5) Research Teams are created and assigned on each of it. Each Research Team is composed of the following:

- One (1) Experienced Cluster Head/Facilitator,
- One (1) Co-Facilitator,
- Two (2) Researchers with skills in field data gathering that would work also as Documenter and Logistics in-charge.

The Baseline Study Group Structure



Process Flow and Instruments

The research tools and methodologies were jointly prepared by the ILO Project Manager with the Technical Working Group and the Baseline Study Group. The tools were designed to get the relevant secondary and primary data at an efficient time and at a reasonable cost. The tools, methods and processes that were employed provided the baseline information of the farming communities of Agusan del Norte the necessary data in the analysis of its socio-economic conditions and environmental constraints brought about by climatic changes and to showcase the coping mechanisms they have employed to cope with these challenges.

The research methods, processes and instruments included the following: secondary data collection and summation of data gaps, Key Informant Interviews (KIs), Focus Group Discussions (FGDs), and the General Poll.

Secondary Data Gathering

Secondary data is crucial in establishing a valid views of a certain locality since these came from official and legitimate source of information. Secondary data gathering is a research tool that aids in the analysis of the current and prevailing status of a certain locality which also further aid in polishing plans and interventions to address the needs of the people.

Thus, the structure of the Baseline Study started with the compilation of available written materials or secondary data from target sources in the province that were used in zooming in the needed information vis-à-vis the minimum information requirements and guidelines as well as the required structure as stipulated in the TOR. Secondary data were gathered from official sources such as Provincial Offices, Government Line Agencies, NGO offices, and from relevant Internet sources.

The Baseline Study Group, with the technical assistance of the TWG and the ILO Project Manager, set a system in the collection and gathering of the secondary data. Collection and compilation of available written materials from official sources were signed and certified upon release by the ones preparing and releasing the data thus made it official vis-à-vis the source data and respective offices. The data were then segregated into folders according to the source offices for easy retrieval.

The Baseline Study Group then reviewed and analyzed the collected written materials and identified information gaps vis-à-vis the minimum information requirements set in the TOR. The information gaps were sought in the FGDs, KIs and General Poll/Survey for the final presentation of the Baseline Study Report.

Secondary data process flow:

- *Collection and compilation of available written materials (segregated into folders per source/office)*

- *Sorting of relevant and irrelevant data according to the required structure*
- *Follow-up collection of secondary data that apparently are gaps*
- *Compilation of relevant data according to the required structure*
- *Processing/Tabulation of relevant data according to the required structure*
  - Encoding and/or scanning of relevant data
  - Consolidation of relevant data
  - Proofreading of the encoded/processed data vis-à-vis the sources of the secondary data
  - Final consolidation of secondary data
- *Storage of data*
  - Print hard copy
  - Back up and storage of electronic copy

Focus Group Discussion [FGD]

Focus Group Discussion [FGD] is a social tool that was used by the BSG to gather qualitative information from primary sources. Participants from the farming communities identified for the study were gathered in a workshop or round table discussion to share their experiences, perceptions, and knowledge on the issues/topics in focus indicative contingent on the results of the secondary data review done previously by the research group. The tool served to validate information in the secondary data.

The BSG conducted two simultaneous FGDs for every two municipalities to ascertain utmost attention and maximization of the resources and staff at the same time to ascertain the quality of the data that will be getting from the participants. Research staff composition in the actual conduct of the FGDs were composed of a Facilitator who led the discussion, a Co-Facilitator who assisted the facilitator, a Documenter who took charge of the documentation of the proceedings at the same time who kept watch of the time spent for every activity of the FGD tools and a Logistics in-Charge who took charge of the preparation and delivery of the materials needed for the discussion.

Tabular FGD distribution per municipality is shown in Annex: Conceptual Framework Table 13.

Participants

The participants of the Focus Group Discussions were selected on the bases of the following representation:

A. Government representation that were composed of the Barangay Captain or Barangay Kagawad on Agriculture; ABC President; the Municipal Agrarian Reform Officer (MARO); The Municipal Agriculture Officer (MAO); the Municipal Planning and Development Coordinator (MPDC); the Municipal Health Officer (MHO); the Municipal Social Welfare and Development Officer (MSWDO) and the Municipal Environment and Natural Resources Officer (MENRO).

B. Non-Government Organizations representatives were composed of NGOs working with farmers with at least 3 years in the area; representative(s) from the academe; and geographical representation from associations of farmers, fisherfolk and women.

C. FGD Value Chain participants involved were the Barangay Captain or Barangay Kagawad on Agriculture; ABC President; MARO; MAO; MPDO; MENRO, NGOs working with farmers with at least 3 years in the area; representative from the academe; geographical representation of farmers, fisherfolk and women associations; entrepreneurs and industry leaders, and cooperative leaders.

F.G.D. Tools

The FGD tools that were employed by the BSG included Resource/Access Mapping, Trend Diagram, Production Cycle Calendar and Value Chain Mapping.

- *Resource / Access Mapping*

Resource and Access Maps helped in the identification of local resources and its accessibility to the farming communities. These included but not limited to agricultural resources and facilities, agri-business related establishments, financial institutions, technology and marketing support agencies and projects.

- *Trend Diagram*

The Trend Diagram covered periodic changes in the yields of crops per harvest that included its corresponding income per harvest per area of production and also the reason for such changes in technology and climatic condition.

Trend diagram was useful in the plotting of increases or decreases in production yield of crops or fish catch within a certain length of time e.g. per year or per harvest period. It

helped the researchers in the analysis of production trends and the factors contributing to such trends.

- *Production Cycle Calendar*

The Production Cycle Calendar assisted the FGD participants in identifying specific crops and the activities required from planting to harvesting indicating the months of the year when each production activity is done by farmers.

The tool facilitated in the gathering of the data in finding the type of crops grown in the farming communities; production activities of farmers / crop; months of the year with the highest production activities, months with the least or no production activities; other activities for livelihood engaged in during no production months and other skills available in the farming communities and the training needs of farmers.

- *Value Chain Mapping*

VC Mapping is the process of identification of sequences of related activities or functions of a certain agricultural activity and the operators performing these functions from the provision of specific inputs to production and to the transformation of the product; to its trading and lastly, to the final consumption of a particular crop or product.

It helped in analyzing relationships of related activities from the operators and functions in a chain, down to the provision of inputs and to the final consumption of a specific product or commodity.

The value chain map aided the BSG in identifying the business activities and actors involved in the different functions of producing the major products of a particular community.

The analyses of these functions and actors helped pinpoint areas for intervention or support depending on the situation as seen from the value chains that were established.

For the full guide of the FGD Workshop Guide please see Annex: Guide for the Actual Conduct of Focus Group Discussion.

General Poll / Survey

The General Poll had a sample size of 1,200 respondents from around the province and were carefully selected representatives of farming households, including those households where fishing is the main activity. The results of the poll supplemented the information obtained from the KIs, the FGDs and secondary sources.

The one-page questionnaire dealt with questions on observed climate change and felt impacts; practice of savings and existence of related institutions as well as of availability of insurance and related institutions thereto.

- *Steps in the Processing of Accomplished General Poll Questionnaires*

– Compilation of Poll results
– Processing/Tabulation of data according to required structure (to ensure correctness of the processed data according to the accomplished answer sheets, the BSG saw to it that data processors/encoders have an accompanying reader of the answer sheets who served as second eye or checker of the encoders)
– Proofreading
– Synthesis of the data according to the required structure
– Analysis of the data
– Presentation of the final data according to the required structure

For the full guide of the General Poll Instrument please see Annex: Guide for the Actual Conduct General Poll.

Profile of Key Informants

Table 1. Profile of Key Informants

Characteristics	X	f	p
Gender			
female		89	29.67
male		211	70.33
Age			
female	47		
male	43		
Average Household Size	6		
Highest Educational Attainment			
College Graduate	24	8	
College Level	43	14.3	
Vocational	5	1.6	
High School Graduate	72	24	
High School Level	63	21	
Elementary Graduate	60	20	
Elementary Level	29	9.7	

N=300 Key Informants

To have a specific perspective on the farming communities of Agusan del Norte, the rural barangays were selected in the study.

A total of 300 Key Informants were selected on the bases of the criteria as discussed in the methodology representing 126 sampled rural barangays in the province, of which 30 % were females and 70% were males (X age = 47 males; 43 females). The average household size of the key informants is 6 members per household.

On their highest educational attainment, only 8% had finished college while many of them were either high school graduates (24%) or had reached high school level and were elementary graduates (both at 20%).

Employment, Livelihood and Income Sources

Main sources of income of the key informants. About 76% of the key informants are engaged in farming as their major source of income while the other 24% are into fishing.

Crops and livestock. As indicated in the consolidated KI results from the 10 municipalities and one city, the municipalities engaged in crop and live stock farming are Cabadbaran (19%) and Buenavista (18%), with Jabonga having a sizable percentage at 10% being a lakeshore community.

Fishing. Magallanes has many informants engaged in fishing activities with 30% followed by Cabadbaran with 18% and Nasipit with 16%. Because of the geographical location, no fishing activities are reported in RTR, Santiago and Las Nieves.

Other sources of income. The farmers have alternative sources of income. Many of them (48%) have non-domestic work while others are engaged in small business (29%). Some are contracted as farm laborers (23%) while others do fishing activities (15%). Few of them do domestic work(4%) and depend largely on their pension (4%).

Average daily household income. More than half of the key informants or 63% have daily estimated household income of P200.00 and below; while some 25% have daily income up to P300.00. Few of the KIs (6%) have income of up to P400.00 per day while another 6% have income of P500.00 and above.

Average daily household expenses. A total of 67% of the KIs have incurred daily expenses of P200.00 and below while the other 25% indicated to have been spending of up to P300.00 per day; 6% are spending up to P400.00; while 3% only have daily expenses of P500.00 and above.

Figure 1. Distribution of the Key Informants Involved in Farming Crop and Livestock

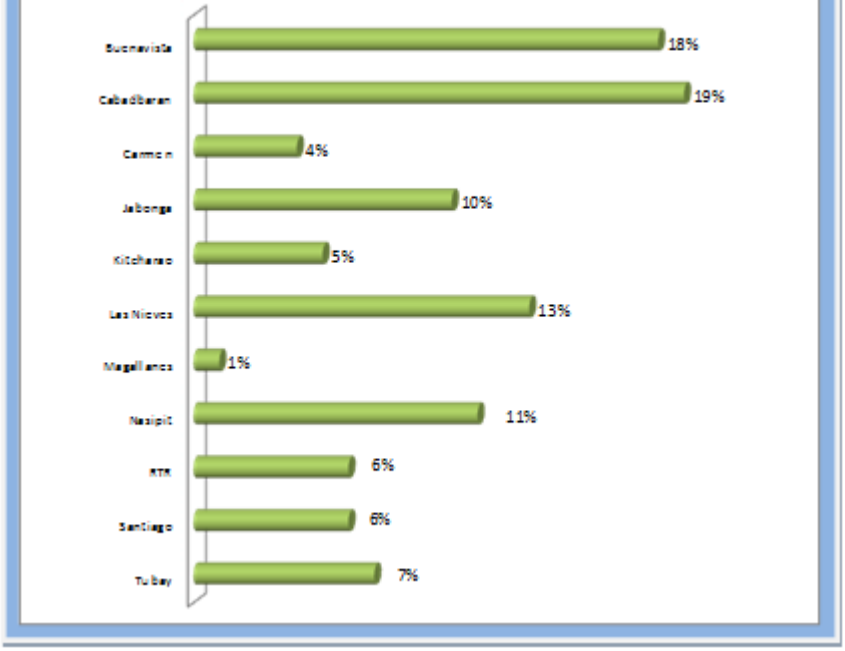
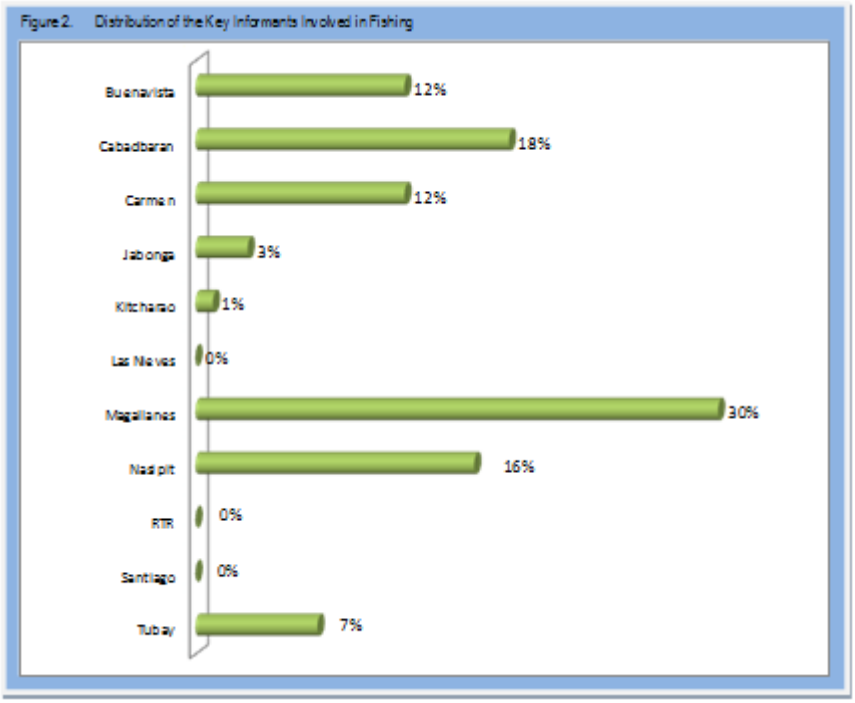


Figure 2. Distribution of the Key Informants Involved in Fishing



1.2.3 KEY INFORMANTS / KEY INFORMANT INTERVIEW

The Key Informant (KI) Interview is another research tool that was employed by the Baseline Study Group in the gathering of quantitative and qualitative information on specific subject of the study. It has a focus on topics indicative contingent on the results of secondary data analysis as they are able to shed light on certain critical issues on account of their direct contacts or on-the-ground experience related to the subject. Key Informant interviews also served to validate identified data gaps in the secondary data analysis.

The Baseline Study Group utilized the population of rural barangays in the entire province as its base point in the computation for its selection of key informants. The selection of rural barangays was based on the perception that farming communities are generally situated in these areas. Generally, it is in the rural barangays where agricultural areas are located and where the presence of farmers and fisherfolk are pronounced. The concentrations of agricultural farms were also situated in these areas wherein households are most dependent on farming and fishing activities as major sources of income.

The sampling method used by the Baseline Study Group to come up with the subscribed number of key informants was based on the sampling method employed by the Germany Technical Cooperation (GTZ) on the Local and Regional Economic Development (LRED) approach that used a sampling of 60-80 key informants in a locality of 50,000 inhabitants for them to have come up with a representative sample that reflects the economic situation of local areas.

Thus for this research, 300 individuals were identified across Agusan del Norte as key informants for the Baseline Study duly distributed according to the computed weighted mean of the total population of rural barangays of every municipality against the total population of the rural barangays of the province.

Moreover, the key informant interviews were complemented by a General Poll of 1,200 respondents around the province.

THE KEY INFORMANTS

The Key Informants were identified and selected with the help of the Municipal Agriculture Offices (MAOs) from the eleven (11) municipalities of the province. The MAOs furnished the Baseline Study Group the master lists of land-based farmers and fishers. From the master lists, the Baseline Study Group carefully selected the key informants based on their personal knowledge on the condition and/or situation of farming households; direct or indirect involvement in the activities and/or provision of support to activities of farming households; roles and responsibilities with regards to policies on environment and/or governance structure affecting farming households and as such concerned LGU officials.

Detailed distribution of sample size of the KIs per municipality is shown in Annexures: Conceptual Framework Tables 2 - 13.

THE INSTRUMENTS

The KI Instrument is an 11-page questionnaire which covers (a) personal and household profile of the key informant; (b) main source of income/livelihood; (c) nature/type of livelihood activity(ies); (d) ownership of land, equipment and other related assets; (e) observed climatic changes and felt impacts; (f) coping mechanisms employed; (g) assistance received from government/non-government organizations; (h) practice of savings and existence of related institutions; (i) availment of loans and existence of related institutions; (j) availment of insurance and existence of institutions related thereto. The questions and choice of responses contained in the instrument are presented in both English and Visayan.

The key informant interviews were conducted in the Visayan dialect.

Steps in the Processing of Accomplished Key Informant Interview Instruments

- Compilation of the fully-accomplished KI answer sheets/forms
- Processing/Tabulation of data according to required structure (to ensure correctness of the processed data according to the accomplished answer sheets, the Research Management shall see to it that data processors/encoders will have an accompanying reader of the answer sheets who will also serve as second eye or checker of the encoders)
- Proofreading
- Synthesis of the data according to the required structure
- Analysis of the data
- Presentation of the final data according to the required structure

For the full guide of the Key Informant Instrument please see Annex: Guide for the Actual Conduct of Key Informant Interview.

The Agusan del Norte Provincial Profile

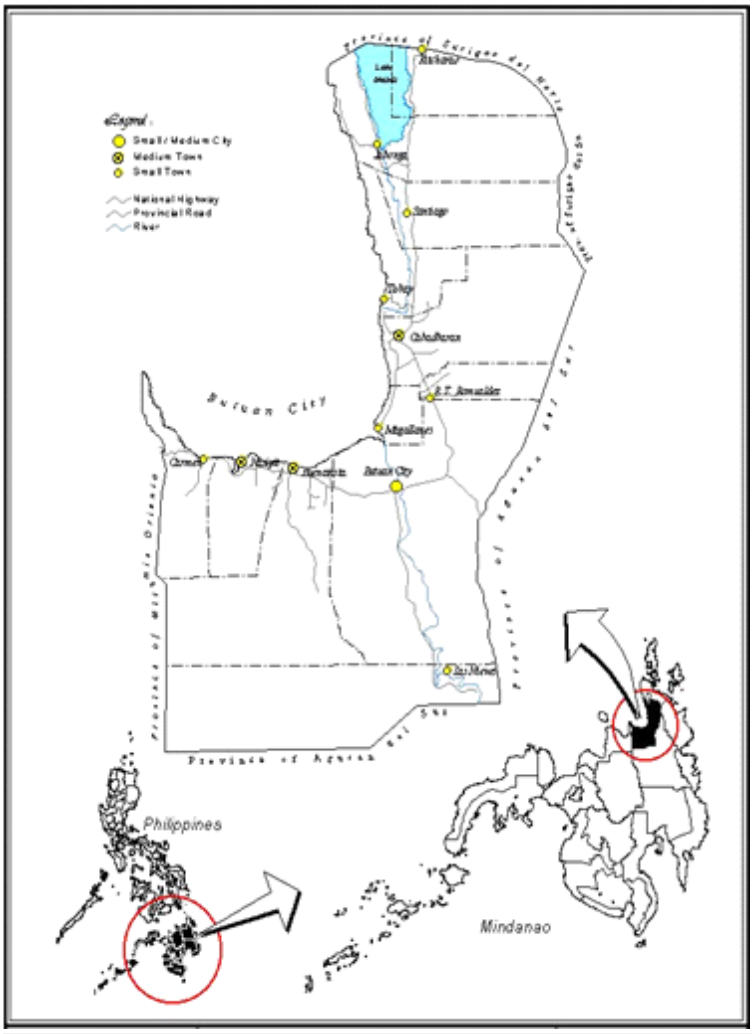
2.1 GENERAL PROFILE

2.1.1 LOCATION AND HISTORY

Location

Agusan del Norte is located 9 degrees north latitude and 125 degrees and 30 minutes east longitude on the northeastern part of Mindanao. It is bounded on the north by Butuan Bay and Surigao del Norte; on the east by Surigao del Sur; on the south by Agusan del Sur and on the west by Misamis Oriental. It is one of the five provinces of Northeastern Mindanao (Caraga Region 13).

Figure 3. Location Map of Agusan del Norte



Source: PPFP, 2003 - 2012

Location of the Municipalities

Buenavista lies 9 degrees 55 minutes north latitude and 125 degrees 25 minutes east longitude of the northeastern part of Agusan del Norte. Its boundaries are Butuan Bay to the north; Nasipit to the west; Las Nieves to the south; and Butuan City to the east. The area is made up of plains and rolling lands. The northern portion is hilly while the southern part is flat. The Poblacion and most of the barangays are located along the plain. In its eastern boundary with Butuan City lies Mt. Mayapay.

Cabadbaran City is generally flat with rolling hills and lies 9 degrees north latitude and 125 degrees and 30 minutes east longitude on the northeastern part of Mindanao. Its boundaries are Tubay and Santiago to the north; Butuan Bay to the west; Magallanes to the south; Madrid and Cantilan, Surigao del Sur to the east. It is 28.70 kilometers from Butuan City. Located within the jurisdiction of the municipality is Mt. Hilong-hilong, which at 2,012 meters above sea level, is the highest elevation in the region.

Carmen is located at the western part of Agusan del Norte. Its boundaries are Butuan Bay to the north; Magsaysay, Misamis Oriental to the west; Nasipit and Buenavista to the south; and Nasipit to the east. It is 31.80 kilometers from Butuan City. The terrain of the municipality has both flat lands and mountainous features. It is a boundary municipality between Misamis Oriental and Agusan del Norte, and on its territory rises Mt. Piglagahan with an elevation of 810 meters above sea level.

Jabonga lies within the grid of 9 degrees 18 minutes to 9 degrees 23 minutes north latitude and 125 degrees 24 minutes to 125 degrees 43 minutes east longitude. Its boundaries are Kitcharao and Surigao del Norte to the north; Butuan Bay to the west; Tubay and Santiago to the south; and Surigao del Sur to the east. It is 59.70 kilometers awa from Butuan City. The topography of the municipality is generally plain to rolling and hilly.

Kitcharao is generally made up of rolling hills such as Mt. Cabatuan, which rises 918 m above sea level. It is bordered by Alegria, Surigao del Norte to the north; Gigaquit, Surigao del Norte to the west; Jabonga to the south and Claver, Surigao del Norte to the east. It is 73.90 kilometers away from Butuan City.

Las Nieves is characterized by rolling hills and some flat lands. It lies 9 degrees north latitude and 125 degrees 30 minutes east longitude of the southern part of Agusan del Norte. Its boundaries are Butuan City to the north; Buenavista to the west; Esperanza, Agusan del Sur to the

south; and Sibagat, Agusan del Sur to the east. It is 40 kilometers to Butuan City.

Magallanes is a coastal area, generally composed of flat lands. It lies 9 degrees and 1 minute north latitude and 125 degrees 31 minutes east longitude. Its boundaries are Butuan Bay to the north and south; mouth of Agusan River to the west; and RTR to the east. It is 35.90 kilometers away from Butuan City.

Nasipit is generally made up of rolling hills. It lies 8 degrees 59 minutes north latitude and 125 degrees 24 minutes to 125 degrees 15 minutes east longitude of the northwestern section of Agusan del Norte. Its boundaries are Butuan Bay in the north; Carmen in the south and west; and Buenavista in the east. It is 25.40 kilometers from Butuan City.

Remedios T. Romualdez (RTR) is 18.80 kilometers from Butuan City. Its boundaries are Cabadbaran to the north; Magallanes to the west; Butuan City to the south; Sibagat, Agusan del Sur to the east. The municipality is composed mainly of plain with the hilly part on the east and west.

Santiago lies in the northeastern part of Agusan del Norte and has rolling and rugged mountains. Its boundaries are Jabonga to the north and Tubay to the east. It is 49.10 kilometers from Butuan City. Among its mountains is Mt. Mabaho which rises 1,823 meters above sea level.

Tubay is characterized by flat lands and rolling hills. It lies 9 degrees 18 minutes north latitude and 125 degrees and 37 minutes east longitude. Its boundaries are Jabonga and Santiago to the north; Butuan Bay to the west; Cabadbaran to the south and Santiago to the east. It is 39.10 kilometers from Butuan City.

Historical development

Agasan (where the water flows), an allusion to the mighty river (Agusan River) that cuts through the area, is widely believed to be the origin of the name Agusan.
The ancestors of the present-day *Mamanwas* were the aborigines of the place. The first wave of Malay immigrants from Borneo and the Celebes drove them to the hinterlands.

The Spaniards, the Americans and the Japanese occupied the province in the historical wars that also saw the rising up in arms by the *Agusanons*.

Gumersindo Flores led the *Agusanons* in the war against the Americans at the turn of the 19th century. The short-lived First Philippine Republic under Pres. Emilio Aguinaldo was snapped by the invading Americans.

Until 1907, Agusan, then named Butuan, was under the jurisdiction of Surigao. It was separated from Surigao with the passage of the Special Provincial Government Act of 1907 during the American colonial era.. That separation gave birth to Agusan as a province.

The province was under direct American military control until 1914. In that year, the first Filipino governor was appointed in the person of Teofisto Guingona Sr.

In 1923, an election was held and Apolonio D. Curato became the first elected governor. He served a three-year term. Jose Rosales was elected next for two terms. In 1936, Mariano Atega got elected and governed the Province. Agustin Casinas succeeded Atega but his term was cut short by the Japanese occupation. A certain General Aguirre took the post.

When liberation came, Curato once again got the governorship for a year. Servando Jongko won in the election that was held in 1947.

Felixberto Dagani served as governor in 1950-1959, then Democrito Plaza in 1960-63. Jose Aquino got the post in 1964 but gave up the position in 1966 when he ran for Congress. His vice governor, Consuelo V. Calo, took over and got elected in 1967. Calo held the position through the martial law years until 1986 when the revolutionary government of President Corazon Aquino that booted out then President Ferdinand Marcos through People Power took over. Jose T. Gonzales served as OIC Governor of the province as the country reconstituted the foundations of democracy following years of martial rule. Death, however, limited his stewardship to only a year. Jesus Delfin finished Gonzales' watch. Eduardo L. Rama won in the first elections conducted after the ouster of Marcos. He held the position for two terms. Maria Angelica Rosedell M. Amante got elected as governor in 1995 and served until June 2004.

Erlpe John M. Amante got the post in the 2004 elections and now steers the province to its desired development.

The province was created on 17 June 1967 by virtue of Republic Act 4979, authored by the late Congressman Jose C. Aquino

Butuan City, which used to be a component city of Agusan del Norte, was named as capital and seat of government. When Republic Act 8811 was enacted in the

administrative center of the province.

Historical information is derived from Provincial Physical Framework Plan, 2003-2012.

2.1.2 GENERAL ADMINISTRATIVE, POLITICAL, INSTITUTIONAL PROFILE AND PEACE AND ORDER

GENERAL ADMINISTRATIVE

- ***Vision, Mission, Goals and Objectives***

Vision: A life enhancing agri-forest and industry haven managed by modern communities of God-loving and empowered people

Mission: Serve as reliable partner in realizing sustainable agri-fed industry clusters and actualizing special economic zones by leading the drive for a highly productive populace and the standardization of community facilities

General Goal: The ultimate goal of the province growing into agri-industrialized center is the attainment of a decent and sustainable standard of well-being and general welfare of the populace.

Development Goal: To attain self-sufficiency in its total needs, provide adequate and efficient social services, alleviate poverty and narrow down the disparity in family incomes, arrest environmental degradation and grow along the course of rational and efficient utilization of resources.

- ***Organization***

Office of the Provincial Governor: Acts as the Chief Executive Office of the Province and exercises over-all supervision over the offices and activities in the province among other functions;

Office of the Vice Governor: Presiding Officer of the Sangguniang Panlalawigan and the Vice Governor is heir-apparent if and when permanent or temporary vacancy occurs at the Office of the Governor, among other functions;

Sangguniang Panlalawigan: As a legislative body, it shall enact ordinances; approve resolutions and appropriate funds for the general welfare of the province and its inhabitants pursuant to the code.

Provincial Administrative Bodies and Offices: Responsible for the over-all delivery of services to the population in the province. These include the office of the secretary to the Sangguniang Panlalawigan, Office of the Provincial Administrator; Provincial Planning & Development Office; Provincial Budget Office; Provincial Accountant Office; Office of the Provincial Treasurer; Office of Provincial Assessor; Provincial Administrative Services Officer; Office of the Provincial Engineer; Office of the Provincial Agriculturist; Office of Provincial Legal Officer; Office of the Provincial Social Welfare Development, Population & Nutrition; Provincial Health Office; Provincial Veterinary Office.

Special Bodies

The Provincial Administrative Bodies include Provincial Development Council; Provincial Peace and Order Council; Local School Board; Investment Promotion Board; Local Health Board; Personnel Selection Board; Information and Communications Technology Committee and Bids and Awards Committee.

- ***Institutional Profile***

Hospitals and clinics

All the municipalities, as a standard rule have health stations distributed to its respective barangays or what are called Barangay Health Stations [BHS]. There are currently 104 BHS distributed in the province.

On secondary and tertiary health facilities, the Jabonga and Kitcharao District Hospitals are serving the medical needs of the easternmost municipalities of the province while the Cabadbaran City District Hospital serve for the central towns. The Nasipit District Hospital is serving the populace of the western towns and the Las Nieves Municipal Hospital for the residents in the province's interior area. The Provincial Hospital that is located in Butuan City serves as the tertiary health facility of the province. These said public hospitals are complemented by a number of private hospitals. Some private clinics are Ramirez, Udarbe and Rodriguez Clinics in Cabadbaran City; St. Joseph Medical Clinic in Nasipit and Clinica Nazareth in Magallanes; all these also serve the population of the said municipalities. Accordingly, the equipment and facilities of these said geographically dispersed hospital units are adequate to serve the provincial population, while the hospitals in Butuan City are complementing the hospital

needs of the provincial populace, especially those of emergency cases or those that need specialized care and immediate treatment. (PPFP, 2003-2012).

Based from the Provincial Health Office report, the medical and para-medical personnel in the province totaled to 405 in year 2005 wherein 45% of them are employed in the government while the remaining fraction are in private establishments and field service.

Fire stations

There are eight fire stations that are spread in the municipalities of Buenavista, Cabadbaran City, Jabonga, Kitcharao, Magallanes and Nasipit, while there are two fire stations in Butuan City.

- ***Peace and Order***

The province is relatively peaceful with a crime solution efficiency of 91.45% or 257 crimes solved out of the recorded 281 crimes as of the latest 31 December 2009 PNP Report. All 10 municipalities and 1 city have their own police stations.

2.2 ENVIRONMENT AND CLIMATE

2.2.1 TOPOGRAPHY AND GEOLOGIC CHARACTERISTICS

Topography of Agusan del Norte

The province is made up predominantly of flat and rolling lands (0-18% slope) bounded by mountain ranges on its eastern and western parts, and Lake Mainit in the northeastern part. The eastern mountain range, composed of Mt. Mabaho (1,823 meters above sea level) and Mt. Hilonghilong (2,012 m asl), straddle the Agusan del Norte-Surigao del Sur-Agusan del Sur boundary. Another mountain range serves as the boundary with the province of Misamis Oriental on the west. The most prominent peaks in this mountain range are Mt. Indocay (1,243 m asl), Mt. Piglagahan (810 m asl) and Mt. Camagong (576 m asl). Found between the municipality of Buenavista and Butuan City is Mt. Mayapay which has an elevation of 675 masl.

Very steep slopes (greater than 50% slope) in these mountain ranges are estimated to cover 16,140.14 hectares. Lake Mainit, which Agusan del Norte shares with Surigao del Norte is one of the largest lakes in Mindanao and is the country's deepest and fourth largest lake.

The 105 km coastline is generally rocky with occasional stretches of sandy or gravel beaches. Several embankments are gradually being filled up with alluvial materials which tend to produce small tracts of coastal plains (ADN-EMP).

Land area by municipality

The total land area of the province is 273,024 hectares wherein the largest land proportion is located in Las Nieves with 58,269 hectares or 21.34% to the total land area of the province followed by the municipality of Buenavista with 47,561 hectares or 17.42% to the total land area of the province.

The municipality of Magallanes has the smallest land area with 4,431 hectares or 1.62% to the land area of the province.

Land Use

Table 2. Land Area by Municipality

Municipality	Area (hectares)	% to Total
Buenavista	47,561	17.42%
Cabadbaran	31,102	11.39%
Carmen	21,444	7.85%
Jabonga	29,300	10.73%
Kitcharao	17,192	6.30%
Las Nieves	58,269	21.34%
Magallanes	4,431	1.62%
Nasipit	14,440	5.29%
RTR	7,915	2.90%
Santiago	27,561	10.09%
Tubay	13,809	5.06%
TOTAL	273,024	100%

- *Land Classification*

The proportion of land classified as alienable and disposable has the total of 61,938 hectares or 22.69% to the total land area of the province while the remaining 211,086 hectares are classified as forestlands.

- *Existing land use*

Table 3. Land Classification

Classification	Hectare	Percentage
Alienable and Disposable	61,938.00	22.69%
Forestland	211,086.00	77.31%
TOTAL	273,024	100%

The existing land use of the alienable and disposable area is classified into built-up area with a total of 4,416.61 hectares, wherein 2,611 hectares are settlements area that is composed of residential, institutional, commercial, industrial and open spaces. Additionally, there is a special economic zone of 1,187.48 hectares and another 1,277.61 hectares for infrastructure and utilities.

The land area devoted for agricultural use has a total of 69,422.35 hectares or 25.43% to the total land area of the province, while a total of 199.185.04 hectares are classified as forest-lands, wherein 117,188.76 hectares are production forests and 81,785.14 hectares are protection forests while 211.14 hectares are classified as water bodies. The land that is used for quarrying and mining has a total of 374.13 hectares while 201.59 hectares are classified as tourism areas.

Table 4. Existing Land Use

Land Use Category	Area (Has.)	% to Total
Built-up	**4,416.61**	**1.62%**
Settlement	2,611.00	0.96%
Residential	1,057.85	0.39%
Institutional	251.28	0.09%
Commercial	48.15	0.02%
Industrial	66.24	0.02%
Open Spaces	1,187.48	0.43%
Special Economic Zone	528.00	0.19%
Infrastructure & utilities	1,277.61	0.47%
Agriculture	**69,422.35**	**25.43%**
Crops	57,840.75	21.19%
Uncultivated	7,468.25	2.74%
Fishpond	1,607.74	0.59%
Water bodies	2,505.62	0.92%
Forestland	**199,185.04**	**72.96%**
Production	117,188.76	42.92%
Protection	81,785.14	29.96%
Water Bodies	211.14	0.08%
Special Uses	*575.72*	*0.21%*
Quarrying/Mining	374.13	0.11%
Tourism	201.59	0.06%

Source: PPDO-AdN(2009)

- *Slope classification*

The land area which has a slope of below 18% has a total of 80,693.35 hectares while there is a total of 116,783.65 hectares with slope of 18% to 50%. The land area with slope of above 50% has a total of 75,547.0 hectares.

- *Soil type*

Table 5. Slope Classification and area distribution

Slope	% to total	Estimated area(hectare)
0-3%	17.31%	47,269.21
3-8%	3.08%	8,403.07
8-18%	9.16%	25,021.07
18-30%	25.24%	68,904.08
30-50%	17.54%	47,879.57
Above 50%	27.67%	75,547.00
Total	**100%**	**273,024.00**

Source: PPDO, AdN(2009)

By its abundance of soil types identified to be present in the province, the place is suitable for growing food and commercial crops.

A total of 83,627.25 hectares or 30.63% of the land area in the province is highly suitable for growing food crops while a total of 80,016.40 hectares or 30.04% is suitable for commercial crops including tree plantations. The other 99,926.78 hectares or 36.66% of the land area is suitable for maintaining protection of forest species.

- *Climate type*

Table 6. Soil Types

Types	% to total	Estimated Area (has)	Suitability use
San Manuel Loam	3.77	10,293.00	Rice, Corn, Sugarcane, Vegetable, Camote, Tobacco, Abaca, Banana
San Manuel Clay	0.48	1,310.51	Corn, Banana, Rice, Vegetable, Coconut
San Manuel Clay Loam	2.75	7,508.16	Corn, Rice, Rootcrops, Peanuts, Vegetable
Isabela Clay	0.32	873.76	Rice
Isabela Clay Loam	0.90	2,457.22	Rice, Corn, Sugarcane
Bolinao Silt Loam	5.53	15,098.23	Banana, Corn, Abaca, Rootcrops, Falcata
Camansa Clay Loam	22.36	61,048.17	Banana, Corn, Rice, Abaca, Rootcrops, Falcata
Umingan Clay Loam	5.95	16,244.93	Rice, Corn, Rootcrops
Alimodian Clay Loam	0.71	1,938.47	Banana, Rootcrops, Abaca
Malalag Silt Loam	12.55	34,291.81	Banana, Rootcrops, Abaca, Coconut, Corn, Rice
Butuan Loam	6.90	18,838.65	Rice, Vegetable
Kitcharao Clay Loam	0.25	682.56	Rice, Coconut, Abaca, Ramie, Fruit Trees
Kitcharao Silt Loam	1.19	3,248.98	Rice, Rootcrops, Coconut, Tobacco
Hydrosol	2.13	5,815.41	Fish Pond and Wildlife
Rubble Land	0.11	300.36	Forest
Mountain Soils	34.09	93,073.88	Forest
TOTAL	**100%**	**273,024.10**	

Source: PPFP (2003-2012)

The province is categorized under Climatic Type II which means that there is no definite dry season but with a very pronounced rain that normally occurs during the months of November to February. The average annual temperature is 26.5°C and the average annual humidity is 84.6%.

2.2.2 LAND, MINERALS, FRESHWATER AND COASTAL RESOURCES

The province is replete with natural resources distributed all across the eleven municipalities, evidenced by its many fresh water bodies like rivers and lakes; land resources like forest and agricultural lands; coastal resources and also mineral resources.

Fresh Water Bodies

The Environmental Management Report of Agusan del Norte shows that the province has a number of rivers and lakes of which the most important are: (1) Agusan River, which starts from Compostela Valley and Davao Oriental and cuts through Agusan del Sur and Agusan del Norte and empties into Butuan Bay and (2) Lake Mainit, of which the total area of 17,060 hectares is being shared by the Agusan del Norte (55%) and Surigao del Norte (45%).

Agusan River has several rivers and creeks within the province that serve as its tributaries. Other rivers that are geographically distributed all across the province and are equally important are: Cabadbaran River, Magallanes/Baug River, Taguibo River (tributary of Magallanes River), Kalinawan/Tubay River, Asiga River (tributary of Kalinawan River), Puyo River (tributary of Kalinawan River), Manapa River and Guihao-an River in Buenavista, and Kinabjangan River of Nasipit (ADN-EMP).

Whereas, the waters in Lake Mainit come from 21 rivers and creeks in the northeastern part of Agusan del Norte and Surigao del Norte, Kalinawan River serves as its outlet. Another lake, the Lake Pagusi, is found along the route of the Kalinawan River, about 7 km from Lake Mainit. It is a backwater area of the Kalinawan River and is covered by "pagusi" (thus its name). It is considered an integral part of the Kalinawan river system. Lake Pagusi has a total area of 2,431 hectares (ADN-EMP).

Land Resources

The province is identified with a wide range of agricultural crops courtesy of a varied soil types suitable for agricultural farming. There are 16 soil types found in the province. The most dominant is the undifferentiated mountain soil found mainly in the mountainous parts of the province which is about 34% of the 265,488 hectares covered by the soil survey and deemed suitable for forest and fruit trees.

According to the Provincial Environmental Management Plan, the province has some 19,400 hectares of irrigated and irrigable areas and these are considered as protected areas for agriculture. The report also provides that the province has 61,707 hectares of residual or second growth forests and 31,371 hectares of plantation forests which serve as the timber and non-timber sources of the province. There are 13,266 hectares of brush lands and open lands of 43,822 hectares.

Furthermore, protection areas for forest lands of about 16,025 hectares are located in Cabadbaran City, RTR and Santiago. Mossy forests are found in Kitcharao, Cabadbaran City and Santiago. Areas above 1,000 meters above sea level also are protected in the municipalities of Kitcharao, Santiago, RTR and Cabadbaran City. Areas with slope greater than 50% in Carmen, Jabonga, Las Nieves, Kitcharao, Cabadbaran City, Nasipit, RTR and Santiago. Some 400 hectares in Manoligao, Carmen are for the Higaonon civil reservations.

Accordingly, second growth forest trees distributed can be found in the province but only in patches: narra, molave, kaong, banaba, red and white lauan, yakal, tangile and tan-age. Some parts in Kitcharao is characterized as limestone forest with natural vegetation consisting of balete, dumayaka, kaong, Ficus gigantifolia, bikal baboy, molave, hawili, tibig (ADN-EMP).

Coastal Resources

It is also indicated in the EMP report that the province has a total shoreline of 105 kilometers extending from the municipality of Carmen to the coastal barangays of Jabonga. Accordingly, Butuan Bay is home to fish species such as sardines, hairtail, garfish, yellow fin tuna, slipmouth, skip-jack, tiny shrimps and mudcrabs. About 300 meters from the shoreline of Carmen and some portion of Nasipit and Jabonga are areas matted with seagrasses that have an estimated area of 1,560 hectares. The shoreline of barangays Vinapor, Gosoon, San Agustin, Cahayagan and Tagcatong of the municipality of Carmen are also matted with different kinds of corals. At

an estimated average width of 220 meters from the shoreline, the corals cover about 633.8 hectares including patches found from Rojales, Carmen down to Buenavista. The provinces' coral reefs consist of massive branching and lettuce-like corals. The coral reefs found in Carmen (about 255 hectares) is a potential marine park (ADN-EMP).

Fish sanctuaries were also established in Manapa, Buenavista in 1995 covering 25 hectares; Calibunan, Cabadbaran in 1997 covering 29 hectares and Amontay and Aclan, Nasipit with a total of 30.20 hectares. There are two identified fish sanctuaries in Tagpangahoy, Tinigbasan and Lawigan, Tubay which has a total area of 167.50 hectares. These sanctuaries were established in 1998.

However,based on the Provincial EMP report, the once vast mangrove resources of the province have diminished significantly. The remaining mangrove-swamp forests of the province are now only found in patches or narrow strips along the tidal mud flats of Magallanes, Nasipit and Buenavista. It is only in Taod-oy, Magallanes where a contiguous mangrove area of 50 hectares can still be found.

Mineral Resources

It is also contained in the EMP report that the province's mineral resources are located mainly in the municipalities of Nasipit, RTR, Kitcharao, Cabadbaran City, Jabonga, Tubay and Santiago. It is reported that an area of 10.5 hectares in Nasipit has bauxite ore; 112.9 hectares in R.T.R has manganese and 178.9 hectares in Kitcharao have marbleized limestone. The DENR also pointed to gold deposits of about 1,566.14 metric tons (MT) in Tubay and 75,000 MT in Cabadbaran City. Copper deposits are also said to exist in Cabadbaran City, Jabonga, Santiago and Tubay. The city of Cabadbaran has also manganese deposits.

Furthermore, non-metallic resources such as limestone, marble, guano, sand, gravel and construction materials are also abundant. The Marapot and Cabadbaran Rivers are the best-known sources of Class A sand and gravel. Possibilities for hydrocarbon or natural gas deposits can be found in the coastal plains of Magallanes. Low pressure natural gas seepages have been found in the Magallanes Poblacion while low pressure natural gas utilization has been established at Barangay Caloc-an. Methaniferous gas emanations occur up to the mouth of Agusan River due perhaps to the faults that release the gas from underground deposits as reported in the Provincial EMP.

2.2.3. CLIMATE AND NATURAL HAZARDS

The typical condition of the province is categorized under Climatic Type II which means that there is no definite dry season but with a very pronounced rain that normally occurs during the months of November to February. The average annual temperature is 26.5°C and the average annual humidity is 84.6%.

But the province, just as the rest of the provinces in the country, has been always subjected not only to natural climate-and-weather-related hazards like typhoons and droughts, geophysical hazards like earthquakes, volcanic eruptions and tsunamis, but also anthropogenic or man-made hazards like the results of deforestation, mining, improper wastes disposal/poor waste management and the adverse effects of climate change.

Natural Hazards

- Earthquake-prone areas

Based on the provincial environmental management plan, the province is prone to earthquake hazard with the identification of a fault line west of Lake Mainit area which is an extension of the Philippine Fault Zone that starts from northern Luzon through the Bondoc Peninsula, Camarines, Masbate, Leyte, Surigao and ends in Davao Gulf. The fault is reported to be running in parallel of Agusan River and following the river upstream to Agusan del Sur province. Moreover, the earthquakes recorded in the province have epicenters located along the tract of the major fault zones. Kitcharao is reported to have been within the seismic epicenter. The city of Cabadbaran and the municipalities of Tubay, Santiago and Jabonga are also reported to be within the active or probable active fault zones. The settlements near these fault zones and the roads near or traversing the faultlines (e.g., national highway in Tubay, RTR, Nasipit and Ampayon) are considered to be high-risk areas (ADN-EMP).

- *Flood prone areas*

Flooding has been a perennial occurrence in the province. Flash floods occur due to heavy rainfalls that normally pour during the months of November to January. Floods do not only cause severe damage on land and properties like agricultural farm lands and crops but also endanger the lives of the people directly hit by such calamaty. Statistics of major floods as reported in the EMP of Agusan del Norte show that major floods occurred in the years 1956, 1962, 1974, 1975 and 1981.

The flood that occurred in 1981, was the most severe with a total damage cost of about P57 million.

Accordingly, the locations of rivers and lakes in the province allowed flooding to happen. The big rivers of Agusan, Cabadbaran City, Tubay other rivers are contribute heavily to the seasonal flooding. The low physiography of the rivers, accompanied by poor vegetative cover in the headwaters of these rivers and the inability to cope with high flood discharge and siltation of ricers, are all attributed to the occurrence of flooding. Lake Mainit also overflows after heavy rains, thus bringing damage to surrounding lands and communities. According to the EMP report, the municipalities usually subjected to flooding are Buenavista, Cabadbaran City, Jabonga, Magallanes, Nasipit, RTR, Santiago and Tubay.

Reports from the Office of Civil Defense[OCD] in the region show that for the last five years, flooding had been the leading cause of natural disaster in the province. The continuous heavy rains in the province last January 10-18, 2009 yielded a total damage cost of about P27.5 million to agricultural crops, fisheries and livestock and an additional P39.3 million damage cost to infrastructure, which also affected a total of 11,069 families or 50,641 individuals in 8 municipalities. The municipalities of Jabonga and Carmen had the highest number of affected families and persons. Jabonga had a total of 3,926 families and 16,698 persons affected by the flood while Carmen had with 3,980 families and 18,176 persons that were affected. If measured against irreparable damage it brought to agriculture, the municipalities of RTR and Buenavista had the highest figure with a total estimated cost of P10,974,600.00 and P9,747,207.00, respectively. In March 2008, a three-day flood due to monsoon rains had affected a total of 12,800 persons or 2,558 families from the municipalities of Jabonga and Las Nieves. On January 2007, another flood resulted to a total damage on agriculture of about P7.3 million, where large fractions of it came from the municipalities of Jabonga and Las Nieves of about P2.07 million and P2.28 million, respectively. Another flood was recorded in February 2006 that had affected a total of 154,412 individuals or 29,799 families and a total damage cost of about P30.5 million all across the province, including Butuan City.

- *Landslide-prone areas*

According to the Mines and Geosciences Bureau, there are 4 barangays in the province that are identified to have a high susceptibility to landslides namely Barangay Sto. Niño in the municipality of Jabonga; Barangay Jaguimitan in Nasipit and Barangay Tagpangahoy and Barangay Tinigbasan in Tubay.

- *Other hazard-prone areas*

Additionally, the western and eastern shores of Lake Mainit erode very fast primarily due to the very steep to mountainous slopes and kaingin (slash and burn) areas that remain without sufficient land cover. The local soils are susceptible to erosion, also because of the practice of kaingin. As reported in EMP, landslides were observed in these areas.

The province is generally out of the typhoon belt. Only the northernmost towns of Kitcharao and Jabonga are affected by typhoons that hit the Pacific coast. Nasipit, Magallanes and Cabadbaran are identified as areas threatened by saltwater intrusion (EMP-ADN).

Anthropogenic-Induced Hazards

Anthropogenic activities have also led to environmental destruction all across the province. The Provincial Environmental Management Plan had enumerated the key factors that endanger the quality of air, groundwater sources, productivity of rivers and lakes, productivity of agricultural and forestland areas, as well as socio-ecologically significant areas of the province.

Accordingly, the key factors that affected air quality in the province are the existence of wood-based industries particularly in the municipalities of Magallanes and Buenavista and the sawmills and furniture-makers found in other municipalities in the province. Additionally, the power barge based in Brgy. Sta Ana, fronting the port of Nasipit, the marble processing industry in Kitcharao and the rice/corn mills found all across the municipalities in the province are seen to be potentially hazardous to the health of the populace where these establishments are located. Another cause is the periodic spraying of insecticides and pesticides to agricultural plantations like mango in Carmen and the banana in Barangay Soriano, Cabadbaran City where aerial spraying is applied which has been done periodically the whole year round. Threats to air quality include the open dumpsites and burning of garbage.

Also contained in the EMP report are the actual

and potential contributors that affect the quality of rivers which include: illegal logging and kaingin practices in the upland that caused forest damage and trees loss that resulted to soil erosion and siltation of the rivers; small scale mining operations in Santiago and Kitcharao where the wastewater are drained to Kalinawan and Lambug rivers; industries that dispose their solid wastes and wastewaters into rivers and sewage wastes from the urban centers. All the above activities are posing actual and potential damage to the rivers of Kinabjangan, Guihao-an, Manapa, Masao, Agusan, Magallanes, Taguibo, Cabadbaran River, Kalinawan, Asiga and Puyo Rivers.

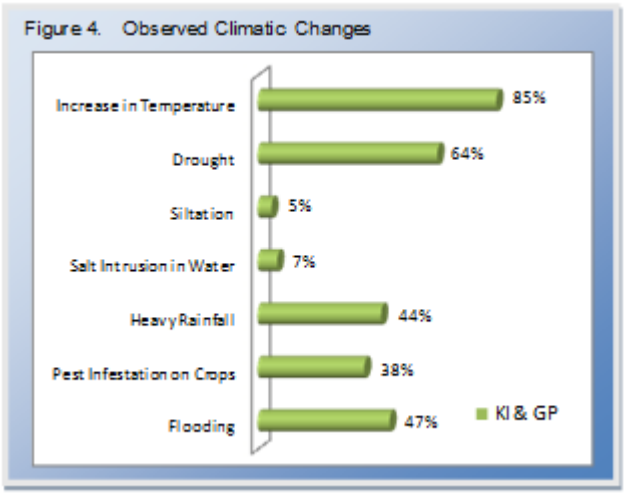
Moreover, the productivity and water quality in the Lake Mainit may be potentially destroyed with the massive deforestation in the uplands and small-scale mining operations in Santiago and Alegria, Surigao del Norte. The agricultural run-off from adjacent rice fields and the use illegal fishing methods also pose threats to Lake Mainit.

The EMP report also shows that the groundwater quality in the province may be also at risk with the insufficient forest cover in the uplands due to continuous deforestation and illegal farming practices like kaingin; from the agro-chemicals used in banana and mango plantations; garbage and other wastes from urban centers such as waste from slaughterhouse, hospitals and funeral parlors,where no proper disposal systems are in place.

- *Observed climatic changes*

In terms of observed climatic changes, the baseline study results show that 85% of the key informants and poll respondents have observed an increase in temperature while 64% of them have observed drought; 47% have observed flooding and 44% have observed heavy rainfall. Some 38% have observed pest infestation on crops, 7% have observed salt intrusion in water and another 5% have observed siltation.

Figure 4. Observed Climatic Changes



2.3 SOCIO-ECONOMIC PROFILE

Population: Size, Growth Rate, Density, Age-Sex Distribution, Urban-Rural Distribution

The province of Agusan del Norte has a total population of 314,027 wherein 153,873 or 49% are females (NSO,2007). Cabadbaran City is the most populated area of the province with 19.60% of the province's total population followed by Buenavista with 16.90%. Remedios T. Romualdez [RTR] is the least populated municipality of the of the province with only 4.77% or 14,976. The average household size of the province is pegged from 5.59 in year 1990 to 5.40 in 2005 while the total number of households in year 2010 is projected to reach 60,771.

The total rural population of the province is 236,452 or at 75% of the province.

Table 7. Population Size

Municipality	Area (hectares)	% to Total
Buenavista	53,059	16.90%
Cabadbaran	61,564	19.60%
Carmen	18,116	5.77%
Jabonga	23,052	7.34%
Kitcharao	21,426	6.82%
Las Nieves	25,203	8.03%
Magallanes	20,930	6.67%
Nasipit	38,096	12.13%
RTR	14,976	4.77%
Santiago	18,931	6.03%
Tubay	18,674	5.95%
TOTAL	314,027	100%

SOURCE: National Statistics Office (2007)

- *Population density*

The province has a population density of 1 person per hectare or around 105 per square kilometer. The municipality of Magallanes has the highest population density of 4.82 per hectare while the agricultural municipality of Las Nieves is the least densely populated with 0.40 or 1 person per 2.5 hectares (Socio-Economic Profile-AdN,2005).

- *Population growth trend*

The population growth trend declined from 2.44% in year 1990 down to 1.42% in year 2005 but a continuous increase in population size from 285,570 in year 2000 to 306,429 in year 2005. The projected population of the province for the year 2009 will reach up to 324,207 (Socio-Economic Profile-AdN,2005).

Table 8. Population of Rural Barangays

Municipality	Urban Population	Rural Population
Buenavista	17,036	36,023
Cabadbaran	16,371	45,193
Carmen	4,758	13,358
Jabonga	3,638	19,414
Kitcharao	7,072	14,354
Las Nieves	1,241	23,961
Magallanes	2,048	18,882
Nasipit	8,446	29,650
RTR	4,482	10,494
Santiago	8,770	10,161
Tubay	3,712	14,962
TOTAL	77,575	236,452

SOURCE: National Statistics Office (2007)

Ethnicity, Languages and Dialects, Religion

The people in the province are pre-dominantly Roman Catholics (75.30% out of the 285,065). A quarter of the population belong to other religious denominations.

The dialects spoken are generally Cebuano-Visayan, while the ethnic minority are mostly Manobo. Other members of the Indigenous People [IP] include Lapaknon, Mamanwa and Higaonon (Socio-Economic Profile-AdN,2005).

Poverty Incidence

Table 9. Ethnicity, Language and Religion in Agusan del Norte

I.P. Groups	Religions	Languages / Dialects Spoken
• Lapaknon • Manobo • Mamanwa • Higaonon	• Roman Catholic • Iglesia Filipina Independiente • Iglesia ni Kristo • United Church of Christ in the Philippines (UCCP) • Seventh Day Adventist • Bible Baptist • Free Methodist • Born Again Christian • Islam	• Butuanon • Manobo • Cebuano • Surigaonon • Waray • Boholano • Tagalog • Ilonggo • Ilocano • Mamanwa

The poverty incidence in the province was gauged and presented in the technical output provided by the Provincial Planning and Development Office[PPDO] through its Community- Based Monitoring System [CBMS] which yielded a rather comprehensive survey on the poverty situation of the farming households in the province.

- *Income and livelihood*

The CBMS data provided that the provincial average of households with income below the poverty threshold is at 55.6% , which is more than twice higher than the national average of 24.4%. This translates to a total of 31,913 households below the poverty line, from the 56,248 total households surveyed.

Households with income below the food threshold all across the province is at 43% out of the 56,248 total households. The provincial average of households who experienced food shortage is at 5.05%(CBMS Results-AdN, 2008).

- *Health and nutrition*

The provincial average of cases of malnourished children aged 0-5 years old is at of 2.9% which is much lower than the national average of 27.6%.

The provincial average of the mortality of children aged 0-4 years old is 0.85% wherein 1.8% mortality is experienced in the municipality of Las Nieves. Provincial average of deaths due to pregnancy-related causes is at 0.3%, with a high incidence recorded at Buenavista (1%) (CBMS Results- AdN, 2008).

- *Housing, water and sanitation*

The number of households in the province that are makeshift houses total to 2,694 or a provincial average of 4.5% , lower than the national average of 29.5%.

The total number of households identified with informal settlers all across the province have a total of 2,553 or a provincial average of 4.5%.

The CBMS data also provided the total number of households which do not have access to clean safe water supply , which is at 16.2%.

Access to sanitary toilet facilities may be a

problem with most of the rural areas as it is recorded that a provincial average of 15.1% or a total of 9,035 households all across the 10 municipilatie and one city, have no access to sanitary toilet facilities (CBMS Results- AdN, 2008).

- *Education*

The number of children aged 6-16 years old who are not attending school is at 11,349 out of the 75,037 total number of children aged 6-16 years old in the province or a provincial average of 14.1% (CBMS Results- AdN, 2008).

The provincial average of children aged 6-12 years old who are not attending elementary school is 20.4%, which is twice higher than the national average of 9.4%. Children not attending secondary schools (aged from 13 to 16 years old) is at a provincial average of 39.4% (CBMS Results- AdN, 2008).

General Overview of the Economic Sectors

According to the physical framework plan of the province, economic dynamics revolve around utilization of available and advantageous resources of each of the municipalities of the province. This further outlined the interventions from small agricultural processing and services to convenience shops and entertainment facilities in municipalities classified as small towns and a larger scope for medium and large towns. The idea accordingly is to enable the municipalities to create economic settings that supplement provincial agricultural activities with other services that would augment the household income of the provincial populace (Socio-Economic Profile-AdN,2005).

Accordingly, the municipalities did keep track on the outlined economic dynamics and did their fair share. The municipality of Nasipit for instance, which is a medium town, is becoming an agri-industrial center and is assumed to be producing value-added products out of the fresh agricultural inputs and would thus create jobs for its constituents. Cabadbaran is also expected to create job opportunities out of its commercial activities and services. Carmen has risen to become a major producer of quality mango and has become one of the tourist centers of the province. Las Nieves have produced many agricultural outputs, as with Buenavista. Good rootcrops can be found in Santiago while Kitcharao is the site of quality marble. The plains of Remedios T. Romualdez has become the rice granary of the province while Magallanes and Jabonga have been the principal sources of aquatic products(Socio-Economic Profile-AdN,2005).

Additionally, investment in the province is evident through the presence of Nasipit Agusan del Norte Industrial Estate[NANIE] ,Tubay Agricultural Processing Center [TAPCEN], Capitol Business Park, Integrated Coconut Processing Center, Integrated Agro-Forestry and Dairy Stock Farm Project, Lake Mainit Integrated Area Development Project and Las Nieves-Buenavista-Nasipit-Carmen [LASBUENASCAR] Sustainable Agro-Forestry Development Project. Furthermore, investment opportunities include mining, integrated rice milling, sugar cane and banana plantations, cassava production and processing and tourism.

2.4 INFRASTRUCTURE, FACILITIES AND SUPPORT INSTITUTIONS

Water

Ninety-eight percent of the households are served by either Level I and II or III water supply facilities. The dominant water supply system is Level II with 39.17% of households served. Level I water systems serve 30.37% of the household, and Level III with 28.47%. There are two water districts operating in the province, namely; Buenavista Water District and Nasipit Water District. These two water districts serve 3,693 households and 5,260 households, respectively (Socio-Economic Profile-AdN,2005).

The 1,084 or 2% of the households do not have access to potable water supply.

Only 3,239 hectares or 14.82% of the 21,868 hectares rice farms is covered by the irrigation system. Which is actually smaller considering only 1,743 hectares covered are operational (Socio-Economic Profile-AdN,2005).

Power

There is one major power substation in the province operated by the Transmission Corporation (TRANSCO) District IV Northeastern Mindanao Area. Its capacity is 1 x 50MVA located in Lawis, Sta. Ana, Nasipit, Agusan del Norte. The province has also four substations namely: Soriano substation, Santiago substation, Manapa substation and Kinabjangan substation. The capacity of each substation is 5MVA. The Santiago substation has the

highest service area coverage, with four municipalities in the province: Kitcharao, Jabonga, Santiago and Tubay (Socio-Economic Profile-AdN,2005, pp.159-160).

As of 2005, all of the 166 barangays are served by power facilities, but only 42,281 households or 74.65% have electric connections (Socio-Economic Profile-AdN,2005, pp.159-160).

As of 2005, Cabadbaran City has the most number of household connections while Tubay has the lowest with 50.31% (Socio-Economic Profile-AdN,2005, pp.159-160).

In terms of type of use, industrial consumption is the highest with 52.21% of the 77,457,687 kilowatt hour [KWH] consumed in 2005. Residential use is next with 39.38%, which includes households classified under the Barangay Power Association[BAPA] , with a consumption of 276,281 KWH (Socio-Economic Profile-AdN,2005, pp.159-160).

Magallanes, the location of most industrial firms in the province, has also the highest kilowatt hour consumption at 42.53% of the total. Santiago has the lowest at 1.44%(Socio-Economic Profile-AdN,2005, pp.159-160).

By the type of use, residential consumption has the highest annual growth at 10.43% from 2001-2005. Institutional consumption is next at 9.80%. Both the indicators of growth in economic activities, industrial and commercial consumptions are at the bottom at 3.94% and 4.04% respectively. This could be because of the considerable power support programs launched by the government, including direct support for households to have electric connection during the period (Socio-Economic Profile-AdN,2005, pp.159-160).

Environmental support facilities

The dike system of the province secures several coastal zones, rivers and some portion in the Lake Mainit area. The areas covered, however are generally short compared to the expansion of settlements uncontrollably created in danger zones. Vast agricultural areas around the Lake Mainit town also need protection from overflows, both from the lake and its tributaries (Socio-Economic Profile-AdN,2005, pp.159-160).

2.4.1 TELECOMMUNICATIONS, TRANSPORTATION AND BANKING INSTITUTIONS

Telecommunications

All the municipalities and roughly half of the barangays in the province have access to telecommunication services, with the existence of cell sites per municipality. Only eight of the municipalities have landline telephone systems, but all have public calling offices. There are four telephone companies serving Agusan del Norte: BAYAN Telecommunications, Philcom, Cruz Telephone Company and Department of Transportation and Communication. BAYAN Telecommunication has the most number of connected lines (Socio-Economic Profile-AdN,2005).

Other than the existence of telephones facilities, all municipalities also have postal and telecom services. They also have radio communication networks. Eight have telegraph/telefax services(Socio-Economic Profile-AdN,2005).

Cabadbaran and Kitcharao have radio stations while the rest of the municipalities have broadcast signals from radio stations in Butuan and Cebu. All the municipalities also have television signals and at least six have cable television services(Socio-Economic Profile-AdN,2005).

None of the municipalities is host to a publishing entity but local and national newspapers and magazines are circulated across the province(Socio-Economic Profile-AdN,2005).

Transportation

The province is adequately linked to neighboring provinces in Mindanao by the land transport artery. It is also just within a few minutes from the regional airport in Butuan City for travels to Manila and other destinations in the country. By sea, it is billed as a premier entry-and-exit point because of the Nasipit Port, a facility of international standards (Socio-Economic Profile-AdN,2005).

- *Land transport*

The 1,090-kilometer road system of the province is still short by 167.00 kilometers when compared to HLURB standards. The shortage is about 36.00 kilometers in the rural areas and 131 kilometers in the urban areas (Socio-Economic Profile-AdN,2005).

The road adequacy level of Agusan del Norte is

86.71% While having a 96.45% adequacy in length in the agricultural areas, the urban areas have only 45.64%. Among the municipalities, Las Nieves greatly lacks rural roads while Nasipit and Magallanes lack urban roads. Based on the materials of which these roads are made of, the reliability level of the system is at 26%. Only 281 kilometers of the roads are cemented (Socio-Economic Profile-AdN,2005).

There are 67 bridges, a total of 2,734 lineal meters, that connect both national and provincial roads. These bridges are variously made of reinforced concrete girder, steel, bailey and footbridge(Socio-Economic Profile-AdN,2005).

- *Marine transport*

The province's Nasipit Port is of international standard. It has facilities that are more than adequate to cope with passengers and cargo volumes and it is now embarking on a major expansion program to meet future demands. Needing attention is the river transport system for its two municipalities, Las Nieves and Magallanes. What these towns have are still sub-standard wharves. At least 37 pump boats and other river transport are serving the Magallanes area. River transport has not been serving the Las Nieves route at the moment. It can be reached by two road links whose conditions, which badly needs improvement because of its present condition (Socio-Economic Profile-AdN,2005).

- *Air transport*

A regional airport is serving the province through Butuan City. The Philippine Airlines and Cebu Pacific, the province's only air transport outfits, have two daily flight each to Manila and a five times a week flight to Cebu (Socio-Economic Profile-AdN,2005).

Banking institutions

The banking institutions operating in Agusan del Norte include Land Bank of the Philippines [LPB]; the Cooperative Bank ,which has a satellite office in Cabadbaran City; Green Bank of Caraga, which has satellite offices in Cabadbaran City, Kitcharao and Nasipit; Enterprise Bank, Development Bank of the Philippines, Banco Buenavista, United Coconut Planters Bank and Butuan City Rural Bank (Socio-Economic Profile-AdN, 2005).

The services offered by these banking institutions include savings and loans through its satellite offices, community-based organizations and cooperatives, client or agent calls and walk-in clients (Socio-Economic Profile-AdN,2005).

Insurance providers

According to the report from the Philippine Crop Insurance Corporation [PCIC], availment of crop insurance were enjoyed by the rice farmer-members of One Town One Product (OTOP) of Remedios T. Romualdez and the members of Avanceña ARBA Multi-Purpose Cooperative in Cabadbaran City. Non-crop insurance such as the Agricultural Producers Compensation Plan/ Term Insurance was also availed by the farmers. Livestock insurances were also availed by the Avanceña ARBA Multi-Purpose Cooperative and the LGUs of Carmen, Nasipit, Jabonga, Kitcharao and Santiago(Socio-Economic Profile-AdN,2005).

The risks covered by those mentioned insurance services include natural calamities and pest infection and diseases. The Land Bank of the Philippines and selected rural banks offer these services which can be accessed by farmers, provided that they satisfy the application requirements(Socio-Economic Profile-AdN,2005).

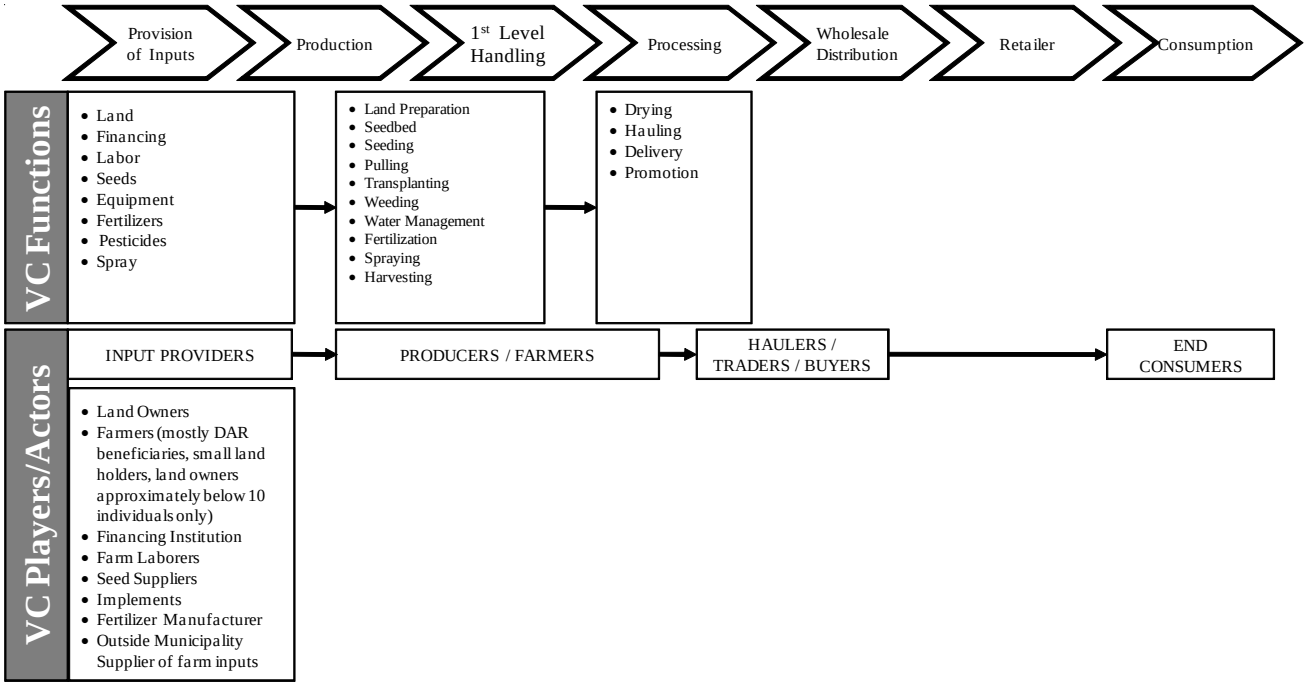
3.1 THE MAJOR FARMING VALUE CHAINS

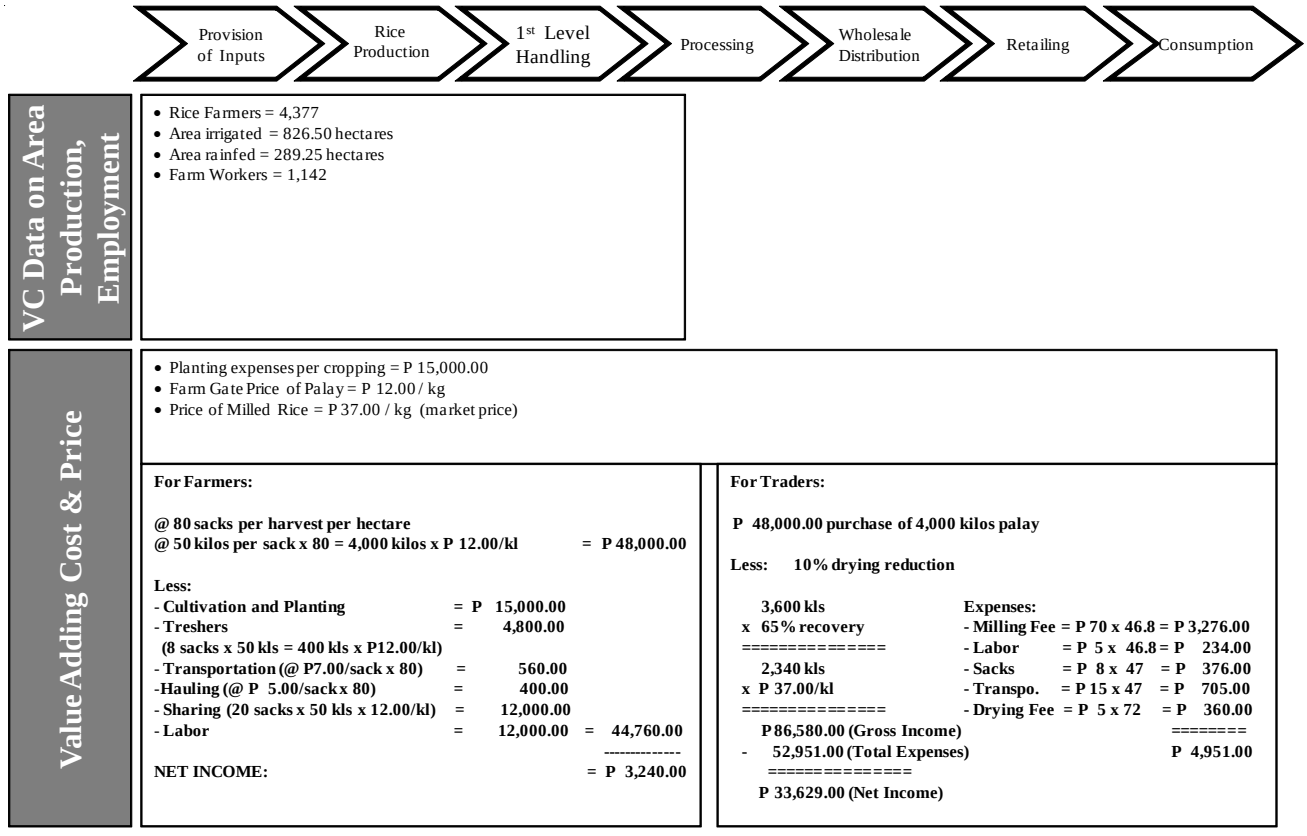
The Farming Communities Profile

3.1 THE MAJOR FARMING VALUE CHAINS

3.1.1 ACTUAL PRODUCTION CYCLES, PRODUCTS AND FORMS

- Buenavista





VC Linkages

- Rice Farmers = 4,377
- Area irrigated = 826.50 hectares
- Area rainfed = 289.25 hectares
- Farm Workers = 1,142
- Traders and Financiers:
  - Calo
  - Lapinid
  - Panganiban
  - Sanchez
  - Bulteodor
  - Gonzaga
  - Muslim individuals
  - Halop
  - Gacheli

VC Support

Financing: SRBC (Buenavista Rural Bank), CARD, Green Bank of Caraga, Cantilan Rural Bank, BAUG-CARP lending/micro-finance, KMBI, MELAMDEC, People's Bank of Caraga

Production Support: Alterdev provided soft loan to 1,126 farmer adoptors of Sustainable Agriculture Technology including technical support and provision of equiptment like, rice thresher, turtle and tractor, Irrigation is provided by the Government including 7 units Solar Dryers.

Policy Support: An Ordinance Prohibiting the burning of Rice Stalks was enacted by LGU of Buenavista, Legislative Measure for the Prohibition of quarrying within the Calayagon Watershed was also undertaken by the LGU of Buenavista.

Perceived Gaps

Financial Assistance for livelihood diversification, Effective Irrigation System, Farm Inputs, Intensification of organic farming, capability building of farmers organization, Reforestation of denuded forest of Calayagon Watershed

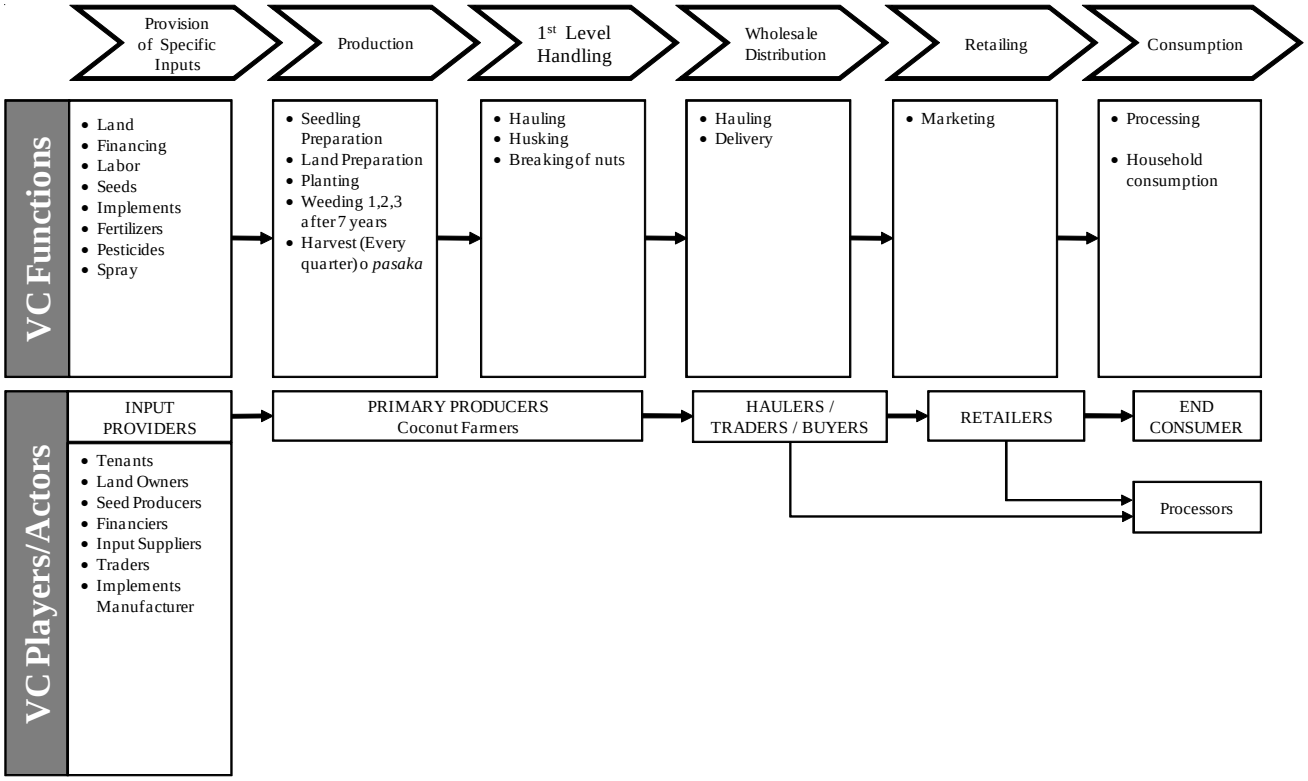
Threats / Risks

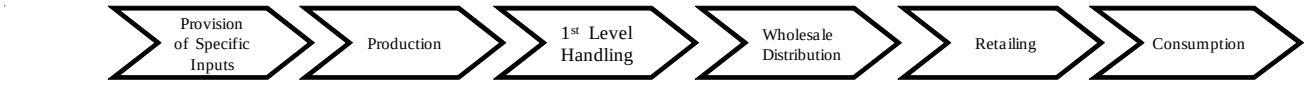
- Insufficient water supply to rice farms
- Climate Change: drought, flooding
- Extensive use of toxic chemicals in farming

VC Issues and Concerns

- Low production due to defective irrigation system
- Irrigation fee is high
- Scarcity of water supply

• Cabadbaran





VC Data on Area of Production, Employment

Area of Production: 6,908.36 hectares
Coconut Farmers : 8,500
Traders :
- Ong Oh - 1 buying in-charge, 2 drivers, 3 laborers;
- King Kiang - 1 buying in-charge, 2-drivers, 3 laborers;
- Concha - 1 buying in-charge, 1-driver, 2 laborers;
- Celebes - 1 buying in-charge, 3-drivers, 30-laborers;
- Obet Cong - 1 buying in-charge, 1-driver, 3 laborers

VC Adding / Costs & Prices

Expenses for planting coconut for 1 hectare:

Land preparation		
Lampas (clearing) P200/person x 10	....	P 2, 000.00
Daro (plowing) P300 x 10	....	3, 000.00
Sticking P200 x 2	....	400.00
Digging P200 x 5	....	1, 000.00
Seedling P30 x 100	....	3, 000.00
Hauling P200 x 2	....	400.00
Planting P200 x 2	....	400.00
Maintenance (Round weeding)		
*P200 x 10 = P2,000 x 4 Quarters x 7 yrs	....	56, 000.00
		=========
TOTAL		P 66, 200.00

After 7 years, farmer can start harvesting every 3 months

Expenses for harvest:

Pagsaka (climbing) @P5/treex100	.....	P 500.00
Tapok (gathering) @P200x2 persons	.....	400.00
Balsa	.....	300.00
Bunot	.....	200.00
Labor	.....	250.00
	Total :	P 1, 650.00

Expected yield for 1 hectare Coconut Plantation:

1000 kilos x P 3.30 / kilo	.....	P 3, 300.00
Less: Expenses		1, 650.00
Net Income for one harvest per hectare	.....	P 1, 650.00

*Trader usually take P2-P5 per kilo as mark up price of the purchased coconut.

VC Linkages

Producers: 8,500 coconut farmers

Traders: Ong Oh, King Kiang, Concha, Celebes, Obet Cong

Processor: Celebes

VC Support

Financing:

- PCA
- Rural Bank of Cabadbaran
- Green Bank of Caraga
- One Network Bank
- Bank of Placer
- SRBC
- People's Bank of Caraga
- LBP
- FCB
- King Coop
- UBI
- Cabadbaran Community Cooperative
- BAUG-CARP MPC
- ANTRECO
- Starjed
- Panaghiusa Coop
- Puting Bato Coop
- Mahaba Coop
- VACPM Coop
- CAMARCO
- Taytay sa Kauswagan, Inc.
- Individual lenders
- Traders
- Carloto Lending
- Dagani Lending

LGU-MAO is providing technical support to coconut farmers.

.

Coco Coir Processing is operated by Celebes. Husk part of coconut is purchased by Celebes at ten centavos per kilo.

Philippine Coconut Authority (PCA) is also providing technical support to coconut farmers.

Perceived Gaps

- Financing for Livelihood Support
- Organizational Capability of Coconut Farmers
- Technology Development on Coconut by-products
- Livestock production
- Organic Fertilizer Production
- Inter-cropping Technology

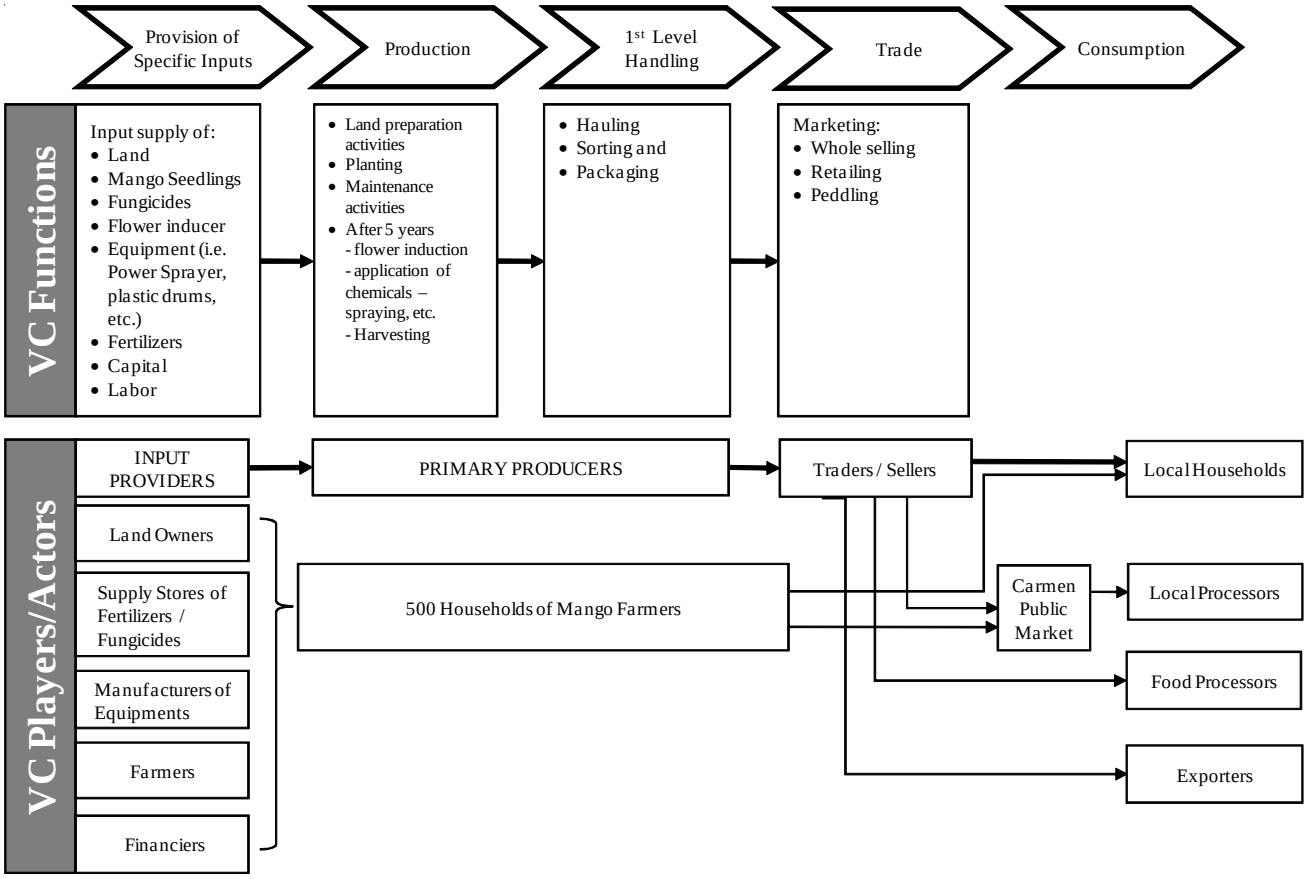
Threats / Risks

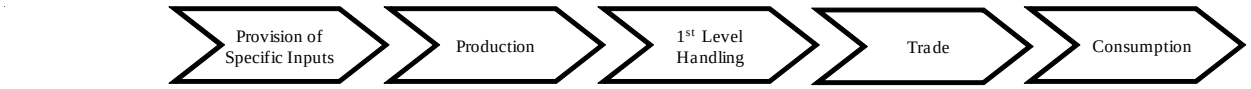
- Climate Change
- Theft of coconut
- Land conversion
- Illegal cutting of coconut trees

VC Issues and Concerns

- Businessmen control the price of coconut
- Continuing illegal cutting of coconut trees
- No market intervention
- LGU did not approve the PCA project on coconut by-product processing

• Carmen





VC Data on Area of Production, Employment

Mango Farmers = 500

Area: 1,387 hectares

Value Adding Cost & Price

- Expenses for planting mango in 1 hectare : P 95,400.00
- Expenses for spray and harvesting after 5 years : P 42,240.00
- Expected yield of 1 hectare mango plantation : P150,000.00 (5 tons @ P30.00 per kilo)

Expenses for 1 hectare Mango Plantation

Preparation / Planting Stage:

- 100 seedlings @ P25.00 / seedling : P 2,500.00
- Clearing 1 (Pakyaw / piecework) : 3,500.00
- Plowing (P200 / Carabao x 10) : 2,000.00
- Clearing 2 : 2,000.00
- Sticking : 500.00
- Digging / Planting : 2,000.00

SUB-TOTAL…… : P12,500.00

After 5 years:

- Weeding (Quarterly) @ P3,500.00/quarter x 5 years : P70,000.00
- Plowing : 2,000.00
- Flower Inducer : 10,500.00
- Labor : 400.00

SUB-TOTAL…… : P82,900.00

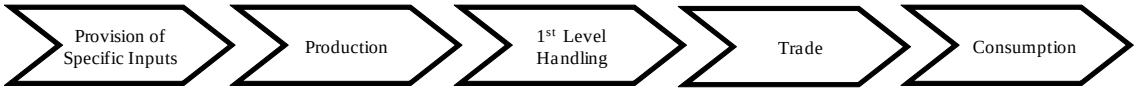
- Spray pesticides, insecticides and fungicides : P 40,000.00
- Bagging (600/bundle x 3) : 1,800.00
- Stapler : 240.00
- *Putos* P200 : 200.00

SUB-TOTAL…….. : P 42,240.00

* Traders will usually have a mark-up of P10 to P20 per kilo of mango.

Yield for first harvest after 5 years: 5 tons

- 5,000 kilos x P30/kilo : P150,000.00
- Less expenses for flower inducer, labor spray, bagging, etc : P 53,140.00
- PROFIT : P 96,860.00



VC Linkages

Producers : 500 Mango Farmers

Buyers : Algen
7D Foods (buyer/processor)
Pro-Foods (buyer/processor)
Diamond Star
Flying Horse
GHL

Peddlers : Piloy and Model
Lour Olan
Lorna Tigoylo
Rey Suson
Nanding Tagalog
Cilo and Rick Tagalog

Supplier of Inputs : JEELS Masagana
Cardinal Farm Supply

Producers/Sprayers : Rustom Beronilla
Abraham dela Cruz
Alie Hagonoy
Sgt. Holin
Arnulfo Daasi
Salas Farm
Antonio Tapere
Ernesto Maambong
Felipe Pagador
Mayor Calo
Dodong Fineza

Local Processors:
- Edig Yumo
- Luz Esdrilon
- Numfa Fernando

VC Support

- Financing : Services from Green Bank of Caraga, Coopeerative Bank, People's Bank, SRBC, KMBI, ANTRECO, LGU
- Production Support : Training / Livelihood Services --- LGU-MAO/MPDO, DAR, Borkenshire, DA provided power sprayers to Mango Growers
- Policy Support : LGU enacted an Ordinance prohibiting disposal of container pesticides to rivers or creeks within the jurisdiction of the Municipality of Carmen

Perceived Gaps

Financial support, Capability Building to Mango Growers Organization, Technology Support, Crop Insurance, IEC Campaign

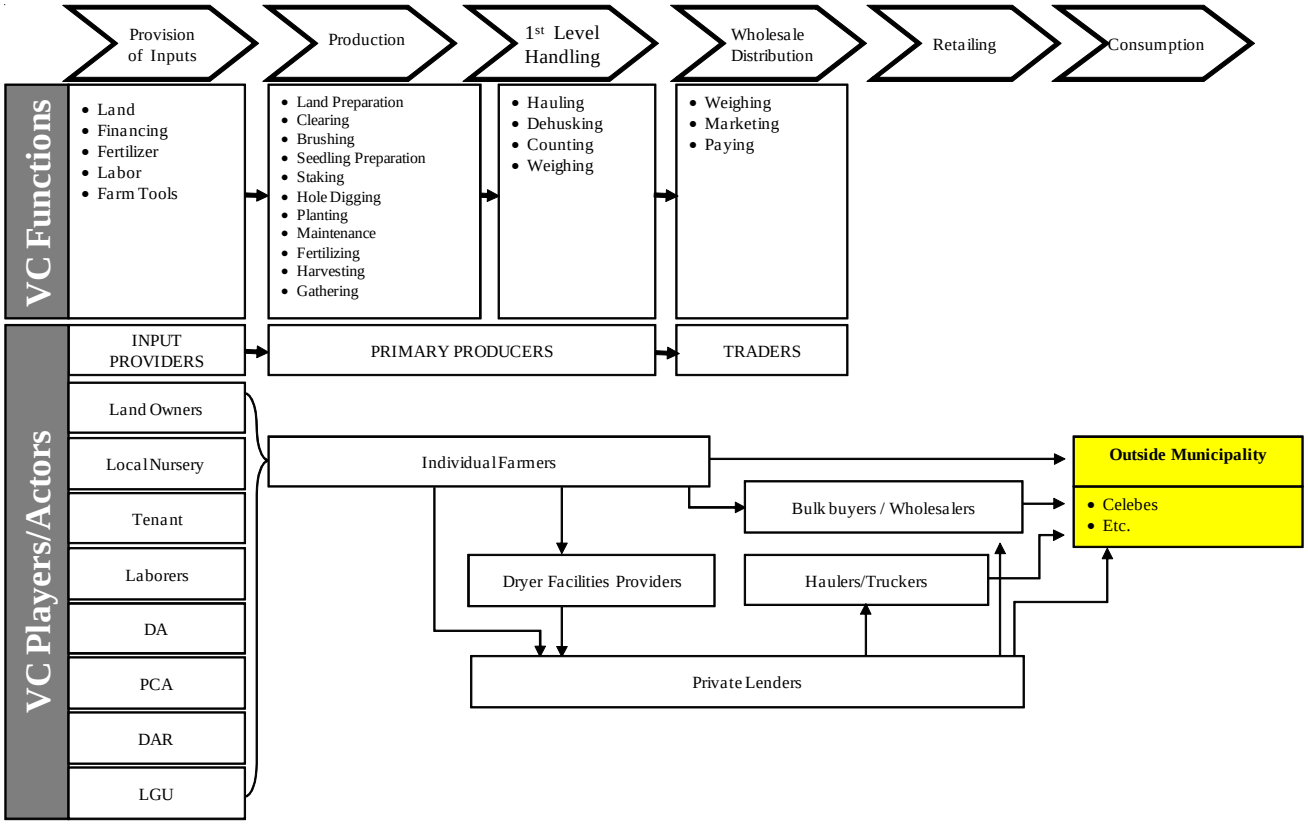
Threats / Risks

- Climate Change (Drought), Heavy Rainfall, Strong Winds, Environmental Hazards, Disposal and wash of pesticides, indiscriminate disposal of pesticide containers, implementation of laws prohibiting the use of banned chemicals

Issues and Concerns

- Sprayers provided by LGU are not enough to mango growers
- Mismanagement in the provision of power sprayers to mango growers because it is supposed to be paid so that others can also avail of such power sprayers

• Jabonga



VC Data on Area Production, Employment

- 6,764.43 hectares total coconut land area.
- 15 Barangays with production of coconut
- 2000 coconut farmers
- 1,050 coconut farms

Value Adding Cost & Price

- Harvest of farmers per quarter range up to 1,000 kgs. per hectare @ 100 trees per ha.
- Price ranges from P3.00/kg *[if there's abundant supply]* to P3.50/kg *[average]*
- Estimated quarterly expenses per harvest is P2,375.00
- For Sharing arrangement: the usual percentage of sharing is 50% for the tenant and 50% for the land owner. Harvesting expense is charge to tenant.

For Farmers:

@ 1,000 kilos harvest in a quarter per ha. [Whole Nut]

Income of farmers [per qtr.]:

1,000 kls. @ Php 3.50 :		P 3,500.00
Less expenses :		
Pasaka [per tree]	- P 5.00 @ 100 trees = P	500.00
Tapok [gathering]	- P 150.00 @ 5 pax = P	750.00
Pagbunot [husking]	- P 15.00/100 @ 1,000 kls = P	150.00
Hauling with Food	- P 300.00 @ 10 pax = P	1,200.00
		P 2,600.00
Net Profit		**P 900.00**

For Buyers/Traders:

1,000 kilos from the farmer @ P3.50/kl. With P3.00 mark-up

P3.50 + P3.00 = P 6.50
x 1,000 kls

Gross profit	**P 6,500.00**
Less:	
	3,500.00 (cost for buying)
Net profit	**P 3,000.00**

VC Linkages

Government Institutions:
- Department of Agriculture
- Philippine Coconut Authority
- Municipal Local Government Unit
- Department of Agrarian Reform
- Department of Science and Technology
- Department of Trade and Industry
- Non-Government Organization

Private Traders:
- Peterez,
- King-Kiang
- Lachica
- Ongue
- Lunayad
- Makatigue
- Ongue

VC Support

Financing:
- Peterez,
- King-Kiang
- Lachica
- Ongue
- Lunayad
- Makatigue
- Ongue

Training Support:

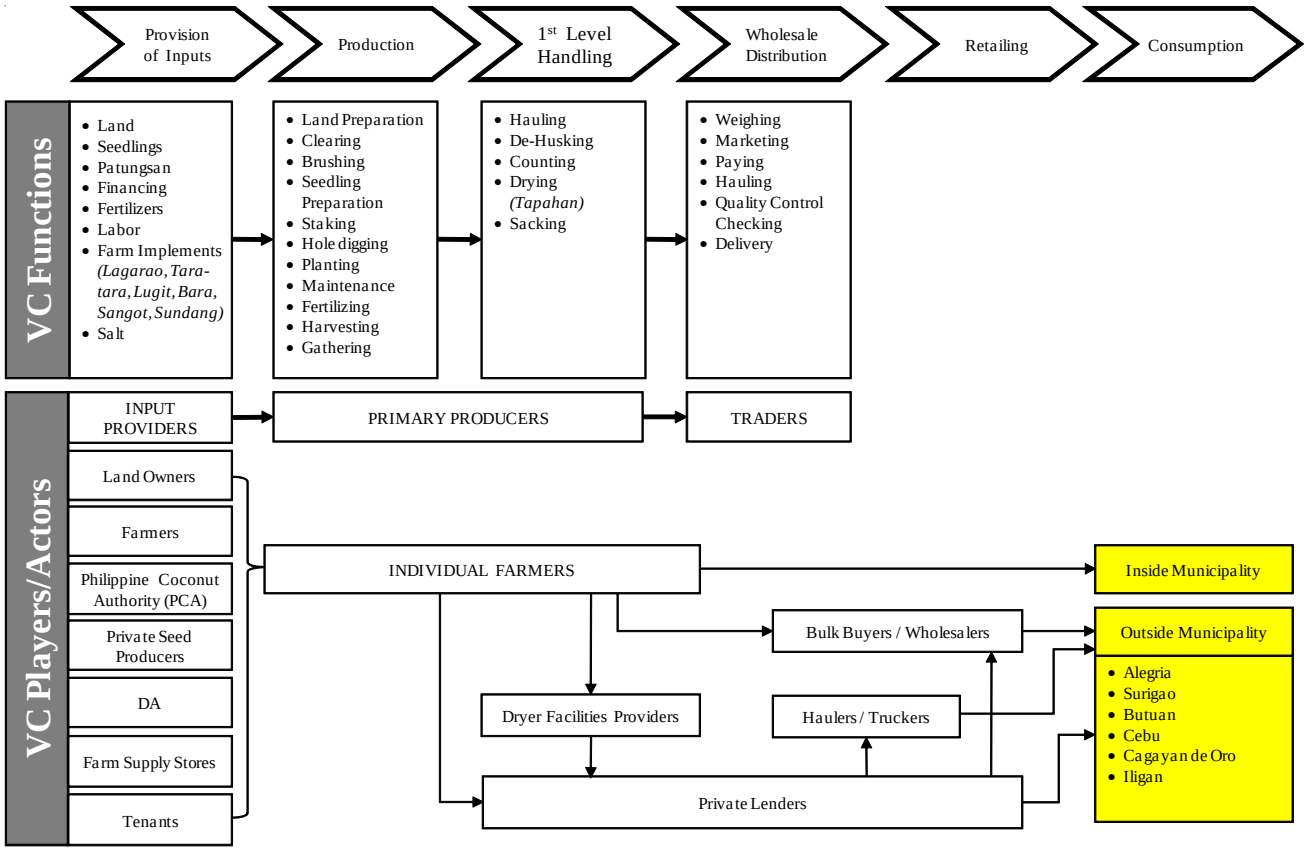
Department of Agriculture
Local Govt. Unit (MAO)
Dept. of Trade and Industry
Dept. of Science and Technology
Dept. of Agrarian Reform
Philippine Coconut Authority
Non-Government Organization

Perceived Gaps
- Not enough capital
- Technology Development
- Lack of Trainings in Coco Processing
- Intercropping Technology
- Technical Support to improve Coconut Industry
- Organizational capacity building of coco farmers organization

Threats / Risks
- Theft Poaching
- Peace and Order
- Insurgency
- Low Pricing
- Price controlled by traders
- Climate Change

VC Issues and Concerns
- Lack of information dissemination
- "Tapahan" – contributor to carbon emission
- Lack of strict law enforcement on Theft of coconuts
- Siltation in Calinawan River
- Farmers are enslaved in loans

• Kitcharao



VC Data on Area of Production, Employment

- 2,707.74 hectares total coconut land area.
- 6 Barangays with production of coconut
- 600 farmers
- Small Coconut Farmers' Organization [SCFO]

VC Adding / Costs & Prices

- Harvest of farmers per quarter range up to 336 kilograms per hectare
- Price ranges from P15.00 / kg *[average]*
- Estimated quarterly expenses per harvest is P3,830.00
- For sharing agreement: the usual percentage of sharing is 50% for the tenant and 50% for the land owner

For Farmers:
@ 336 kilos harvest in a quarter per hectare

Income of farmers [per quarter] :		
336 kilos @ P15.00		.... P 5, 040.00
Less expenses:		
- *Pasaka [per tree]*	P 400.00	
- *Tapok [gathering]*	400.00	
- *Pagbunot [husking]*	200.00	
- *Paglugit*	300.00	
- Hauling with Food	2,000.00	
- Transportation	530.00	.... 3,830.00
		=========
Net Profit		P 1, 210.00

For Buyers / Traders:
336 kilos from the farmer @ P15.00 / kl with P1.00 mark-up

- P15.00 + P1.00	=	P 16.00
		x 336 kilos

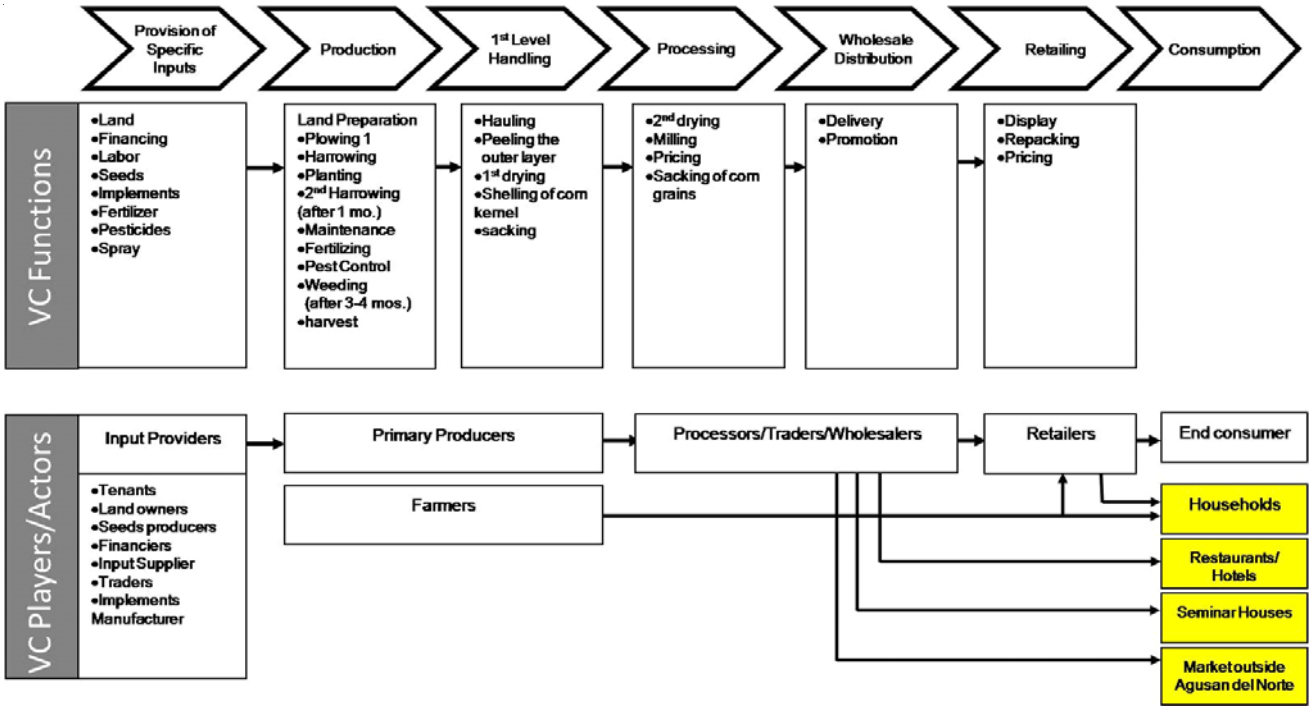
Gross Profit:		P 5,376.00
Less: Cost of purchase	=	P 5,040.00
		==========
NET PROFIT:		P 336.00

*Net profit varies depending on volume

VC Linkages	**Government Institutions**: • Philippine Coconut Authority • Department of Agriculture • Municipal Local Government Unit
VC Support	**Financing:** • PCA • Green Bank of Caraga **Philippine Coconut Authority:** • Seminars • Trainings • Maintenance • Technology • Scholarship (Cocofed Scholars)

Perceived Gaps	• No financing • Technology development • Lack of trainings on Coco Processing • Inter-cropping improvement
Threats / Risks	• Low income due to theft / poaching • Fluctuating price • Illegal cutting of coconut trees
VC Issues and Concerns	• Low / fluctuating price of copra • Farmers have no control on copra price • No insurance of coconut crop • Lack of support from LGU • High interest from financiers • Rampant theft / poaching • Not enough products • Development of coconut by-products • Continuing illegal cutting of coconut trees

• Las Nieves



VC data on area of production, employment

Production area: 1,096 has.

342 organized farmers

7 Corn Traders

Input Suppliers: - Masagana Farm Supply, Cardinal Farm Supply, Monsanto Farm Supply
- Department of Agriculture
- Social Action Center of Butuan Diocese, a Church-Based NGO also providing organic seeds to farmers

Value Adding Costs & Prices

Costing/Expenses in planting corn:

Land preparation, input, maintenance to harvesting for 1 hectare Hybrid Yellow Corn for 1 cropping = P20,000.00

Yield = 55 sacks @ P8/kl for yellow corn
X 60kls per sack

3,300 kilos X P8 = P26,400.00 – P20,000.00 = P6,400.00
Net Income

Land Preparation, input, maintenance to harvesting for 1 hectare Ordinary Corn (White Corn) for 1 cropping = P15,000.00

Yield = 30 sacks x 60 kilos per sack
= 1,800kls x P13 = P23,400.00 – P15,000 = P8,400.00
Net Income

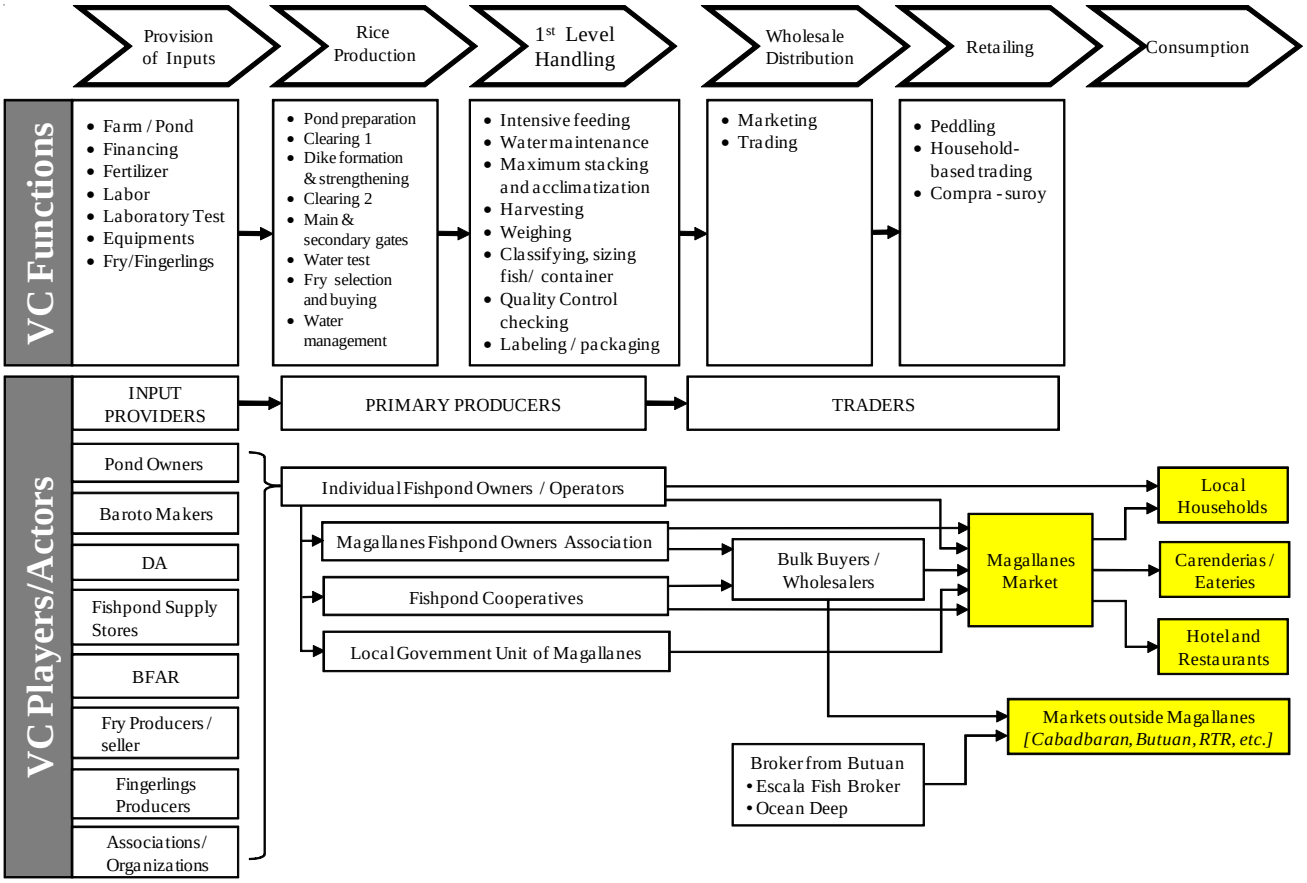
For Trader:
Buying Cost of 3,300 kilos Yellow Corn = P 26,400.00
3,300 kilos – Drying reduction 5% = 3,135 kls. @ 70% recovery = 2,194.5 kilos or 36.6 sacks @ P1,320.00/sack = P48,312.00
Corn Brand/Benlod tiktik = 350 kls @ P8/kl = P 2,800.00
48,312.00
TOTAL GROSS INCOME P 51,112.00

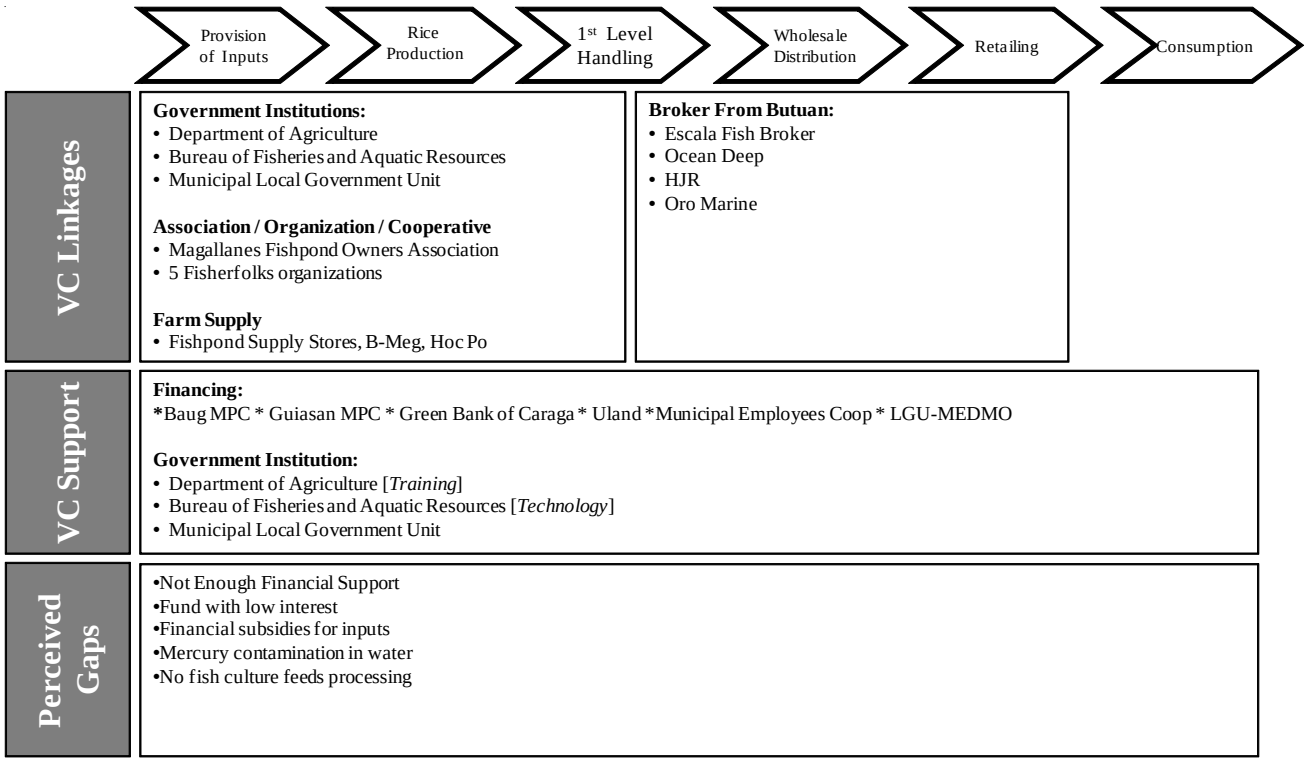
Less Expenses:

Labor	= P 360.50	
@ 1.20 per kilo milling fee	= 2,633.40	
Transportation expense at P50/sk	= 1,850.00	
Sacks = milled corn = 37 @ P16	= 592.00	
Corn brand = 6 @ P16	= 96.00	
Benlod/Tiktik = 1 sk	= 16.00	
Total Operating EXPENSES	= P 5,547.90	
Add: Cost of Corn	= P 26,400.00	
TOTAL EXPENSES		= P 31,947.90
NET INCOME		= P 19,164.10

VC Linkages	342 organized farmers 7 Corn Traders : Lagrosa, Broncano, Fuentes, Yoting, Quillo, Misyon, Labor Input Suppliers : - Masagana Farm Supply, Cardinal Farm Supply, Monsanto Farm Supply - Department of Agriculture. - Social Action Center of Butuan Diocese, a Church based NGO is also providing organic seeds to farmers
VC Support	Financing: Las Nieves is covered as service area of People's Bank of Caraga, BCMPC (Coop., LGU-MEEDMO-MAO is providing production support to Farmers Associations like, Marcos Calo Farmers Assn., Consorcia Farmers Assn., Ibuan Farmers Assn., Balungagan Farmers Assn) DA-PAO provides recently technology to corn farmers in Las Nieves on Bio-N, a microbial based organic fertilizer as well as hybrid GMA Corn, 480 bags. Technical Support on Organic Farming is provided by Social Action Center of the Diocese of Butuan.
Perceived Gaps	*Lack of financing * Lack of Training on livelihood diversification *Lack of Farm Facilities like farm maul **Works Cited** **There are no sources in the current document.**
Threats / Risks	*Climatic Changes (flooding/drought) * Overused of chemicals lead to environmental hazards *15 barangays are affected with flooding
VC Issues and Concerns	• Farmers are tied up with loan from traders • Farmers have no control of the price of their product • 30% of farmers' loan proceeds is diverted to vices • Farmers lack self-discipline.

- Magallanes


Provision of Inputs
Rice Production
1st Level Handling
Wholesale Distribution
Retailing
Consumption
VC Functions
Farm / Pond
Financing
Fertilizer
Labor
Laboratory Test
Equipments
Fry/Fingerlings
Pond preparation
Clearing 1
Dike formation & strengthening
Clearing 2
Main & secondary gates
Water test
Fry selection and buying
Water management
Intensive feeding
Water maintenance
Maximum stacking and acclimatization
Harvesting
Weighing
Classifying, sizing fish/ container
Quality Control checking
Labeling / packaging
Marketing
Trading
Peddling
Household-based trading
Compra - suroy
VC Players/Actors
INPUT PROVIDERS
PRIMARY PRODUCERS
TRADERS
Pond Owners
Baroto Makers
DA
Fishpond Supply Stores
BFAR
Fry Producers / seller
Fingerlings Producers
Associations/ Organizations
Individual Fishpond Owners / Operators
Magallanes Fishpond Owners Association
Fishpond Cooperatives
Local Government Unit of Magallanes
Bulk Buyers / Wholesalers
Magallanes Market
Local Households
Carenderias / Eateries
Hotel and Restaurants
Markets outside Magallanes [Cabadbaran, Butuan, RTR, etc.]
Broker from Butuan
• Escala Fish Broker
• Ocean Deep


Provision of Inputs
Rice Production
1st Level Handling
Wholesale Distribution
Retailing
Consumption
VC Linkages
Government Institutions:
• Department of Agriculture
• Bureau of Fisheries and Aquatic Resources
• Municipal Local Government Unit
Association / Organization / Cooperative
• Magallanes Fishpond Owners Association
• 5 Fisherfolks organizations
Farm Supply
• Fishpond Supply Stores, B-Meg, Hoc Po
Broker From Butuan:
• Escala Fish Broker
• Ocean Deep
• HJR
• Oro Marine
VC Support
Financing:
*Baug MPC * Guiasan MPC * Green Bank of Caraga * Uland *Municipal Employees Coop * LGU-MEDMO
Government Institution:
• Department of Agriculture [Training]
• Bureau of Fisheries and Aquatic Resources [Technology]
• Municipal Local Government Unit
Perceived Gaps
•Not Enough Financial Support
•Fund with low interest
•Financial subsidies for inputs
•Mercury contamination in water
•No fish culture feeds processing

VC Data on Area of Production, Employment

1,415.76 has. Total fish pond area
342 households of organized fisherfolks/farmers

VC Adding / Costs & Prices

- Harvest per fisherman per hectare range up to 666 kilos *[average]*
- Farm gate price range up to P70.00 / kl *[average]*
- Estimated expenses per harvest is P29,369.58
- For sharing arrangement: the usual percentage of sharing is 50% for the lease holders and 50% for the fish pond owners

For Lease Holders:

@ 666kls harvest in a 4 mos. per hectare

Income of farmers [per harvest]:			
666 kls. @ Php 70.00 :		= **P**	**46,666.20**
Less expenses :			
Fingerlings Cost	-P1.70 @ 2,000 pcs.	P	3,400.00
Clearing 1 (5days)	-P120.00 @ 2 pax	P	1,200.00
Dike Formation (3days)	-P120.00 @ 2 pax	P	720.00
Gates		P	1,200.00
Clearing 2 (4days)	-P120.00 @ 2 pax	P	960.00
Fertilization (1sack Urea)		P	1,200.00
Detoxifying (tea seed powder 1sack)		P	1,100.00
Feeds	-P950.00 @ 3 sacks	P	2,850.00
Maintenance 10% of gross profit		P	4,666.62
		=	**P 17,296.62**
Net Profit		=	**P 29,369.58**

For Buyers/Traders:

@ 666kls with P70.00/kl rate plus P20.00 mark-up

P70.00 + P20.00	=	P	90.00
		x	666 kls
Gross profit			**P 59,940.00**
Less Expenses:			
Cost of purchase	=	P	46,666.20
Operating Capital	=	P	7,000.00
Transpo (2pax)	=	P	200.00
Labor	=	P	50.00
Ice	=	P	50.00
Cellophane	=	P	20.00
Meals	=	P	100.00
Arkabala	=	P	50.00
			P 54,136.20
Net profit			**P 5,803.80**

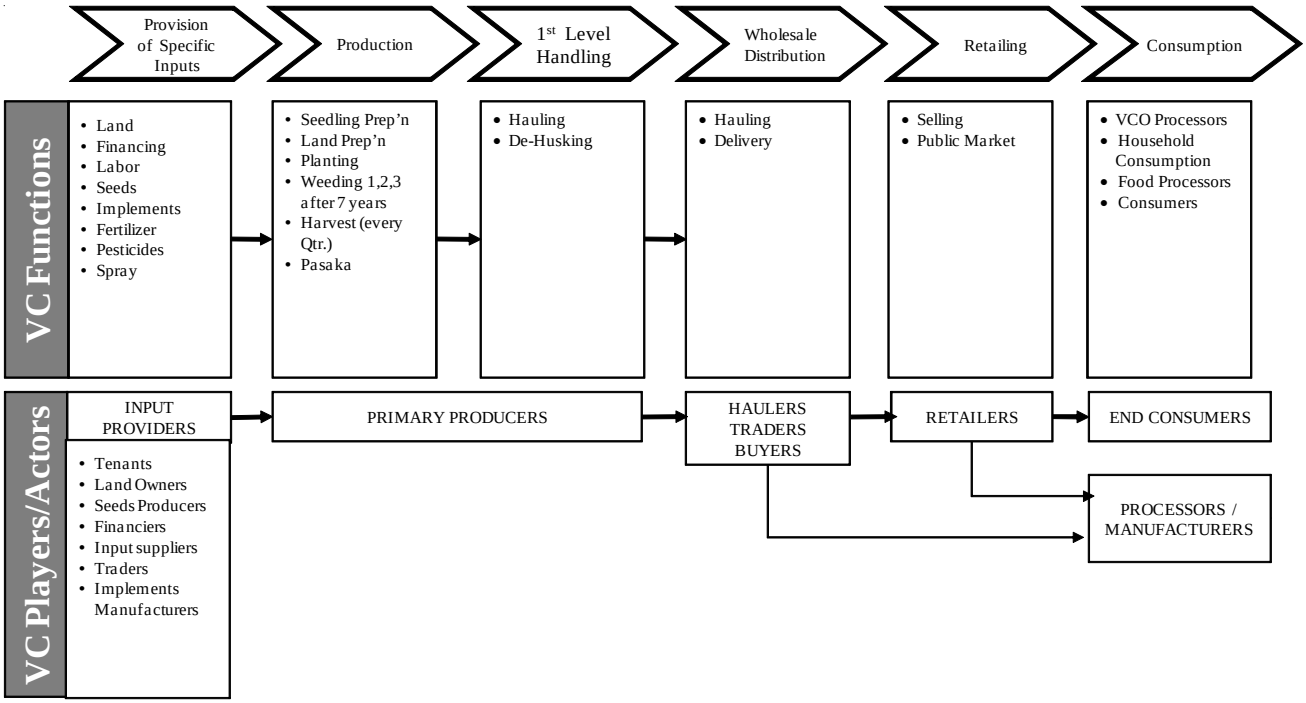
Threats / Risks

- Floods
- Typhoon
- Climate Change
- Local Small fish traders (*utang*)
- No written marketing agreement
- Small individuals fishpond operator not organized

VC Issues and Concerns

- Lack of Capital
- High Cost of production [inorganic fertilizer usage]
- Lack of Fishpond technician experts
- Virus attack due to climate change and pollution
- No ice storage facility
- Harvest done mostly at the same time
- Over supply of produce bangus with low price
- Air and water pollution

• Nasipit



VC Data on Area of Production, Employment

Production Area: 3,252.68

Coconut Farmers: 1,275

Buyers: JR Marketing (1 buying in charge, 1 cashier, 2 drivers, 6 laborers)
AGSA Trading (1 buying in-charge, 1 cashier, 1 driver, 4 laborers)
Celebes (1 buying in-charge, 1 cashier, 1 driver, 3 laborers)

VC Adding / Costs & Prices

*Coconut farmers do not have control on the price of coconut. The price is unstable to the disadvantage of the farmers. Although, there are times that price is favorable to the farmers.

Computation of Expenses in planting coconut for 1 hec.

Land preparation	P 6,000.00
Clearing, plowing, etc.	
Cost per seedling @ P25x100	2,500.00
Hole Digging, planting	3,000.00
Maintenance for 4x a year x 7 years	
@ P150/laborx10 persons x 28	42,000.00
	=========
TOTAL	P53,500.00

Harvesting Expenses:

Pagpasaka (climbing) @P5 per tree x 100 trees	= P 500.00
Pagpatapok (gathering) @P150/pax x5pax	= 750.00
Pagbunot (dehusking) @P15/100pcs.x1000	= 150.00
Hauling pakyaw P1,200	= 1,200.00
TOTAL	P 2,600.00

Yield per hectare:

1000klsxP3.50	= P3,500.00
Less Expenses	= P 2,600.00
Net Income	= P 900.00

One participant said Coconut Buyers' mark up is from P3 to P5 per kilo.

VC Linkages

Producers: 1,275 Coconut Farmers, **Buyers**: JR Marketing, AGSA Trading, Celebes **Processor**: Celebes, VCO makers

In put Provider: PCA

In put Supplier : Cardinal Farm Supply, Jeels Masagana

VC Support

Financing:

- PCA
- Green Bank of Caraga
- Individual Lenders
- Traders

Production Support:
- PCA provides fertilizers to coconut farmers, LGU-MAO provides technical assistance to coconut farmers

Policy Support:
- LGU enacted Mun. Ord. No. 004-2002 prohibiting the entry of coconut seedlings to Nasipit coming from Luzon and Visayas to avoid the spread of Cadang-cadang disease.

Perceived Gaps

- Lack of financial support for livelihood diversification of coconut farmers
- Lack of Organizational Capacity Building of the farmers' organization
- Lack of Skills for the By-products development of coconut
- Lack of machineries for the development of coconut by-products
- Lack of financing to support coconut plantation in log over areas.

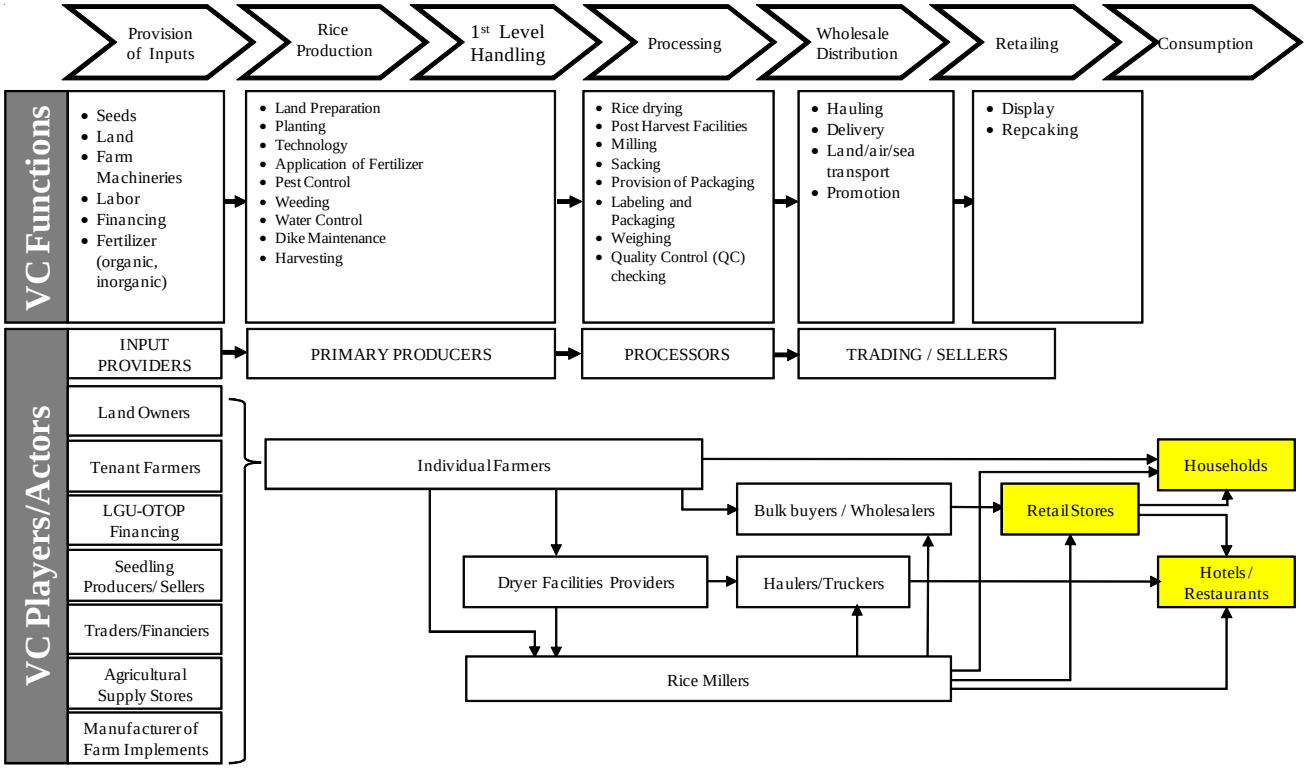
Threats / Risks

- Continuing illegal cutting of coconut trees
- Spread of diseases
- Climatic Changes (landslides, heavy rains, drought)
- Land Conversion

VC Issues and Concerns

- Illegal Cutting of trees including coconut
- Laxity in the enforcement of laws to the cutting of coconut trees.
- Continuing reduction of coconut plantation areas.
- Farmers do not have control on the price of coconut
- Unstable price of coconut
- Lobbying of coconut levy fund to be used for development of coconut by products

• R.T. Romualdez



VC Data on Area Production, Employment

- 726 Household Farmers
- 1,742 Irrigated Areas

Value Adding Cost & Price

- Harvest of farmers per quarter range up to 1,000 kgs. per hectare @ 100 trees per ha.
- Price ranges from P3.00/kg *[if there's abundant supply]* to P3.50/kg *[average]*
- Estimated quarterly expenses per harvest is P2,375.00
- For Sharing arrangement: the usual percentage of sharing is 50% for the tenant and 50% for the land owner. Harvesting expense is charge to tenant.

For Farmers:

@ 80 sacks per harvest per hectare
@ 50 kilos per sack x 80 = 4,000 kilos x P 12.00/kl = P 48,000.00

Less:

- Cultivation and Planting	**= P 15,000.00**	
- Treshers	**= 4,800.00**	
(8 sacks x 50 kls = 400 kls x P12.00/kl)		
- Transportation (@ P7.00/sack x 80)	**= 560.00**	
-Hauling (@ P 5.00/sack x 80)	**= 400.00**	
- Sharing (20 sacks x 50 kls x 12.00/kl)	**= 12,000.00**	
- Labor	**= 12,000.00**	**= 44,760.00**
NET INCOME:		**= P 3,240.00**

For Traders:

P 48,000.00 purchase of 4,000 kilos palay

Less: 10% drying reduction

3,600 kls
x 65% recovery
2,340 kls
x P 37.00/kl
P 86,580.00 (Gross Income)
- 52,951.00 (Total Expenses)
P 33,629.00 (Net Income)

Expenses:

- Milling Fee	**= P 70 x 46.8**	**= P 3,276.00**
- Labor	**= P 5 x 46.8**	**= P 234.00**
- Sacks	**= P 8 x 47**	**= P 376.00**
- Transpo.	**= P 15 x 47**	**= P 705.00**
- Drying Fee	**= P 5 x 72**	**= P 360.00**
		P 4,951.00

VC Linkages

Government Institutions:
- PhilRice
- Agricultural Training Institute (ATI)
- Municipal Local Government Unit
- Department of Trade and Industry (DTI)
- National Economic and Development Authority (NEDA)

Farm Supply:
- Agrivet
- Placer
- LGU-OTOP – Organic Fertilizer

Private Lenders/Financers:
- Ong-o
- Inteno
- Goodluck
- Langan-langan
- Recklens,
- Marticion
- Anita Tan
- Corona
- Racaza
- Dultura
- Monteros
- Cabatingan
- Azerado
- Abecena
- Ariga
- Cagampang
- Udarbe
- Alcantara
- Baquial
- Sanchez

VC Support

Financing:[private]
- Ong-o
- Inteno
- Goodluck
- Langan-langan
- Recklens
- Marticion
- Anita Tan
- Corona
- Racaza
- Dultura
- Monteros
- Cabatingan
- Azerado
- Abecena
- Ariga
- Cagampang
- Udarbe
- Alcantara
- Baquial
- Sanchez

Financing: [government]
- Municipal Local Government Unit –OTOP Project
- Department of Trade and Industry
- National Economic and Development Authority-Caraga Regional Office

Training Institutions: PhilRice, ATI, LGU-MAO

Perceived Gaps

- Not enough capital
- Less improvement of their income/livelihood
- Lack of knowledge
- Organizational Capacity of Farmers Association
- Livelihood Training for diversification of farmers livelihood

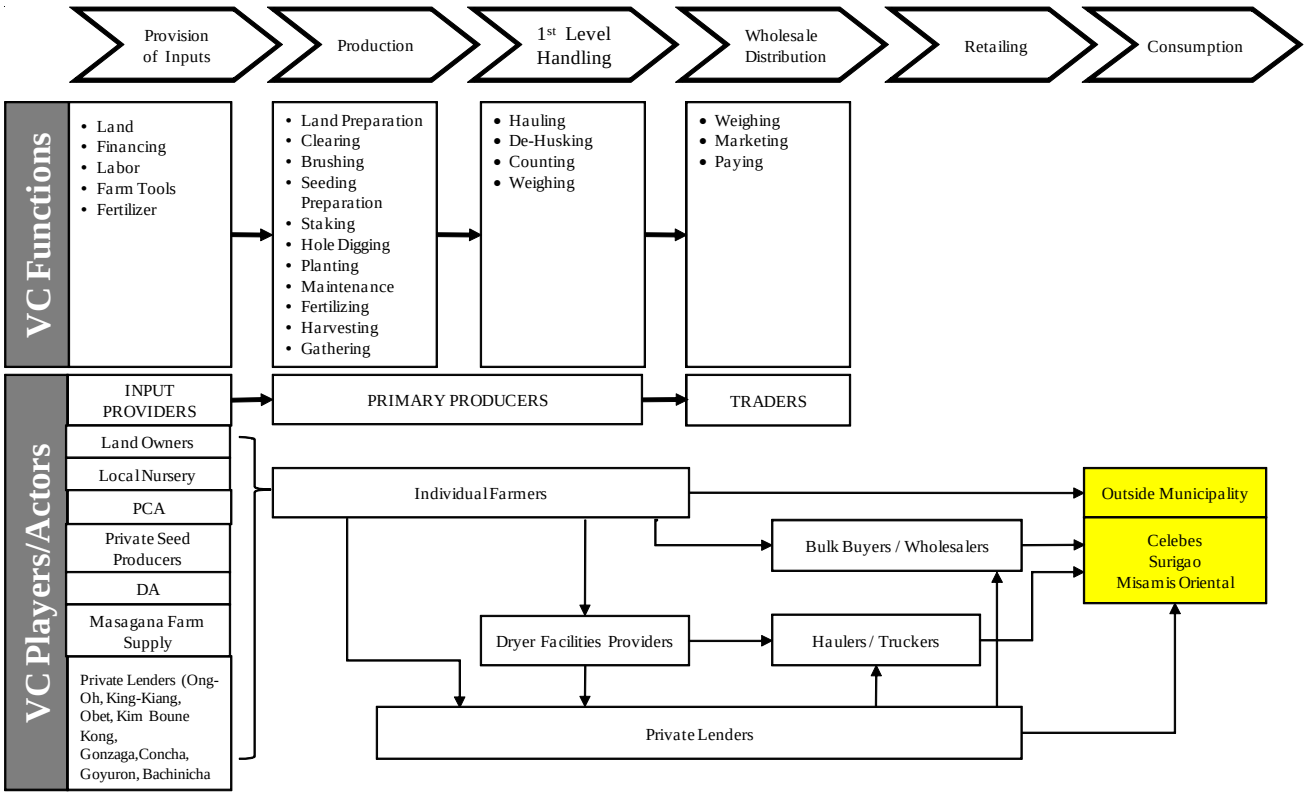
Threats / Risks

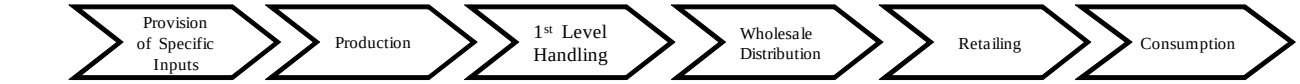
- Environmental Hazard due use of synthetic chemicals
- Difficulty to improve their income / livelihood [farmers]
- Farm Land used for collateral
- Flooding
- Pest infestation

VC Issues and Concerns

- High Cost of Inputs
- Defective Irrigation System
- Water Source
- Flooding – Climate Change
- Financing – too high Interest
- Price Controlled by compradors
- Farmers Association has no Rice Mill facility

• Santiago





VC Data on Area of Production, Employment

- 2,241 hectares total coconut land area.
- 6 Barangays with production of coconut
- 759 households of coconut farmers

VC Adding / Costs & Prices

- Harvest of farmers per quarter range up to 1,000 kgs. per hectare @ 100 trees per ha.
- Price ranges from P3.00/kg *[if there's abundant supply]* to P3.50/kg *[average]*
- Estimated quarterly expenses per harvest is P2,375.00
- For Sharing arrangement: the usual percentage of sharing is 50% for the tenant and 50% for the land owner

For Farmers:

@ 1,000 kilos harvest in a quarter per ha. **[Whole Nut]**

Income of farmers [per qtr.]:

1,000 kls. @ Php 3.50 :			Php. 3,500.00
Less expenses :			
Pasaka[per tree]	-P5.00 @ 100 trees	=	Php. 500.00
Tapok[gathering]	-P150.00 @ 5 pax	=	Php. 750.00
Pagbunot[husking]	-P15.00/100 @ 1,000 kls	=	Php. 150.00
Hauling with Food	-P300.00 @ 10 pax	=	Php. 1,200.00
			Php. 2,600.00
Net Profit			**Php 900.00**

For Buyers/Traders:

1,000 kilos from the farmer @ P3.50/kl. With P3.00 mark-up

P3.50 + P3.00 = Php. 6.50 x 1,000 kls

Gross profit **Php. 6,500.00**

Less:

P3,500.00 (cost for buying)

Net profit **Php. 3,000.00**

VC Linkages

Government Institutions:
- Department of Agriculture
- Philippine Coconut Authority
- Municipal Local Government Unit

Farm Supply
- Masagana Farm Supply
- Boholano Store

Private Lenders/Traders:
Ong-o, King-Kiag, obet, Kim Boune Kong, Gonzaga, Concha, Goyuron, Bachini cha

VC Support

Financing:
Private Lenders - Ong-oh, King-kiang, Obet, Kim Boune Kong, Gonzaga, Concha, Goyuron, Bachinicha

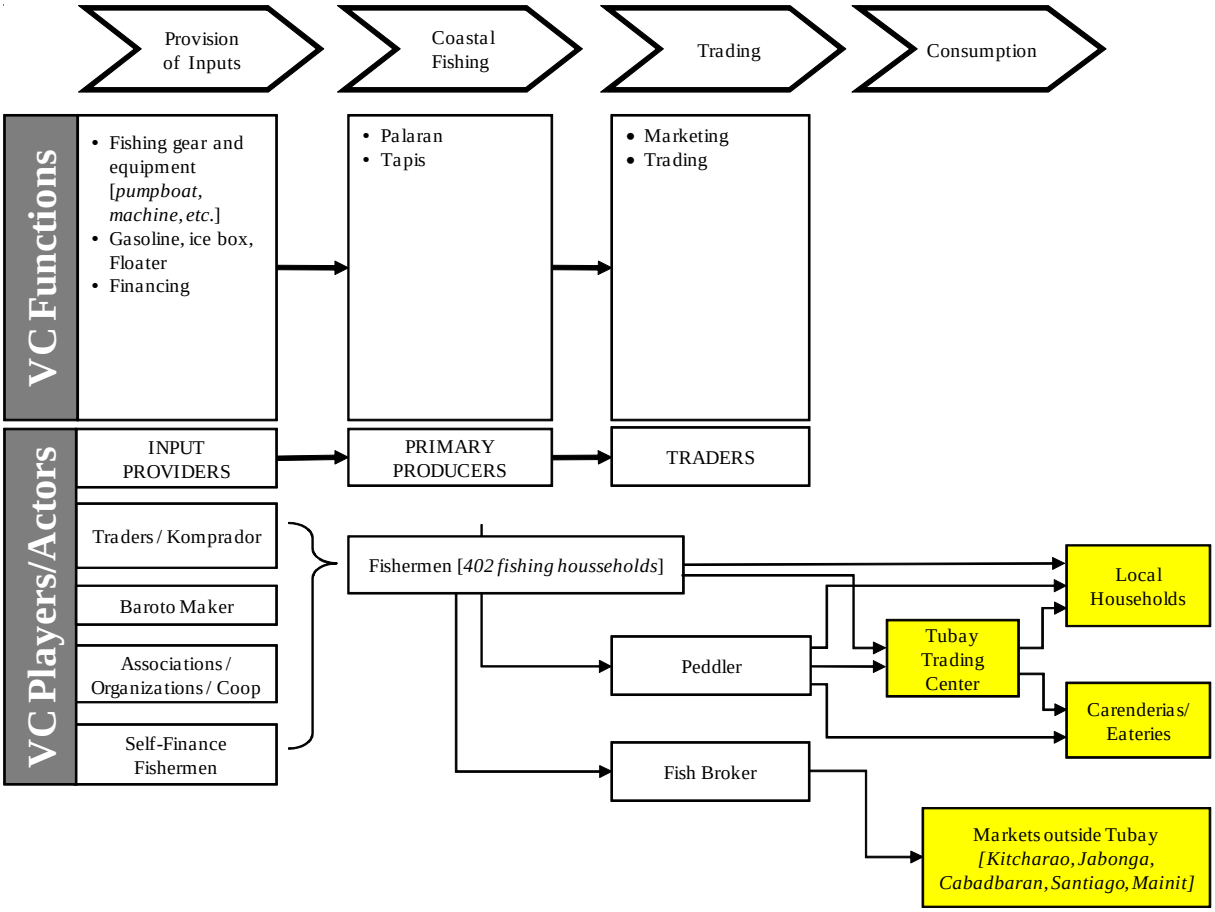
Production Support:
DA – Fertilizers, Seeds
PCA – Seeds

Perceived Gaps
- Not enough capital
- Technology Development
- Financing (Farmers Friendly Financing Scheme)
- Lack of Trainings in Coco Processing
- Intercropping improvement

Threats / Risks
- Some farmers were afraid of Typhoon that hit in their farm
- One of the hindrances of the farmers are pest
- Low income due to Theft/poaching
- Fluctuating Price
- Illegal cutting of coconut trees

VC Issues and Concerns
- Low Price
- Limited Market
- No Processing Technology
- No Processing Facilities
- Climate Change (*Sandaw*) because of drought
- No improved Intercropping Technology
- Illegal cutting of coconut trees

• Tubay



VC Data on Area of Production, Employment

- 402 Households engaged in fishing
- Fishermen: 760 – Fulltime
  450 – Part time

VC Adding / Costs & Prices

- Catch per fisherman ranges from 80 kilos to 100 kilos per fishing [*tamban*]
- Shore price range up to P20.0/kl *[average]*
- Estimated expenses per catch is P500.00/catch
- For sharing arrangements: the usual percentage sharing is 40% for boat owner and 60% for the fiserman

For Fishermen:

@ 100 kilos catch
Income of fishermen [per catch]:

100 kilos @ P20.00	P 1,600.00
Less expenses:	
	500.00
NET PROFIT [to be divided by 2 persons]	P 1,100.00

For Trader:

@ 100 kilos with P20.00/kl rate

P20.00 + P10.00	=	P 30.00
	x	100 kilos
Gross profit		P 3,000.00
Less expenses:		
Cost of purchase		P 1,600.00
Labor [hauling, icing, etc.]		196.00
NET PROFIT…….....P		1,204.00

VC Linkages

Government Institutions:

- Congressional Office – District II
- Bureau of Fisheries and Aquatic Resources
- Municipal Local Government Unit

VC Support

Government Institution:

- MLGU
- Bureau of Fisheries and Aquatic Resources
- Congressional Fund

Policy Support

- R.A. 8550 – Philippine Fisheries Code
- Establishment of Fish Sanctuary
- Banning of Fish Compressor
- Regulating net fishing
- Prohibiting fishing in the Calinawan River at the Month of February
- Municipal Fisheries Law Enforcement Monitoring Team
- Registration of Fisherfolk
- Regulating Establishment of Fish Cage
- Municipal Comprehensive Fisheries Ordinance (3rd Reading)

Perceived Gaps

- Pump Boat
- Fishing gear

Threats / Risks

- Environmental Hazard
- Destruction of Coral Reef due to siltation
- Siltation of sea coming from La Fraternidad
- Health Hazard
- Household Waste

VC Issues and Concerns

- Incursion of fish sanctuary using compressor from other municipality
- Low price of fish *[if abundant]*
- Big problem in marketing in terms of sardines *[tamban]*

3.2 PRODUCTION YIELD, INCOME AND TRENDS

Production yield and income from major crops

As indicated in Table 10, mango is the most expensive crop to harvest with a yearly expense of P28,334 followed by rice which is harvested twice a year with a cost of P11,797 per harvest. Corn is the least expensive crop to harvest at a cost of P523 per harvest.

In terms of the amount production, rice production is the biggest at 2,475 kgs yielded per harvest, followed by mango at 1,542 kgs yielded per harvest. Coffee has the lowest production at only 50 kgs yielded per harvest.

In terms of income derived from the products, rice production is the most profitable at P55,202 of generated income per harvest, followed by mango at P15,500 of generated income per harvest. Root crops are the least profitable with only P2,221 of generated income per harvest.

Though not considered an agri-cultural product, wood and timber product such as falcata generates P60,000 of income per harvest every 8 years, with an average cost of P20,000.

As indicated in Table 11, fisherfolks catch more *liplipan* fish than any other fish at 1,666 kgs per catch, followed by *pawayan* at 424 kgs per catch. At the same time, both fishes also are the most expensive to catch and are the biggest income generator. They seldom catch and profit from *budloy* fish.

- *Income and production trend on major crops*

In terms of agricultural production and trend of major crops, more than half of the farmers (54%) have observed a decrease in production in the past five years (see while 39% indicated that the production trend is fluctuating. Six percent of the respondents have observed that there is an increase in the production while the other 1% observed that there was neither decrease nor increase in the production trend in recent times.

On the other hand, data from the Bureau of Agricultural Statistics, Caraga Regional Office (2009) as shown in Table 12, indicate that there is a fluctuating trend in the production of major crops in

Table 10. Production Yield and Income from Major Crops in the Province

Crops	Average Production (kilograms/hectare/harvest)			
	Frequency Of Harvest	Average Expenses (Php)	Average Production (kgs)	Average Income (Php)
Rice	2 x / year	11,797.00	2,475.64	55,202.00
Coconut	4 x / year	1597.49	1,406	5,342.90
Banana	20 x / year	2,066.00	1,566	4,200.00
Corn	2 x / year	523.00	375	5,250.00
Vegetable	70 x / year	2,892.00	1,871	7,894.00
Root Crops	48 / year	734.38	883.75	2,221.25
Coffee	2 x / year	2,000.00	50	2,500.00
Mango	1 x / year	28,334.00	1541.66	15,500.00
Abaca	2x / year	800.00	100	3,000.00
Falcata	1x / 8 years	20,000.00	80 pcs.(logs)	60,000.00
Nipa*	3x / year	1,000.00	200/100 pcs	2,800.00

Table 11. Production Yield and Income from Major Fish Catch in the Province

Kinds of Fish Catch	Average Production (kilograms/hectare/harvest)			
	Frequency (Fishing Activity per Month)	Mean Catch (kgs)	Mean Expenses (Php)	Mean Income (Php)
Sardines	30	101.55	556.17	1,700.98
Katambak	30	6.41	27.78	633.61
Molmol	30	10.65	101.39	670.83
Panit	18	31.83	1,850.00	4,830.00
Pawayan	15	424.22	31,336.67	33,908.33
Kutob	30	2.38	105.56	522.22
Bilong-bilong	3	1.11	16.67	55.56
Budloy	30	0.67	17.78	41.66
Shrimp	5	1.09	38.52	188.89
Patika	1	10	300.00	600.00
Barak	1	10	200.00	300.00
Bangsi	3	95	5,750.00	10,500.00
Bugwan	30	5	50.00	150.00
Pijanga	30	4	50.00	150.00
Tilapia	1	3.5	25.00	137.5.
Punaw	1	6	50.00	200.00
Sail	1	2	30.00	150.00
Gisaw	2	24.16	50.00	583.33
Bansidol	1	40	100.00	500.00
Sapsap	2	27.5	75.00	500.00
Crab	6	2	12.00	200.00
Lobster	2	1.25	0.00	89.00
Kikilo	2	1	38.00	200.00
Mangko	1	4	0.00	280.00
Dewet	30	25	0.00	2,000.00
Octopus	20	8.33	0.00	1,666.66
Shell	4	33.33	0.00	333.33
Tuna	21	100	550.00	4,700.00
Sari-sari	20	48.33	75.00	3,925.00
Squid	30	31.67	266.67	750.00
Samin/Tabangko	30	40	200.00	3,600.00
Budlis	30	2,500	16,666.67	20,000.00
Liplipan	15	1,666.66	125,000.00	100,000.00
Adlo	5	2.3	50.00	240.00

the province from 2004 to 2008 (except for mango that has been consistently increasing its yield). But, abaca and coffee also showed a potential growth because of its increasing trend from 2006 to 2008.

Table 12. Production of major crops per year in metric tons

CROPS (Metric Tons)	2004	2005	2006	2007	2008
Rice	83,766	82,215	85,800	96,385	90,515
Corn	16,352	13,645	13,184	2,179	17,991
Coconut	141,508.9	139,528.7	148,697	161,786.2	164,823.8
Mango	12,964.14	13,630.32	14,917	15,800	16,097
Banana	99,794.53	98,278.96	98,599	103,967	103,284.3
Abaca	191.11	424.73	420	502	550.53
Coffee	548.9	510.74	530	610	626.5

The results of the Focus Group Discussions by the use of the Trend Diagram as shown in Table 13, the following trends of major crop production from 2004 to 2008.

Table 13. Trend Diagram on the Production of Crops

Municipality / City	Crop / Product	Trend
Buenavista	Banana	Decreasing
	Rice	Decreasing
Carmen	Mango	Increasing
	Banana	Decreasing
Cabadbaran City	Coconut	No Increase, No Decrease
	Rice	Decreasing
Jabonga	Coconut	Increasing (slight)
	Fish	Decreasing
Kitcharao	Coconut	Decreasing
	Rice	Decreasing
Las Nieves	Rice	Decreasing
Magallanes	Fish	Decreasing
Nasipit	Coconut	Decreasing
Santiago	Coconut	Fluctuating
Tubay	Fish (Tamban)	Fluctuating
RTR	Rice	Fluctuating
	Coconut	Decreasing

There is a general observation of decreasing trend in production of crops except for mango that has a consistent increasing production trend in Carmen. For coconut, there is a slight increase in production trend in Jabonga. There is a steady coconut production in Cabadbaran but generally a decreasing trend in all other areas of the province. Production trend for rice is also decreasing, but in RTR, it is fluctuating.

Based from the the Socio-Economic Profile of Agusan del Norte(2005), at least 29,056 families are financially dependent on farming as a means of living . This is shown in Table 14.

- *Income and production trend on fish catch*

The production trend on fish catch for the past five years (see Figure 5) has decreased as observed by 44% of the key informants who have engaged in fishing activities, while 28% have observed that it has a fluctuating trend. Another 10% indicated that the trend has increased while 17% indicated that there was neither increase nor decrease in the production trend of fish catch in the past years.

Table 13 above also shows a decreasing trend in fish catch in Jabonga and Magallanes, while there is a fluctuating trend in Tubay.

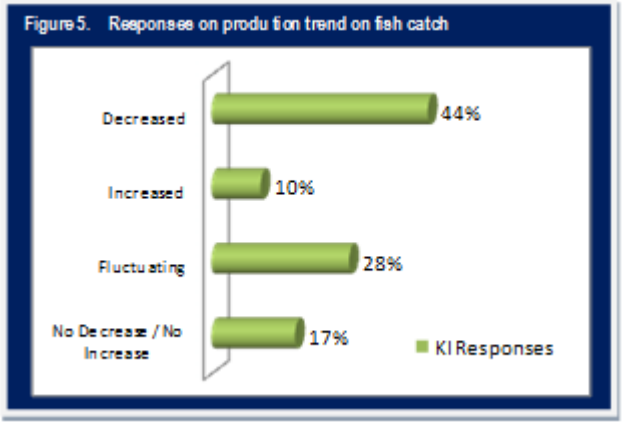


Table 14. Number of farming-dependent families per Municipality

Municipality / City	Number of families dependent on farming
Buenavista	4,768
Cabadbaran City	3,808
Carmen	2,141
Jabonga	3,527
Kitcharao	2,520
Las Nieves	3,669
Magallanes	242
Nasipit	2,128
RTR	1,946
Santiago	1,369
Tubay	2,938
TOTAL	29,056

Source: Socio-Economic Profile-AdN(2005)

from the Marine Municipal Fisheries Production in the province indicated in Table 15 shows a fluctuating trend on fish catches.

A total of 3,710 families across the province who are dependent on fishing as their main source of livelihood, are distributed as follows according to their municapality:

Table 16. Number of fishing-dependent families per Municipality

Municipality / City	Number of families dependent on fishing
Buenavista	220
Cabadbaran City	657
Carmen	290
Jabonga	1,135
Kitcharao	370
Las Nieves	155
Magallanes	211
Nasipit	302
RTR	na
Santiago	111
Tubay	259
TOTAL	3,710

Source: Socio-Economic Profile-AdN(2005)

- *Factors that affect production*

Among the factors that affect production (see Figure 6), most of the key informants mentioned climate change as the main cause (73%). Almost half of them mentioned financial and capital constraints for production (46%).

Focus group discussions through Access Mapping, Value Chain Analysis and Production Calendar yielded the following factors that caused the decrease of production. These are (1) defective or lack of irrigation systems for rice farming areas; (2) climatic changes brought by heavy rains causing landslides and flooding, and drought; (3) lack of financing for capitalization of inputs and for farm

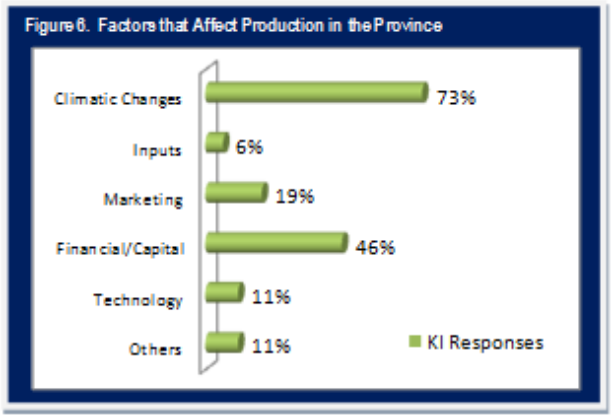


Figure 15. Marine Municipal Fisheries Production

Year	Production (Metric Tons)
2004	6,230.34
2005	6,803.52
2006	6,811.56
2007	6,703.30
2008	6,595.92

SOURCE: BAS, CRO 13 (2009)

labor expenses; (4) lack of technology on pest control; (5) lack of pre- and post-harvest facilities; (6) lack of training for organic farming technology; (7) lack of regulation of fishpond/fish cage operation; (8)lack of training on the proper use of chemicals and its disposal and (9) lack of laboratory facilities to examine feasible water quality for fishponds.

Other important points raised during the conduct of FGDs are the following: (1) lack of industrial facilities to process raw materials into useful finished products like coco product processors, fruit juice processors, etc.; (2) lack of insurance on important products like coconut and mango; (3) farmers do not have control on price of their products; (4)lack of access on low-interest loan scheme for farm financing and (5)lack of organizational capacity to sustain farmers organizations/cooperatives.

Although the lack of pre and post harvest facilities was raised, the extent of farmlands and the number of farmers across the province must also be considered. Farmers said that the current production facilities are not enough.

Based from the Post Harvest Facilities Development Plan of Agusan del Norte (2006) [see Table 17], there are around 477 agricultural facilities supporting the farmers in their farming livelihood distributed across the province.

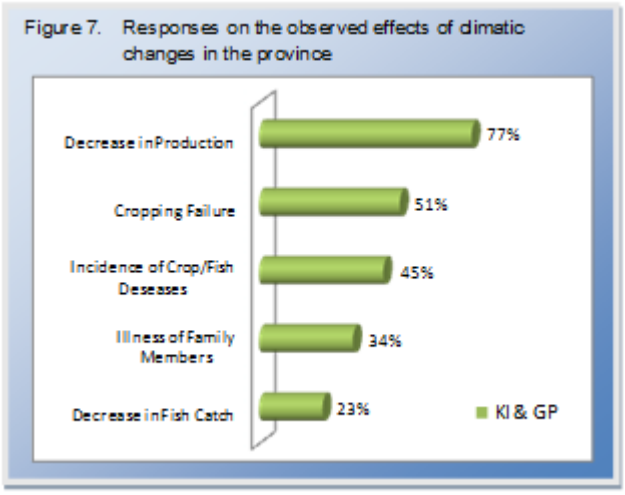
Table 17. Post Harvest Facilities in Agusan del Norte

Municipality	TYPES OF FACILITIES				
	Threshing / Shelling	Drying	Milling	Warehouse / Storage	TOTAL
Buenavista	49	29	13	11	102
Cabadbaran City	33	32	8	-	73
Carmen	-	5	-	-	5
Jabonga	4	28	5	3	40
Kitcharao	49	35	6	9	99
Las Nieves	54	21	13	-	88
Magallanes	-	16	-	-	16
Nasipit	3	3	-	-	6
RTR	2	19	6	1	28
Santiago	2	6	-	-	8
Tubay	-	12	-	-	12
TOTAL	196	206	51	24	477

Contrary to the data shown in the Table 17, the actual survey yielded that there is one corn mill operating in Carmen privately operated for several years already. It also appears that Nasipit has no milling facilities, but in actual survey, there are at least two rice millers and two corn millers in the said town also privately operated for more than twenty years already.

- *Impact of Climate Change and Natural Hazards to Production*

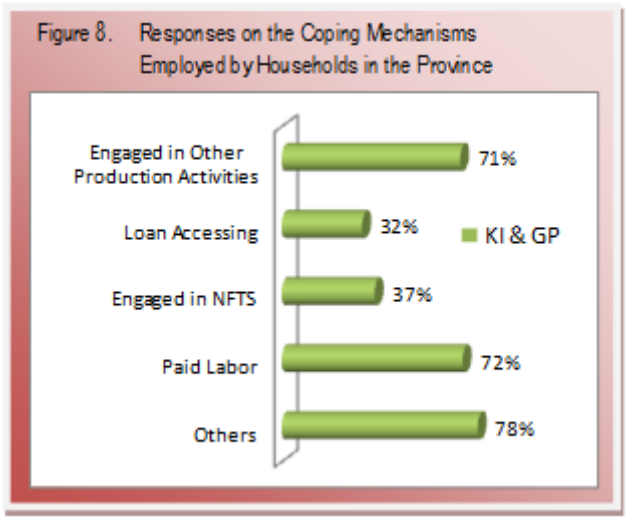
Among the key informants and poll respondents, they perceived the effects of climatic changes as the leading cause of decrease in production (77%); cropping failure (51%); crops and fish diseases (45%) and illness of family members (34%). Twenty-three percent of them also mentioned the decrease in fish catch (see Figure 7).



The farmers' experience were corroborated. Data from the Provincial Planning and Development Office(PPDO) and Provincial Disaster and Coordinating Council of Agusan del Norte show that for the last four years (2006-2009), at least 10,625.26 hectares across the province were affected by climatic changes brought by flooding that led to cropping failure: 8,576.53 hectares of which are rice farms, where 5,364.30 hectares of it belong to RTR; 1,290.73 hectares are corn farms, 407 hectares are farms planted to root crops, 11.30 hectares are for fruit tree farms, 14.65 hectares are coconut farms, 7.50 hectares arecut flower farms; 177.05 hectares are planted with assorted vegetables, 98.30 hectares planted with banana and 42 hectares planted with squash.

- *Coping mechanisms*

In order to cope with the effects of climatic changes, 72% of the respondents have engaged in paid labor mostly doing non-domestic work and another 71% have engaged in other productive activities while 37% have engaged in organic farming. Some 32% of them have also indicated that they have accessed loans.

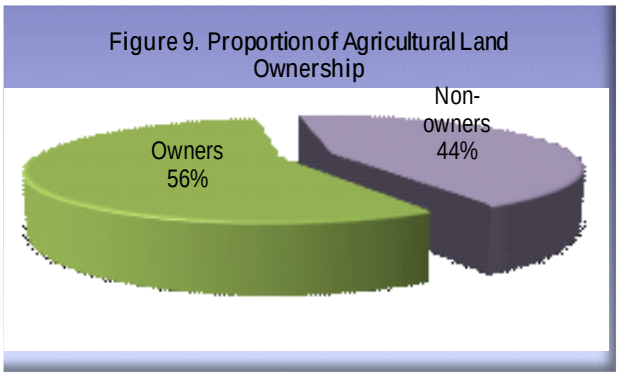


3.3 AVAILABILITY AND ACCESS TO SUPPORT AND PRODUCTIVE RESOURCES

Land Ownership and Tenurial Arrangements

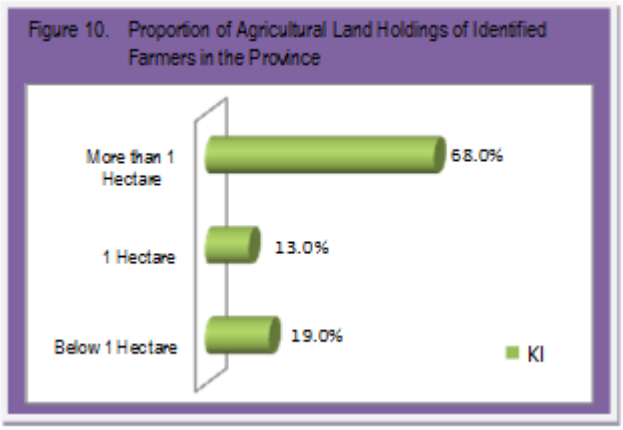
Proportion of agricultural land ownership

Across the province, a proportion of 56% of the key informant engaged in farming indicated that they owned the lands they are tilling, while the remaining 44% are non-owners (see Figure 9).



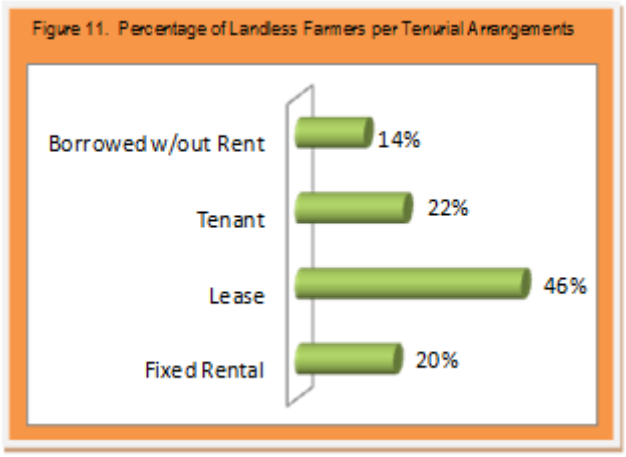
Proportion of agricultural land holdings of identified farmers

Sixty eight percent of the key informants own more than one hectare of land while 13% indicated that they have 1 hectare of land. The other 19% indicated that they own less than a hectare of land (see Figure 10).



Percentage of landless farmers per tenurial arrangements

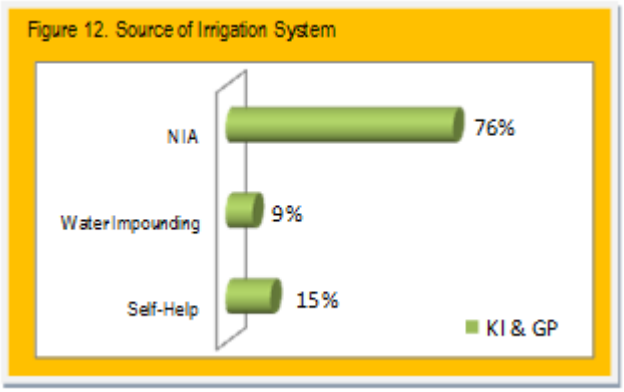
For the non-owners of lands (see Figure 11), many have tenurial arrangements with their landlords (45.5%) while some are tenants(21.8%) ; some are engaged in fixed rental (19.8%) and some are borrowing the land without rent (13.9%).



Access to Irrigation Facilities

- *Major type of irrigation*

For the sources of irrigation in these farms, 76% of the informants identified the National Irrigation Authority [NIA] as their main supplier of water, while others have self-help irrigation system (15%) and into water impounding (9%) [see Figure 12].



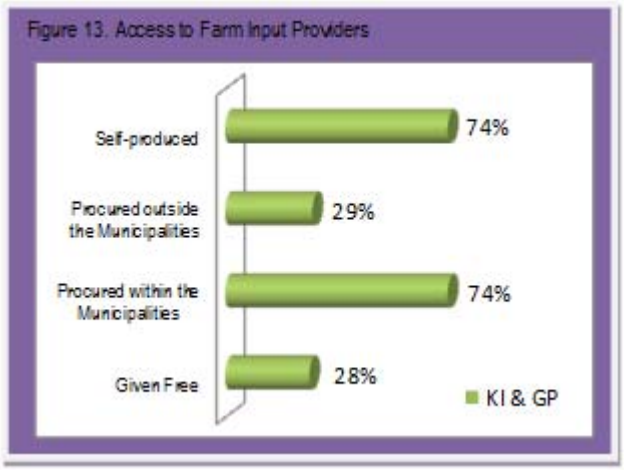
- *Major sources of irrigation water*

Below is the list of sources of irrigation for agricultural crops in the province. These are:

- Cabalalahan River
- Pijanga River
- Gihao-an River
- Bucas Grande
- Kalayagon River
- Canaway River
- Kiagta River
- Sangay River
- Sanghan River
- Cabadjangan River
- Pandanon River
- Jaliobong River
- Sarmiento River
- Mamcas River
- Buntalid Creek
- Magos River
- Baleguian River
- Lingayao River
- Lake Mainit
- Los Angeles River
- Macalang River
- Camagong River
- Aclan River
- Amontay River
- Cabadbaran River
- Dalichan River
- Magdagunot River

Access to Farm Input Providers

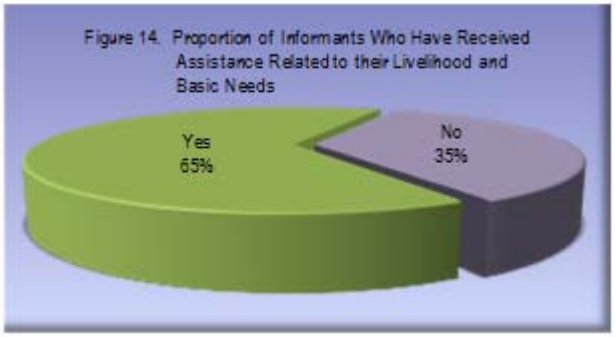
Most of the informants and respondents say that access to farm input providers are self produced and are procured within their respective municipality (74%) [see Figure 13]. Some inputs are given free as indicated by 28% while 29% also indicated that the inputs are procured outside the municipalities.



Access to Training, Technology and Market Support Providers

- *Proportion of informants who have received assistance related to their livelihood*

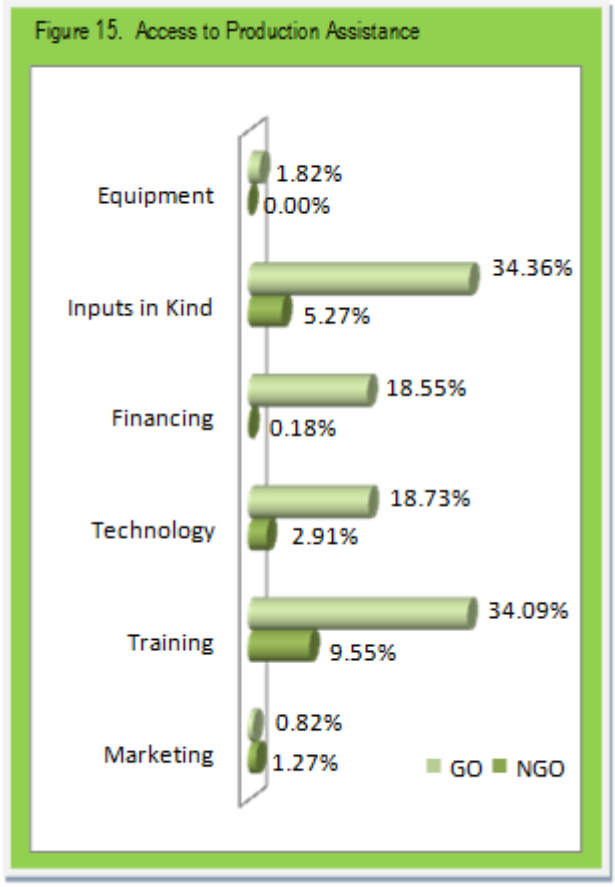
Sixtyfive percent of the key informants indicated that they have received assistance related to their livelihood and basic needs while the other 35% have not received any.



Access to production assistance

The main support providers for production are government offices and non-government organizations (see Figure 15). There are significant differences in terms of the amount of support received, of which government support is greater than those given by the NGOs. Thirty four percent of the key informants say that trainings, as form of production assistance, were provided by government offices while 9.55% say that these are provided by NGOs. In terms of cash inputs, 34.36% of the informants indicated that they have received it from the government and 5.27% have received it from NGOs. In terms of technology assistance, 18.73% of the informants indicated that they have received it from the government while 2.91% indicated that it was provided by NGOs.

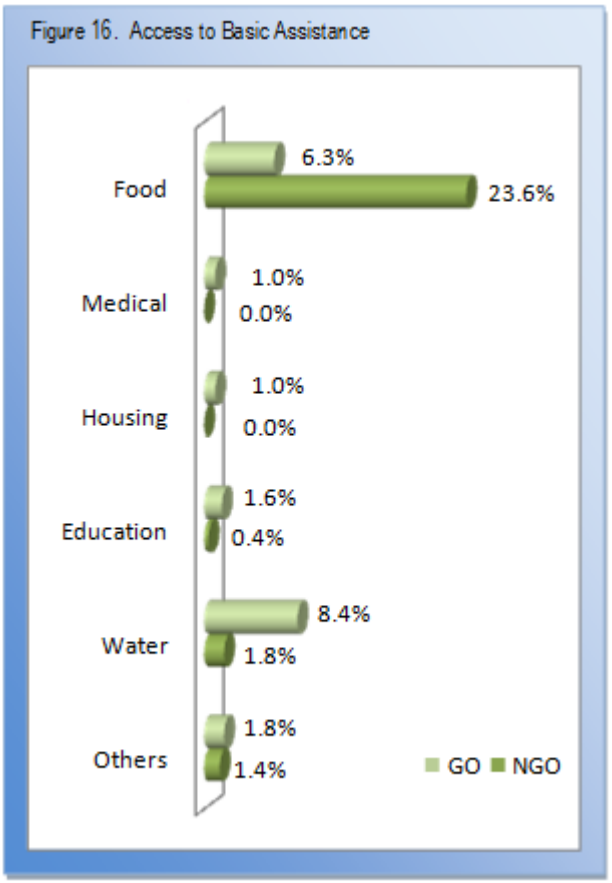
Financing assistance was mostly provided by the government as indicated by 18.55% of the informants while only about 0.18% of them said these came from NGOs. In terms of equipment assistance, 1.82 % said they have received it coming from the government and non from NGOs. In terms of marketing assistance, 1.27 % of the respondents received it from NGOs and 0.82% of them received it from the government.



Access to Basic Needs Providers

- *Basic needs assistance*

The informants also provided that they have received assistance from both LGUs and NGOs in relation to their basic needs such as food (29.9%) , water(8.4%), educational (2%), medical (1%), housing (1%), and other assistance like animal dispersal and clothing (3.2%).



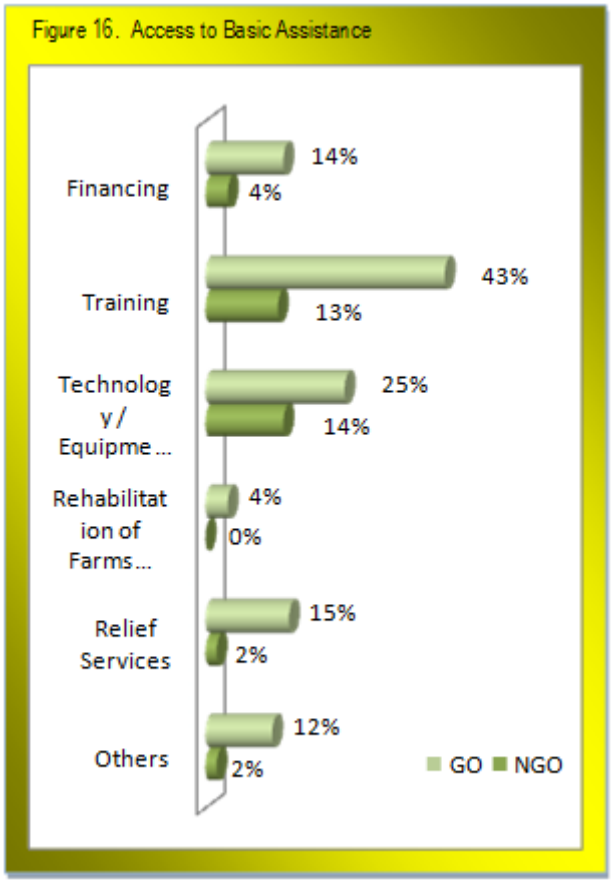
Access to Assistance Related to Coping with Climatic Changes

- *Proportion of informants who have received assistance related to coping with Climatic Changes*

Fifty-two percent of the informants and poll respondents indicated that they have received assistance related to coping with climate change while the other 48% have not received any.

Access to assistance related to coping with Climate Changes

As indicated in the KI results, the type of assistance that the informants have received related to coping with climate change includes financing, training, technology/ inputs/equipment, relief services and assistance for rehabilitation of farms and houses. A total of 43% of the informants indicated that they had received training assistance from the government while 13% of them received it from NGOs. Some 25% of the informants have received technology and equipment assistance from the government while 14% indicated that it came from NGOs. Some 15% of the informants have received relief services from the government and other 2% indicated that it came from NGOs. Financing assistance came mostly from the government as indicated by 14% of the informants while the other 4% indicated that they had received it from NGOs. Other assistance included fertilizers, seeds and other farm inputs.



3.4 AVAILABILITY AND ACCESS TO FINANCIAL SUPPORT PROVIDERS

- Formal and Informal Structures and Schemes
- Savings and Attitude of Famers Towards Savings

Proportion of Key Informants and Poll Respondents with Savings

A third of the key informants reported to have savings while the other 66 per cent indicated that they have no savings.

Usage of savings

A multiple response analysis shows that of those informants who are saving money, their purposes were to able to save for their retirement age (73%) and for medical and emergency needs(72%). Another 40% of the informants were saving for the capital of their business and faming; 33.91% were saving for their children's education and 6.09% were saving for house repair finances. Other purposes of having savings include family consumption (4.35%) [see Figure 18].

Place of savings (where the informants put their savings)

The majority of the informants and poll respondents (see Figure 19) indicated that they put their savings in their respective houses (53%). Few put it on banks (32%), cooperatives(7%) and MFIs/ paluwagans (4%).

Responses for reasons of not having savings

The Figure 20 show that more than half (55%) of the key informants and poll respondents had indicated that they could not save money because their income is enough only for their subsistence and while another 53% of them also attributed it to income insufficiency. Another 3% also indicated that they could not save due to absence of financing institutions operating in their respective municipalities. Other reasons included were : income is prioritized for their children's education, loans that are yet to be paid and that their income is enough for farming and fishing expenses (2%).

Figure 18. Informants' Responses to the Purpose of Savings

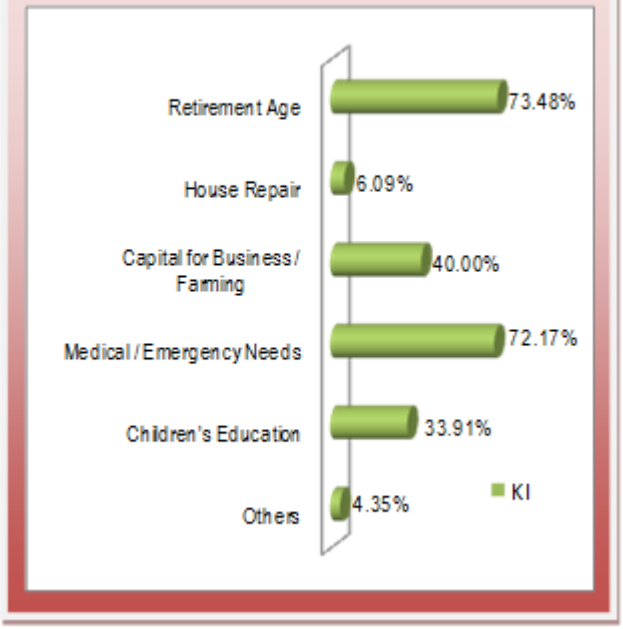


Figure 19. Informants' Responses on Where Did They Put Their Savings

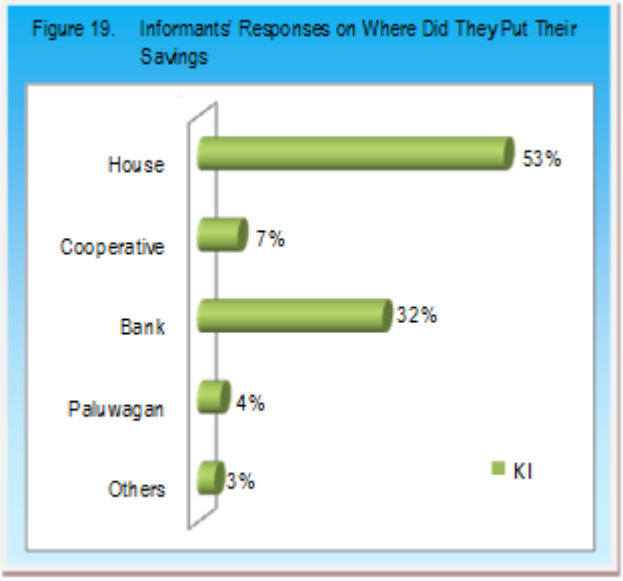
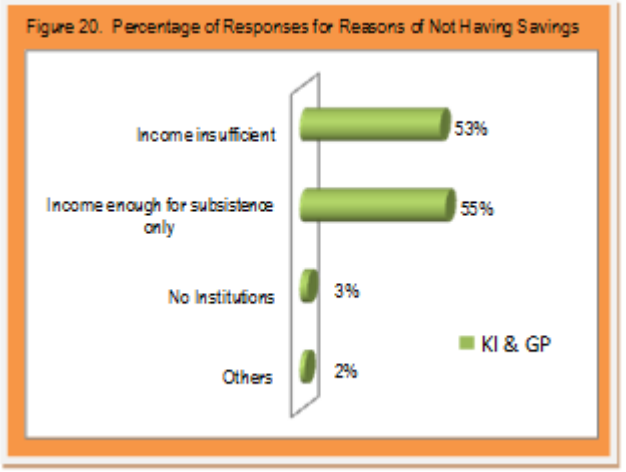


Figure 20. Percentage of Responses for Reasons of Not Having Savings



- Loan Services and Attitude of Farmers Towards Loans

Proportion of Key Informants who have incurred loans

Fifty-seven per cent of the Key Informants and poll respondents have incurred loans in the past years while the other 43 per cent have not availed of loans.

Responses to the purpose of loans

Those who reported to have incurred loans in the past five years have used their respective loans mostly as capital for business and farming (66%); children's education (29%) and medical and emergency needs (27%). Ohers said they were using it for house repair (5%). Other uses of the loans (6%) include loan payments, purchase of farm animals, purchase of *trisikad* (a bicycle-like vehicle on three wheels), acquisition of fishing gear, boats and for family consumption (see Figure 21).

Responses to sources of loans

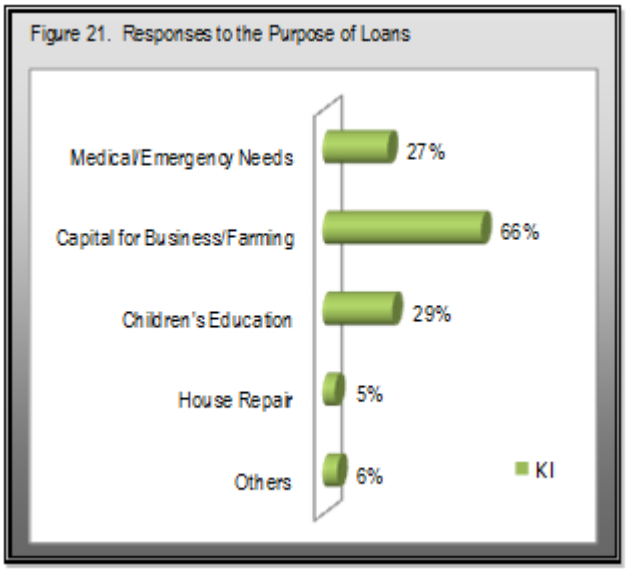
The farmers interviewed were favorable towards access of loans loan as indicated by the KI results as 57% of the farming households have incurred loans in the past five years. The KI results (see Figure 22) further show that majority of the informants have accessed loans from the banks (55%). Other got it from credit cooperatives (16%); MFIs (15%) and individual lenders (10%), govern-ment (4%) and others such as barangays and NGOs (6%).

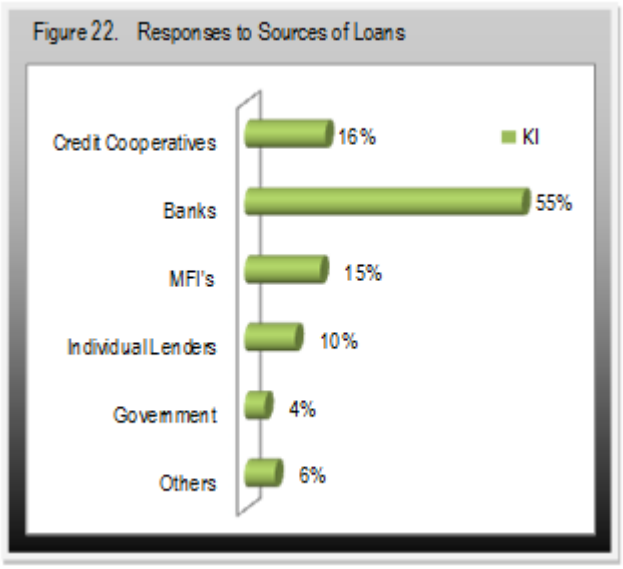
Responses to reasons for choosing their respective sources of loans

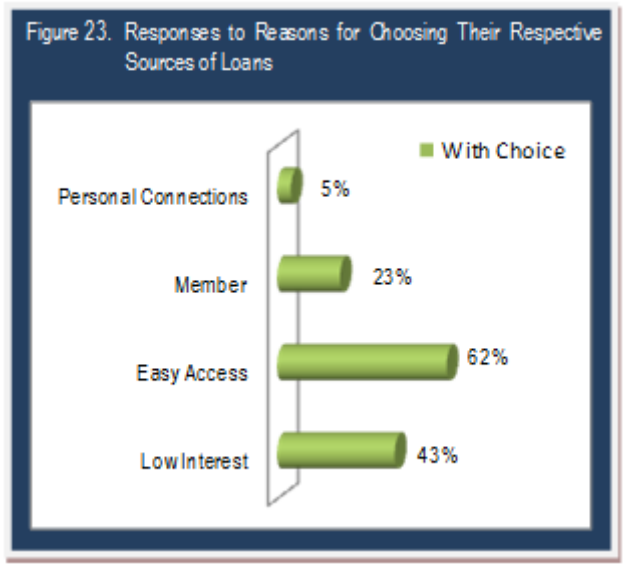
For those who reported to have a choice in their sources of loans (see Figure 23), they indicated that they have chosen their respective sources because of its easy access (62%) and low interest rates (43%). Access to loans also was due to their membership with the institutions (23%) and personal connections (5%).

Terms of their incurred loans

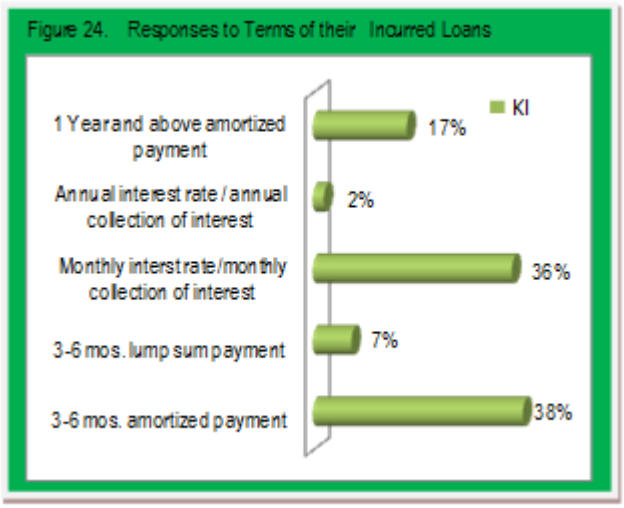
The terms of the incurred loans by the farmers also differ. Thirty eight percent of the informants have a 3-6 months amortized term while 36% of them pay it







with monthly interest rate and monthly collection of interest (see Figure 24). The other 17% have a one-year and above amortized payment while 7% have 3-6 months lump sum payment term. The other 2% of the informants indicated that they have an annual interest rate and annual collection of interest.

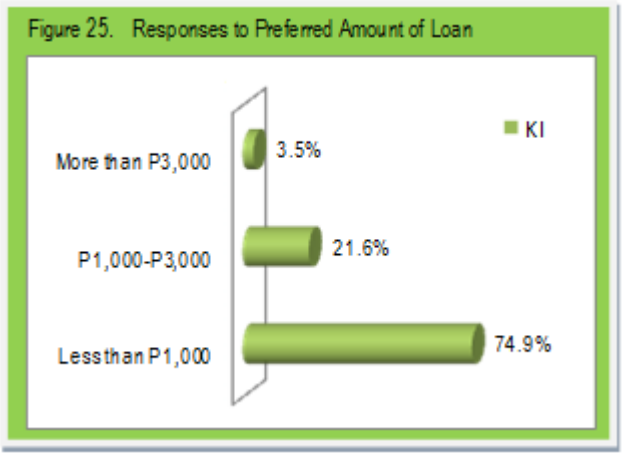


Proportion of informants who are willing to obtain loan.

A proportion of 52% of the informants who have not yet availed loans in the past years across the province indicated that they are willing to obtain loans while the other 48% are not willing.

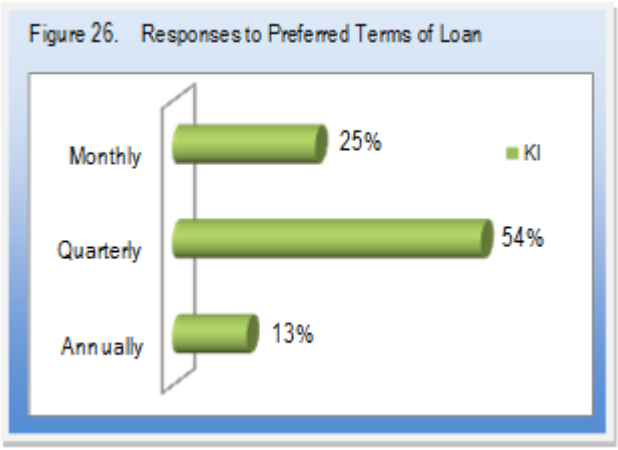
Responses to preferred amount of loan

Seventy-five percent of informants preferred to loan an amount of more than P3,000.00. The other 21.6% indicated their willingness to obtain from P1,000.00 but not more than P3,000.00. Another 3.5% indicated preference to loan an amount of less than P1,000.00.



Preferred Terms of Loan

More than half of the informants (54%) preferred to pay to their loans in a quarterly basis while a quarter want to pay it monthly.



3.5. AVAILABILITY AND ACCESS TO INSURANCE

Formal and Informal Schemes

- *Proportion of informants who have insurance*

Almost three-fifths (58%) of the total key informants and poll respondents reported that they have insurance while 42% indicated that they have no insurance.

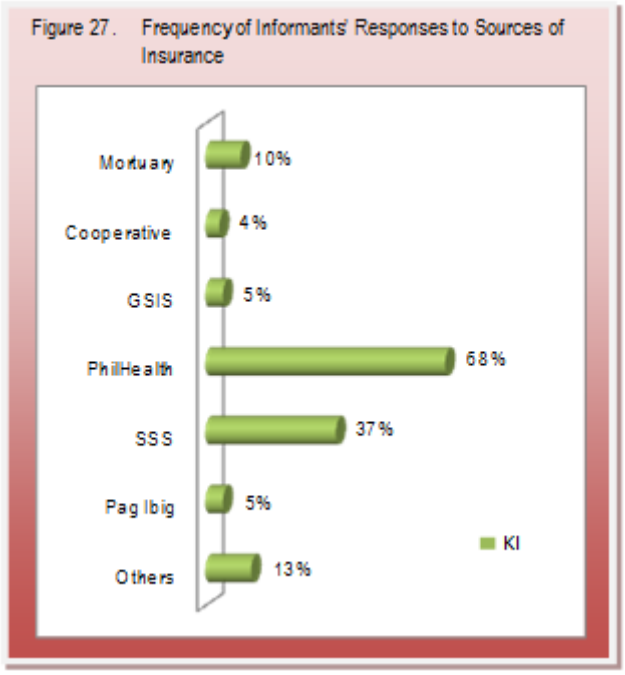
- *Crop Insurance and Attitude of Farmers Towards Crop Insurance*

The KI results show that only the key informants from the municipalities of Buenavista, Cabadbaran, RTR and Santiago have enrolled in crop insurance coming from the Philippine Crop Insurance Corporation (PCIC).

- *Personal Insurance and Attitude of Farmers Towards Personal Insurance*

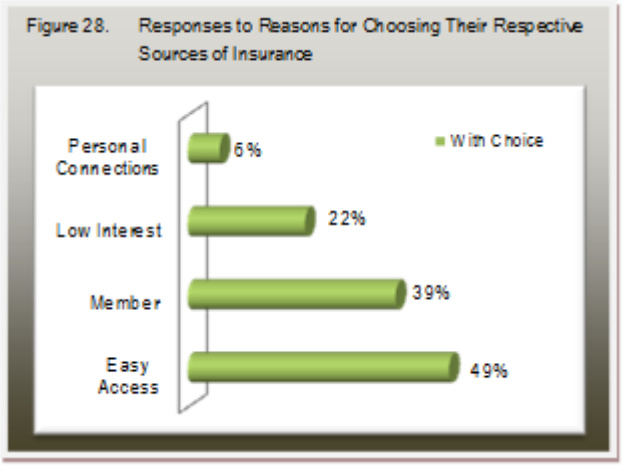
Percentage of informants' responses to sources of insurance

Two of the most popular personal insurance institutions, PhilHealth (68%) and SSS (37%), are being accessed as source of insurance by informants. Other sources of insurance are morturary (10%), GSIS and Pag-Ibig (both 5%), and cooperatives (4%). Other sources include other private insurance agencies (13%) such as Standard Insurance, Eye Care Insurance and St. Peter Life Plans (see Figure 27).



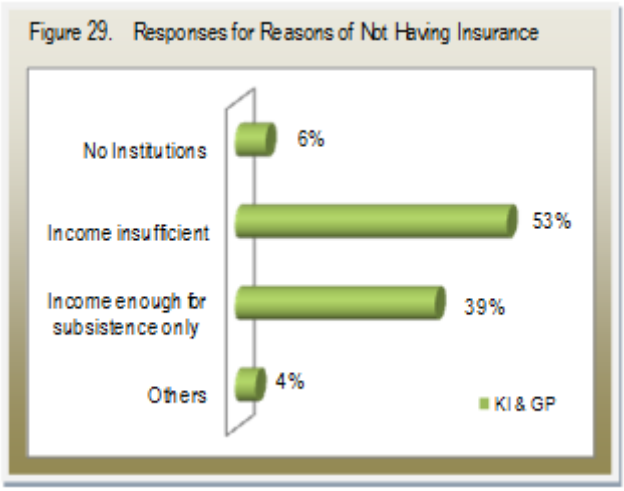
Reasons for choosing their respective sources of insurance

Many informants with insurance (see Figure 28) indicated that they have chosen their respective insurance sources because of its easy access (49%), their membership to the insurance institution (39%), its low interest rates (22%) and their personal connections (6%).



Reasons of not having insurance

Results would indicate that more than half of those informants who have not enrolled in any insurance coverage are constrained to do so because of insufficient income (53%) and because their income is only enough for their subsistence (39%). A few informants (6%) reasoned out that the it is because there were no available institutions and while others say that enrolling in an insurance system is not among their priorities (4%) [see Figure 29].



Informants who are willing to obtain insurance

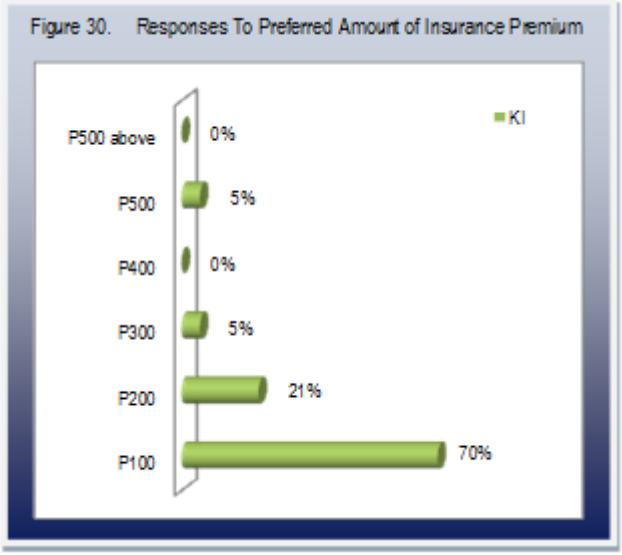
A proportion of 51% of the informants who have not yet enrolled in any insurance are willing to obtain insurance while the other 49% are not willing.

Responses to type of insurance to be enrolled in

Most of the informants who are willing to obtain insurance wish to enroll in personal insurance (82%) of the responses while the others wish to enroll into crop insurance schemes (27%).

Preferred amount of insurance premium

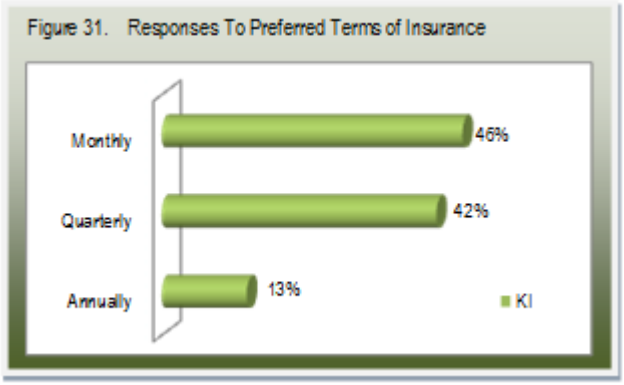
Most of the informants and respondents who expressed willingness to obtain insurance (see Figure 30), preferred to pay an amount of P100.00 as insurance premium (70%) while the others (21%) are willing to pay P200.00 as insurance premium. Very few (5%) are willing to a premium payment at



both P300.00 and P500.

Preferred terms of insurance

In terms of the mode of payment, most of the farmers are willing to pay their insurance either on a monthly basis (46%) or quarterly basis (42%)



Annexures

Conceptual Framework

1. Background and Rationale

A Climate Change Adaptation Project under Outcome 3: Coping Mechanisms improved through pilot schemes with national up-scaling potential of the "MDG-F 1656 Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change" is implemented by the International Labour Organization [ILO], a specialized agency of the United Nations in partnership with the Department of Labor and Employment [DOLE] and the Department of Trade and Industry [DTI] to support vulnerable farming communities in Agusan del Norte[AdN].

A key premise of the Project is that economic condition of population, whether in terms of economic assets, capital resources, financial means, etc. is a very important determinant of the adaptive capacity to climate change impacts. Poor people are at a disadvantage situation while the wealthy ones are better equipped to deal with the costs of adaptation.

Besides, access to, and not only availability of resources is also another important determinant factor which could spell the difference in a population's capacity to adapt to climate change and other similar phenomena. These resources include not only financial resources but also access to productive resources such as training, markets and technology. It is recognized that adaptive capacity of vulnerable communities will be greater if social institutions and arrangements governing the allocation of power and access to resources is more equitably distributed. A more integrated and comprehensive approach is required to ensure long-term preparedness for climate change.

The Project aims to showcase these determinants at work, where target disadvantage communities are provided access to financial and productive resources for purposes not only of helping them cope in the event of climate change triggered disasters but of improving their socio-economic lot, especially through diversified livelihood schemes. Risk transfer mechanisms like revolving funds and innovative insurance schemes are expected to help develop resiliency through flexible financial mechanisms. Providing the enabling conditions for livelihood diversification is critical as new types of livelihoods are often required to effectively adapt to climate change.

It aims to attain the following objectives: (1) to develop and test financial safety nets for vulnerable populations, especially women; and (2) to develop the capacities of vulnerable populations to participate and avail of the benefits under economic diversification and a democratized governance system.

It is on this context that ILO conducted a baseline study in the selected pilot province of Agusan del Norte with primary focus on its farming communities. The purpose of the study was to present a general profile of the farming communities of Agusan del Norte which would provide the basis for the selection of priority vulnerable areas and/or sectors for the Project.

Evidence-based planning and decision-making is crucial in the above-mentioned Project to ascertain that its efforts will be anchored on facts that are taken from the farmers themselves - the direct beneficiaries of the Project. The Baseline Study Report will provide the ILO Project Manager and TWG with the necessary information that will serve as the key for the planning schemes and mechanisms for community interventions.

The final output is the ***Baseline Study Report of Agusan del Norte Farming Communities***. This report shall conform to the minimum information requirements and guidelines as well as structure prepared by the ILO Project Manager, as assisted by the Technical Working Group created by the Project.

To secure the minimum information requirements pursuant to the basic structure of the report, the following major tasks were required to be undertaken by the contracted Baseline Study Group:

1. Identification and mapping of farming communities in Agusan del Norte according to crop/sector and by municipality
2. Establishment of the ecological profile of the province and these farming communities to include social, economic, environmental, political and peace and order condition
3. Identification of the general environmental conditions and climate risk exposure including but not limited to extreme events or disasters along with coping strategies employed

4. Identification of GO, LGU, NGO/PO and/or collaborative initiatives, projects and programmes relating to agri-business as well as climate or disaster risk reduction and enhanced coping mechanisms
5. Identification of players in the major farming value chains in these farming communities
6. Identification of support institutions pertaining to training, markets and technology
7. Identification of financial institutions, structures and schemes in the including existing informal financing schemes
8. Identification of existing insurance schemes and other risk transfer mechanisms
9. Assessment of knowledge and skills as well as training needs of farmers, especially women farmers, in existing and/or alternative lines of work and/or business.
10. Draw up conclusions and recommendations on priority communities, areas and/or sectors taking into consideration the interplay of the above factors as well as on priority training needs vis-à-vis thrust for economic diversification.

Below is the required structure of the Baseline Study Report.

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6.0 Agusan del Norte Farming Communities-Crop/ Sectoral Profile
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  - 6.1.1 Poverty Incidence
  - 6.1.2 Knowledge, Skills and Training (Men and women farmers)
- 6.2 Value Chains and Players
- 6.3 Environmental conditions and climatic risk exposure
  - 6.3.1 Coping Mechanisms employed by households and communities
- 6.4 GO, LGU, NGO/PO and Collaborative Initiatives, Project and Programmes
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  - 6.4.2 Climate or Disaster Risk Reduction
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7.0 Conclusions and Recommendations
- 7.1 Priority Crop/Sector
- 7.2 Priority Municipality
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References

Bibliography
List of Key Persons (Discussants in FGDs; Key Informants; Sources of Written Materials)

Propegemus Foundation, Inc. has been engaged by the ILO to undertake the Baseline Study of the Farming Communities of Agusan del Norte pursuant to the Service Contract effective August 12, 2009 to December 10, 2009.

Propegemus Foundation, Inc. was recommended to execute the work and/or services pertaining to the conduct of **"Baseline Study on Agusan del Norte Farming Communities"** of the MDG-Climate Change Adaptation Project.

Propegemus Foundation, Inc. [PFI] is a non-stock, non-profit and non-governmental organization committed to the two-fold task of preserving the environment and promoting social equity. Since its establishment in 1994, it has been engaged in services geared towards addressing the twin problems of rural poverty and ecological destruction, specifically of rainforests and watersheds. It has been a partner of the Australian Agency for International Development [AusAID] and Save the Children, Department of Agrarian Reform/International Fund for Agricultural Development-Northerm Mindanao Communities and Resource Management Project [DAR/IFAD-NMCIREMP] among others, undertaking in several projects in the Caraga Region focused in assessments, monitoring and evaluation, capacity-building for rural populations and on environment and natural resources management. PFI is also affiliated with the Caraga Learning Service Providers Network (LSPN) and has a large pool of in-house and accredited consultants necessary for the conduct of the baseline study.

2. Review of Related Studies

Baseline studies are fundamental towards informed policy decisions both on national and local perspectives. It serves as the bridging tool between the policy makers and the people in the community to achieve a two-way view in sustainable development planning processes. Baseline studies provide several relevant indicators that are crucial in the situational analysis of a defined territory in presenting its general picture.

Moreover, baseline studies provide venue for the local people in the community to have a voice relative to their problems and concerns and how they want it addressed.

Generally, these studies revolve on ecological, social, economic and political profiles of a certain area generated out of the defined measuring tools and study methodologies relative to that purpose.

The Research Management is inclined to present some of these tools, as references, that aid in the conceptualization of its own research methodologies for the delivery of the Baseline Study of the Farming Communities in Agusan del Norte. The related studies cited in the subsequent paragraphs are beneficial in establishing a consensual research system that will be utilized to come up with an intelligent and reliable data related to the minimum information requirements laid down in the TOR for the Baseline Study Report.

1. Community-Based Monitoring System [CBMS]

The *Community-Based Monitoring System* [CBMS] is an organized way of collecting information at the local level for use of local government units, national government agencies, non-government organizations and civil society for planning, program implementation and monitoring. It is a tool intended for improved governance and greater transparency and accountability in resource allocation (pids.gov.ph). The CBMS work has been premised on the fact that to be effective, development programs must be targeted and based on relevant, current, accurate, disaggregated data (Reyes & Due, 2009). Community-based information gathering is gaining status to complement the national monitoring systems.

CBMS established a series of steps that direct its actions from the collection of raw data down to its analysis. The following shows the steps in conducting CBMS:

Step 1 – Advocacy/organization
Step 2 – Data collection and field editing
Step 3 – Data encoding and map digitization
Step 4 – Processing and mapping
Step 5 – Data validation and community consultation
Step 6 – Knowledge (database) management
Step 7 – Plan formulation
Step 8 – Dissemination, implementation, and monitoring

According to the Philippines Institute of Developmental Studies [PIDS], the CBMS is being institutionalized for the purpose of establishing a monitoring system that aims to provide updated and official information at the local or community level. Several memorandum circulars and policy issuances have been prepared by key national government agencies supporting the use of CBMS as a tool to diagnose poverty at the local level. The National Anti-Poverty Commission [NAPC] has issued on March 2003 an En Banc Resolution No. 7 directing LGUs to adopt the 13 core local poverty indicators as the minimum set of community-based information for poverty diagnosis and planning at the local levels. The Department of the Interior and Local Government [DILG] has issued on April 2003 Memorandum Circulars 2003-92 to set policy guidelines for the *adoption of the 13 core local poverty indicators* for planning and 2004-152 (November,2004) to encourage LGUs to intensify efforts toward the achievement of the Millennium Development Goals [MDGs]. The latter circular also enjoins LGUs to use monitoring systems such as MBN-CBIS, **CBMS,** IRAP, etc., for monitoring and diagnosing of the nature and extent of poverty. CBMS was adopted by the DILG as the data collection and processing system for the CLPIMS which was the tool adopted to monitor the MDGs for LGUs (pids.gov.ph). In 2005, the National Statistical Coordination Board issued Resolution No. 6 "Recognizing and enjoining support to the CBMS as a tool for strengthening the statistical system at the local level that will generate statistics for monitoring and evaluation of development plans, including the progress of the local governments in attaining the Millennium Development Goals (MDGs)." The League of Municipalities of the Philippines (LMP) has also issued

Memorandum Circulars 027-2006 and 027-2006B enjoining member LGUs to adopt/sustain the adoption of the CBMS as a tool for local poverty diagnosis and to institutionalize this as part of the system of local governance. CBMS had become a tool in the localization of MDGs since the indicators set in the MDGs are included in the CBMS (Reyes & Due, 2009).

By January 2009, CBMS was being implemented in 52 of the country's 81 provinces, including 531 municipalities and 42 cities, totaling 13 498 *barangays*. The goal is 100% coverage by 2010, the target date for the national implementation of a core local poverty indicators monitoring system (Reyes & Due, 2009).

The CBMS was employed by the local government units of Agusan del Norte starting 2007. Provincial Validation of the CBMS Results through the Barangays was held on 2008 and the resulting data was also published on 2008.

Consequently, in the context of the Baseline Study of Farming Communities of Agusan del Norte, the CBMS results significantly provided the Research Management the source towards its eventual compilation of available relevant written materials. The consolidated CBMS results in Agusan del Norte (2007), provided a reliable and locally-generated data necessary in the presentation of the general profile of the province.

2. Local Economic Development [LED] / Local and Regional Economic Development [LRED]

Another approach in research that is employed and customized by the International Labour Organization [ILO] is called the Local Economic Development [LED].

Employment-centered LED started in 1988 with the Development Programme for Displaced Persons, Refugees and Returnees in Central America[PRODERE], financed by Italian development cooperation in 6 countries, 1.5 million beneficiaries and 350 member institutions. This expertise has been disseminated to over 25 countries and has evolved as an ILO-wide initiative (www.ilo.org).

Principles of the LED Approach

Participation and social dialogue

The design and implementation of a bottom-up strategy further guarantees the most suitable solutions for the local needs and underpins the sustainability of the development process.

Public/private partnerships

Cooperation and coordination of development activities prevent ineffective, individual approaches and support the legitimacy and sustainability of the development process

Territory

The LED approach provides a comprehensive framework of initiatives and actions that respond to the need to integrate the economic, social, political and institutional dimensions of development at the local level.

ILO – LED methodology

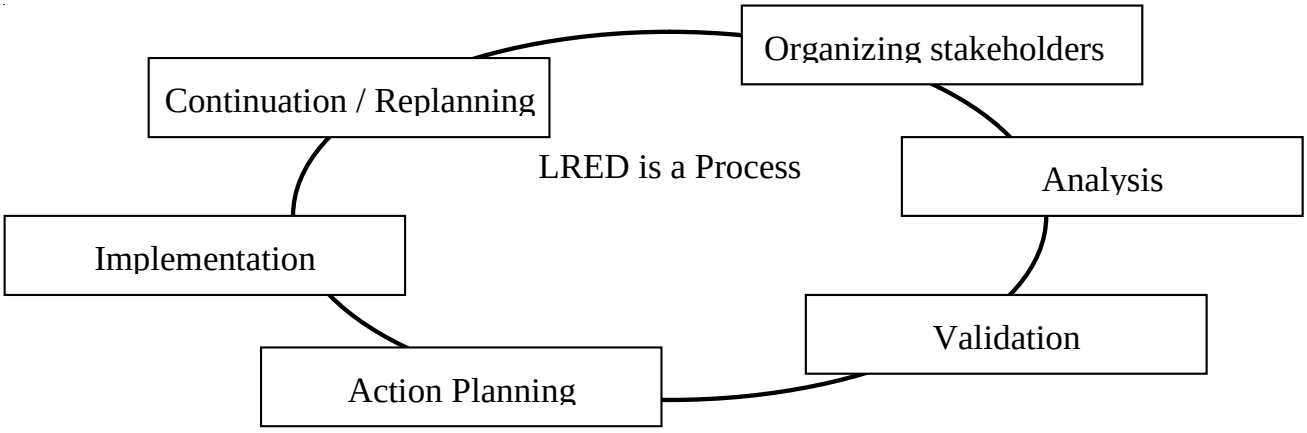
The ILO-LED process involves six steps:

1. Territorial diagnosis, institutional and poverty mapping
2. Sensitizing: advocacy, awareness raising
3. Organization for LED
4. Designing the LED: Strategy and development of specific programmes and action plans
5. Stabilizing and strengthening local structures
6. Review, feedback and disengagement (exit strategy)

The Germany Agency for Technical Cooperation [GTZ] also utilized LED and they called it the Local and Regional Economic Development [LRED]. The LRED has gained momentum in its usage among governments in developing countries and international organizations. The World Bank, USAID, ILO, UN-HABITAT, and other agencies have embarked on programmes on this field (Manual for LRED Facilitators, 2007).

The underpinning principles of LRED are the following: (a) focus on a subnational territory ; (b) involvement of relevant stakeholders; (c)holistic approach; (d) committed local leaders and local government backing actively the LRED – effort and (e)action and strategic orientation .

Below is an illustration of the LRED Cycle:



The LRED approach in development planning processes was brought into the Caraga Region since the pilot implementation in 2008 in the municipality of Talacogon, Agusan del Sur, with the initiation from the Caraga Learning Service Providers Network (Caraga LSPN) in partnership with GTZ, DTI-Caraga and the Local Government Unit of Talacogon.

The LRED Process Documentation Report in Talacogon and the LRED Manual for Facilitators, made available by the Caraga LSPN through its Convenor, Ms. Lurraine Baybay-Villacorta, provided the Research Management valuable references especially in its computation and distribution of its research respondents that will represent a valid sampling of the farming communities in Agusan del Norte.

3. Integrated Rural Accessibility Planning[IRAP]

Another community-based approach in research is the Integrated Rural Accessibility Planning [IRAP]. Rural accessibility and its translation into a planning process has its origins in the work of the ILO. The major work on accessibility planning took place in the Philippines during 1990-95, where an IRAP procedure was developed as a planning tool for the use by local level planners to make the most appropriate investments with the limited funds available to them (Donnges, 2008).

The IRAP methodology defines the *access needs of rural households* as the relation to the basic, social and economic services that a household requires such as water, fuel wood, health, education, markets, employment, agricultural fields, etc. (Donnges, 2008).

This approach is premised on the argument that all households (rural and urban, poor and rich) need to have access to facilities, goods and services in order to fulfill their basic, social and economic needs and be able to live a social and economic productive life. *Access* was defined as the ease or difficulty of reaching locations where facilities, goods and services are available. A *lack of access* constraints people's opportunities to develop and sustain their level of living and therefore, often induces poverty (www.ilo/irap).

The IRAP process endeavors to address three questions related to rural accessibility, transport and infrastructure: what should be done, where it should be done and how to improve rural access:

1. It defines the priorities for different sector activities to improve accessibility of rural households: what should be done? (Improved road access, improved access to primary education, improved market access etc.);
2. It defines the priority locations for particular project interventions: where should it be done? (In village A or village C or between village D and E, etc.);
3. It defines the most effective design for project interventions to ensure community participation and an effective use of local resources: how should it be done? (Using Labour-based procedures or more equipment based procedures; levels of community participation, etc. (www.ilo/irap).

The IRAP, as a local level planning tool, was brought to the Philippines on 1993 with the initiation from the International Labour Organization with its IRAP I-III Project in collaboration with the Department of the Interior and Local Government (DILG). The IRAP Project is a capacity-building project that introduced a simple, inexpensive and easy to use data gathering tool that

determines the needs for access of rural households to basic services, goods and facilities. IRAP I covered a total of 12 provinces of which six of these provinces were in Mindanao (from Regions 10 and 11), four in the Visayas (in Regions 6 and 8) and two in Luzon (CAR). IRAP II covered 13 additional provinces of which 8 of these come from the regions in Mindanao (Regions 10, 11, 12, 13) three in the Visayas (Regions 6 and 7) and three in Luzon (Regions 4 and 5). IRAP III targeted rural communities nationwide and facilitated the transfer of skills to the major local actors and policy-makers to capacitate them in the analysis of the data gathered from the said tool. The data would then provide the necessary information for the crafting of project and programs that will address the accessibility needs.

The IRAP approach rendered a lesson for the Research Management in its formulation of a research procedure that comes up with the accessibility maps and access profiles of the target research areas. The furnished base maps prepared by the Provincial Planning and Development Office of Agusan del Norte [PPDO-AdN] facilitated a participatory resource and accessibility mapping of the existing institutions and facilities at respective municipalities of the province. The accomplished maps helped in the analysis of people's access to basic goods and services, facilities in those specified farming communities in the province.

The participatory access mapping facilitated the extraction of the needed information especially in terms of the accessibility of the people in the community to support institutions like market, technology, financial institutions and other financing schemes necessary for the layout of possible project interventions to address these accessibility problems.

4. Socio-Economic Profiling

The decentralization of government comes with the need for a localized development planning processes where people at the community level participate in the planning, discussions and problem prioritization then draft local initiatives to address these problems. With these, local development policy-makers see the need for a localized assessment of the situation of their respective areas that would provide the necessary data where their actions would be anchored.

Hence, the local government units utilized many participatory tools to have come up with a localized data such as, Participatory Rural Appraisal [PRA] that serves as the guide for the barangay, municipal, provincial and regional development planning. Socio-economic profiling is also an able tool that targets the social and economic status of the people in a defined area.

The Socio-Economic Profile of Agusan del Norte (2005) provided relevant information of the province. The Socio-Economic Profile provided the Baseline Study Group the needed secondary data vis-à-vis the minimum information requirement of the baseline study. The profile included demographic, geographical, social, political and economic data of the province which are necessary for assessing the make-up of Agusan del Norte.

3. Study Methodologies, Data Gathering Tools and Handling of Data

A. DATA GATHERING TOOLS AND METHODOLOGIES

1. Secondary Data Gathering

Secondary data is crucial in establishing a legitimate view of a certain locality since these come from official sources that are authoritative to dispose the information. Secondary data gathering is a research tool that aids in the analysis of the current and prevailing status of a certain locality which also further aid in polishing plans and interventions to address the needs of the people.

Thus, the structure of the Baseline Study starts with the compilation of available written materials or secondary data from target sources in the province that will be used in zooming in the needed information vis-à-vis the minimum information requirements and guidelines as well as the required structure as stipulated in the TOR. Secondary data are gathered from official sources such as, Provincial Offices, Government Line Agencies, NGO offices, and other relevant data that are available in the Internet.

The Research Management, with the technical assistance of the Technical Working Group led by the ILO Project Manager, sets a system in the collection and gathering of the secondary data. Collection and compilation of available written materials from official sources shall be signed upon release by the ones preparing and releasing the data to make it official and have it certified as to its correctness vis-à-vis the source data and respective offices. The data are then segregated into folders according to the source offices for easy retrieval.

The Research Management reviews and analyzes then the collected written materials and then identifies information gaps vis-à-vis the minimum information requirements set in the TOR. These information gaps will eventually surface in the FGDs, KIs and General Poll/Survey for the final presentation of the Baseline Study Report.

In the context of the Baseline Study Report's minimum information requirements, the CBMS Consolidated Results (2007), the Socio-Economic Profile of Agusan del Norte (2005), the Municipal Profiles as well as the Barangay Profiles, and Provincial and Regional Government Agencies provided the following secondary data:

INDICATORS (Based on the Structure)	Available data	Sources of the data
1. AGUSAN DEL NORTE – PROFILE		
1.1. Geography and Demography	▪ Location map of Agusan del Norte Province	PPDO
	▪ Municipal Maps	Municipal Profiles, MPDO *(please see attached maps)*
	▪ Physical Features of Agusan del Norte (AdN)	Socio-Eco Profile of AdN, 2005;
	▪ Physical Features and Topography of the 11 Municipalities	Socio-Eco Profile of AdN, 2005;
	▪ Land Area by Municipality	Socio-Eco Profile of AdN, 2005;
	▪ Primer on Climate of the Philippines	DOST, PAG-ASA
	▪ Total Household Population, Number of HHs and Projected Population by Municipality and by Barangay of Agusan del Norte	Socio-Eco Profile of AdN, 2005;
	▪ Current and Projected Population, Urban and Rural Barangays by Municipality (2000-2010)	Socio-Eco Profile of AdN, 2005;
	▪ Current and Projected Population by Age Group and by Sex	Socio-Eco Profile of AdN, 2005;
	▪ Projected Labor Force	Socio-Eco Profile of AdN, 2005;
	▪ HH Population by Religious Affiliation and Sex	Socio-Eco Profile of AdN, 2005;

	▪ HH Population by Citizenship and Sex	Socio-Eco Profile of AdN, 2005;
	▪ Language or Dialect Spoken in the HHs	Socio-Eco Profile of AdN, 2005;
	▪ HH Population by Ethnicity and Sex	Socio-Eco Profile of AdN, 2005;
1.2. General Admin., Political and Institutional Profile	▪ Political Subdivisions	Socio-Eco Profile of AdN, 2005;
	▪ List of Past and Present Provincial Governors and Vice-Governors	Socio-Eco Profile of AdN, 2005;
	▪ Class Classification of Municipality, 2001-2005	Socio-Eco Profile of AdN, 2005;
	▪ Internal Revenue Allotment (IRA) per Municipality, 2001-2005, PBO-AdN	Socio-Eco Profile of AdN, 2005;
	▪ Women Political Leaders	DILG-AdN
	▪ Directory of Incumbent Government Officials	DILG-and
	▪ Brief history of Agusan del Norte	Socio-Eco Profile of AdN, 2005;
	▪ Brief Histories of the 11 Municipalities of AdN	Socio-Eco Profile of AdN, 2005;
Education:	▪ Type and Number of Elementary and Secondary Schools	Socio-Eco Profile of AdN, 2005;
	▪ Enrolment Profile by District, by Level and by Sex	Socio-Eco Profile of AdN, 2005;
	▪ Consolidated Data on Day Care Service	Socio-Eco Profile of AdN, 2005;
Health:	▪ Distribution of Barangay Health Stations by Municipality	Socio-Eco Profile of AdN, 2005;
	▪ Number of Health Units by Municipality	Socio-Eco Profile of AdN, 2005;
	▪ Government Health Facility Resources	Socio-Eco Profile of AdN, 2005;
Cultural heritage and Tourism:	▪ Fiesta Celebration by Municipalities by Barangays	Socio-Eco Profile of AdN, 2005;
	▪ Tourist Destinations	Socio-Eco Profile of AdN, 2005;
1.4. Economic	▪ Crops / Commodities Including Livestock & Fisheries, 2002-2005	Socio-Eco Profile ADN, 2005
Establishing Agricultural Production and Non-farming sources	▪ Location Best Suited by Specific Crops, PAO-AdN	Socio-Eco Profile AdN, 2005
	▪ High Value Crops and Production Area	Socio-Eco Profile AdN, 2005
	▪ GMA High Value Commercial Crops, Las Nieves, March 2008	Resource Material No. 1, PAO-AdN, 2008
	▪ Number of Business Establishments, 2001-2004, DTI	Socio-Eco Profile ADN, 2005
	▪ Number of Industries by Major Classification, DTI	Socio-Eco Profile ADN, 2005
1.5. Environment	▪ Average Rainfall	
	▪ Average Wind Velocity and Maximum Wind Speed	Socio-Eco Profile ADN, 2005
	▪ Monthly Number of Rainy Days	
	▪ Monthly Average Temperature	
	▪ Monthly Average Relative Humidity	
1.6. Peace and Order	▪ Crime Statistics	Socio-Eco Profile ADN, 2005
	▪ PNP Essential Equipment and Facilities	Socio-Eco Profile of AdN, 2005;
	▪ Size of Police Force and Size of PNP Personnel by Sex by Municipality	Socio-Eco Profile of AdN, 2005;
2. AGUSAN DEL NORTE FARMING COMMUNITIES		
2.1. Social and Economic Conditions		
2.1.1 Poverty Incidence	▪ Total Population of Rural Barangays in Agusan del Norte (as of 2000 Census)	Socio-Eco Profile of AdN, 2005;
	▪ Households Reporting Land Ownership by Municipality	Socio-Eco Profile of AdN, 2005;
	▪ Labor Force vs. Employment Rate	Socio-Eco Profile of AdN, 2005;
	▪ Nutritional Status of Children/ Malnutrition Incidence	Socio-Eco Profile of AdN, 2005;
	▪ Proportion of Children 0-5 years old who are malnourished, by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of Women Who Died Due to Pregnancy-Related Causes	CBMS Results-AdN, 2008
	▪ Child Mortality	CBMS Results-AdN, 2008
	▪ Proportion of HHs Who Live in Makeshift Housing by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of HHs Who Are Informal Settlers by Municipality	Socio-Eco Profile of AdN, 2005;
	▪ School-Aged Children vs. Children Not in School	Socio-Eco Profile of AdN, 2005;
	▪ Proportion of Children 6-12 years Old Not Attending Elementary School by Municipality by Sex	CBMS Results-AdN, 2008
	▪ Proportion of Children 13-16 Years Old Not Attending High School by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of HHs With Income Below the Poverty Threshold by Municipality	CBMS Results-AdN, 2008

	▪ Proportion of HHs With Income Below the Food Threshold by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of HHs Who Experienced Food Shortage by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of Labor Force Who Are Unemployed by Municipality	CBMS Results-AdN, 2008
	▪ Access to Electricity and Power Supply	Socio-Eco Profile of AdN, 2005;
	▪ Access to Potable Water Supply	Socio-Eco Profile of AdN, 2005;
	▪ Proportion of HHs Without Access to Safe Water by Municipality	CBMS Results-AdN, 2008
	▪ Proportion of HHs Without Access to Sanitary Toilet Facilities by Municipality	CBMS Results-AdN, 2008
	▪ Status of Toilet Facilities by Municipality	Socio-Eco Profile of AdN, 2005;
2.3. Environmental conditions and climatic risk exposure	▪ Occurrence / Magnitude of Disasters (last 2-5 years)	Resource Material No. 2 Profile of natural disaster incidents in AdN from 2005-March 2009 – Office of Civil Defense
	▪ Number of Families Affected by the Disasters	
	▪ Severely Eroded Areas	Provincial Medium Term Development Plan 06-07
	▪ Environmentally Constrained Areas	Provincial Medium Term Development Plan 06-07
2.4. GO, LGU, NGO/PO and collaborative initiatives, projects and programs	▪ Existing ARCs in Agusan del Norte	Resource Material No. 3 ARC Profile – DA-AdN
	▪ Social Structures in the Community (Cooperatives, Farmers/Fisherfolk Organizations, Women Initiated Projects)	Resource Material No. 4 Department of Agriculture-AdN
	▪ List of Recipients of Livelihood Programs from the Provincial Government, 2001, 2004, 2005	Socio-Eco Profile of AdN, 2005;
	▪ Master List of Recipients of Hybrid Rice and Corn by Municipality	Resource Material No. 5 Department of Agriculture-AdN
	▪ Master List of Certified Seeds Recipients Given by the DA to the Municipalities from Year 2007-2009	Resource Material No. 6 Department of Agriculture-AdN
2.5. Relevant Support Institutions (training, technology and markets)	▪ List of Rice & Corn Millers, Warehousing Operation and Transporters Registered, 2005	Socio-Eco Profile ADN, 2005
	▪ Storage and Warehousing Facilities	
	▪ List of Retailers, Wholesalers, Corn Sheller, Dryers, and Transport Operators	
	▪ Master List of Tindahan Natin Operators by Municipality	Resource Material No. 8 National Food Authority, 2009
	▪ List of Vegetable Organizations/Associations by Municipality	Resource Material No. 5 DA-RFU, Caraga
	▪ Master List of Existing Banana Growers	
	▪ Banana Tissue Culture Lab, PAO Agusan del Norte	
	▪ Banana Packinghouse, ABSMULCO	
2.6. Existing Financial Institutions, structures, and schemes including informal financing schemes	▪ Lists of Banking Institutions Operating in Agusan del Norte	Socio-Eco Profile AdN, 2005
	▪ Lists of Credit Cooperatives	Cooperative Development Authority (CDA)

The available data abovementioned will be validated and supplemented in the other research tools like Focus Group Discussion (FGD) and Key Informant (KI) Interviews. The information gaps that are identified in relation to the set minimum information requirements will then be sought in the said tools.

2. Focus Group Discussions (FGD)

Focus Group Discussion or FGD is a social tool that will be used by the research team to gather qualitative information from primary sources. Discussants from the farming communities identified for the study will be gathered in a workshop or round table discussion to share their experiences, perceptions, and knowledge on the issues/topics in focus indicative contingent on the results of the secondary data review done previously by the research group. The tool serves to validate information in the secondary data.

Discussants shall be carefully selected on the basis of the following criteria:

1. Representative of farmer or fisherfolk (with personal knowledge or information of the situation of farming communities in Agusan del Norte).
2. Representative of NGOs and Academe.
3. Agricultural Technicians and Health Professionals
4. Local government official such as Punong Barangay, Kagawad, etc.
6. Representative of POs/ CBOs.
7. Entrepreneurs doing business in the locality with the farmers

The Research Management had 2 FGDs for each municipality (22 in all): one FGD for Resource Mapping, Trend Diagram, Production Cycle of the top two (2) crops and one FGD for Value Chain Mapping.

Table 1. FGD Distribution per Municipality

Municipality	Agricultural Production	Baseline Study		Grand Total
		For Top 2 Crops	Value Chain Mapping	
Buenavista	Rice, Banana	1	1	2
Cabadbaran	Rice, Coconut	1	1	2
Carmen	Coconut, Mango	1	1	2
Jabonga	Fishing, Coconut	1	1	2
Kitcharao	Rice, Coconut	1	1	2
Las Nieves	Coffee, Industrial Tree	1	1	2
Magallanes	Fishing	1	1	2
Nasipit	Coconut, Mango	1	1	2
RTR	Rice	1	1	2
Santiago	Abaca, Banana	1	1	2
Tubay	Fishing Coconut	1	1	2
			TOTAL	22

2.1 FGD Process Flow:

2.1.1 Entry Protocol/Data Authorization

Entry protocol with the Local Chief Executive and chiefs of government agencies for the following purposes:

- Information dissemination on the purpose of the Baseline Study Group in the area, with a brief background on the ILO project;
- Obtain master list of possible FGD discussants and Key Informants from the MAO and MPDO for consideration by the research team;
- Gather suggestions on details of the conduct of the FGD particularly the location and venue.

2.1.2 Preparatory Activities

For the second part of the FGD, preparation is needed. Below are the following sub-tasks:

- Identification of FGD discussants by the clustered teams;
- Setting of date and venue of the FGD after due consultation with the MAO and preparation of logistical needs for the FGD formal conduct such as: meals and snacks, transportation, supply/materials for the discussions, etc. ;
- Formal invitations to FGD participants with a briefer on the discussion topics;
- Identification and procurement of materials needed for the conduct of FGD, as follows:
    - Base Map of the 11 municipalities;
    - Tracing paper;
    - Push pins;
    - Pentel pens;
    - Manila papers;
    - Meta cards (different colors);
    - Masking tapes;
    - Colored pens;
    - Meter stick;
    - Crayons/colored pens;
    - Colored papers;
    - Note pads;
    - Ball pens;
    - Plastic Envelopes;
    - Pencils.

2.1.3 Final Preparatory of FGD Team

An FGD Team must be organized to ensure proper coordination.

- Tasking
  - o Facilitator –leads the discussion and stirs the participants to interact with each other;
  - o Documenter – takes the minutes of the proceedings of the FGD;
  - o Process Observer/Moderator – observes the process of the discussion relative to the topic, traffics the discussions;
  - o Logistics In-Charge – in-charged with the logistics and resource materials needed for the FGD process.
- Assessment of final list of the FGD discussants and possible replacements of unavailable participants.
- Last-minute-checking of logistics preparations.

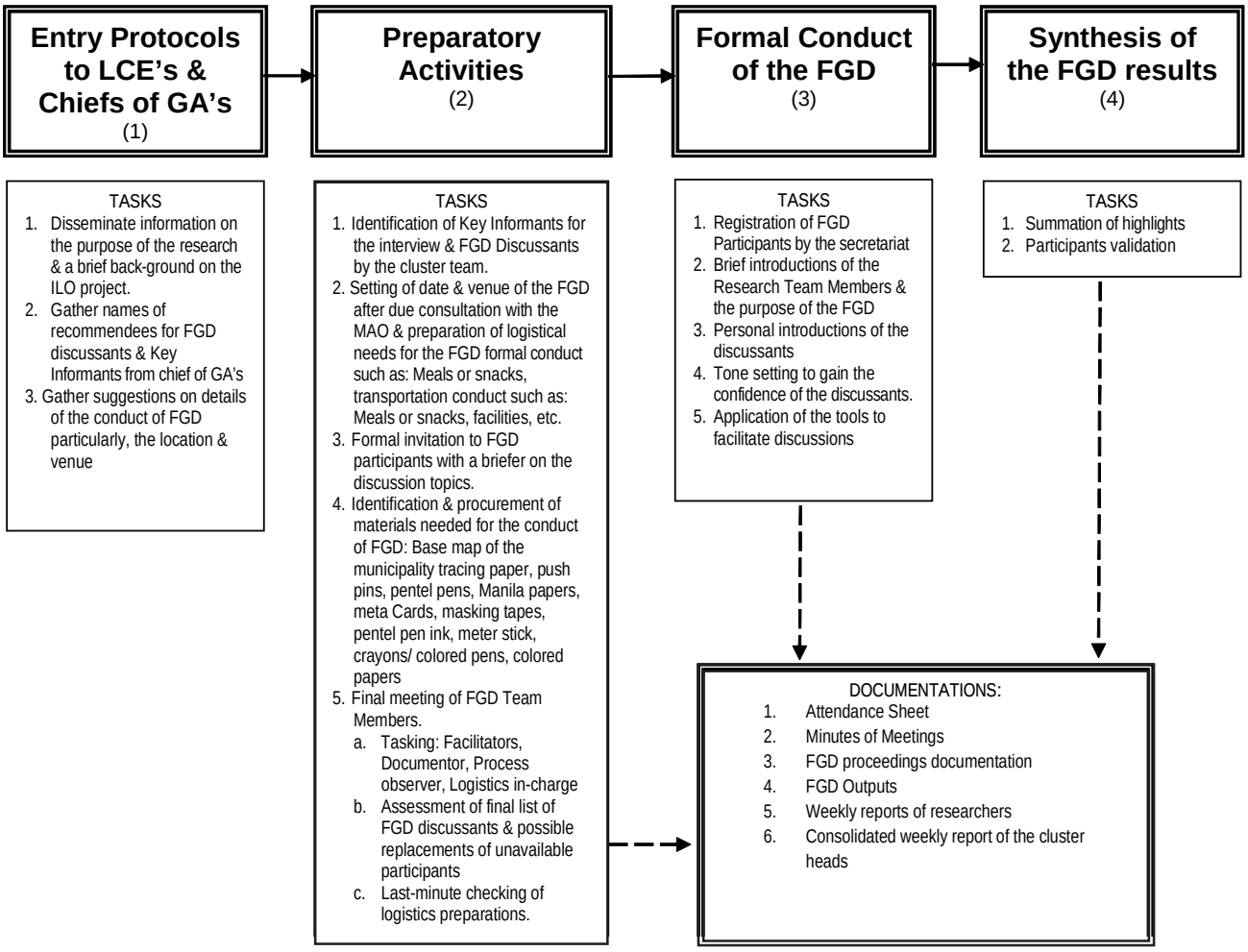
2.1.4. Conduct of FGD

For the proper conduct of the FGD, the following procedural actions must be taken:

- Registration of FGD participants by the Research Team
- Brief Introduction of the Research Team and the purpose of the FGD
- Personal introduction of the discussants
- Tone setting to gain the confidence of the discussants
- Application of the following tools to facilitate discussions (please see FGD guide booklet for details on the use of the tools)

III. HOW DO YOU GO ABOUT THE TASKS & PROCESSES OF CONDUCTING AN FGD?

Process flow in the conduct of FGD's



Tools in the FGD:

A. Resource and Access Maps

Resource and Access Maps will identify local resources on its access by the farming communities coming but not limited to agricultural resources and facilities, agri-business related establishments, financial institutions, technology and marketing support agencies and projects.

The following data can be gathered from the resource and access maps:

1.Agricultural Resources:	Land, Water, Crops
2.Agricultural Facilities:	Corn Mills, Dryers, Shredder, Stripping Machine (abaca), Irrigation System, Tapahan/Ganggangan (copra), FMR, Corn Shellers, etc.
3. Agribusiness:	Farm Inputs Stores/Suppliers, Warehouses, Farm Facilities Suppliers, Wholesalers, Trucking Services, Retail Stores
4. Financing Institutions:	Banks (Rural/Commercial), Traders, etc., Micro-Finance Institutions, Informal Groups (Dayong), Private/Individual Lenders
5.Institutions Providing Support Services to Farmers:	Private, Government: Trainings, Technology, Market, Local Development Plans / Legislations

Steps on how to construct the Resource & Access Maps:

1. Secure a Base Map of the specific municipality that you want to focus on. This base map is one output that you can make, out of the secondary data gathered by the team. In a plenary, ask participants to construct the resource and access map.

2. Mount the Map on a cork board or Styrofoam and place it on a convenient place for viewing of the FGD Discussants.

3. Prepare the following materials for easy access of each FGD participant & put them on the tables.
   a. Push Pins
   b. Colored papers / cartolina
   c. Scissors
   d. Pencils

4. Divide the participants into smaller groups, each group provided with a table where materials are made available

5. Assign each group a specific task such as:

Group 1: To identify agricultural resources & facilities.
Group 2: Infrastructures -- FMR, Bridges, irrigation canals.
Group 3: Agri-business establishments --
- Farming supply store
- Farm Equipment Suppliers
- Rice Mills, etc.

Group 4: Support institutions -- Technology, Market, Finance, Trainings, Legislations

N.B. (The facilitators and participants could agree for more resources when necessary)

6. Ask each group to agree on color codes in identifying their resources and to come up with common representative symbols as legends.

Ex. Establishment or institution
Irrigation
Coconut
Roads
Rice Fields
Bananas

7. Instruct the participants to locate on the mounted base map the resources they have identified & stick it on the map, using push pins.
8. Give each group 5 to 8 minutes to do #6 & #7
9. Ask each group to explain to the large assembly their output.
10. When all groups have reported to the assembly, you begin with the questions for analysis.

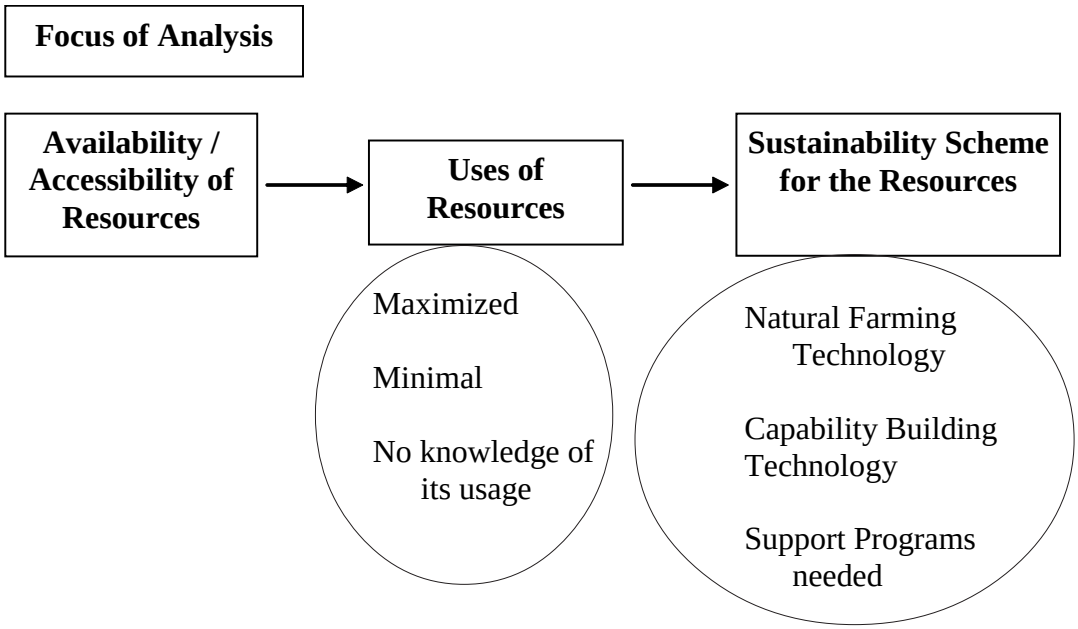
Note: Allow participants to ask 2-3 clarificatory questions only, before asking in-depth questions.

Guide Questions for Synthesis & Initial Analysis of the data gathered in the Resource/Access Maps:

a. Which barangays have utilized what resources? Why?
b. Who owns and controls these resources? (Refer to 1)
c. What available resources (raw materials) have been unused or minimally used? Why?

d. What resources are lacking or not available to the community, but are considered necessary. Why?
e. What other issues and concerns affect the sustainability of these resources?
f. What is your picture of sustainability as farmers considering these resources?

Guide for Analysis of Resource / Access Maps:



B. Trend Diagram

Trend Diagram was also used to cover periodic changes in yields of crop/ha./harvest; to include income/ha./harvest and the reason for such changes (technology, climatic change, etc.)

Trend diagram is a useful graphic tool for small groups to plot increases or decreases in production yield of crops or catch (fish) within a certain length of time e.g. per year or per harvest period. It helped the researchers analyze production trends and the factors contributing to such trends.

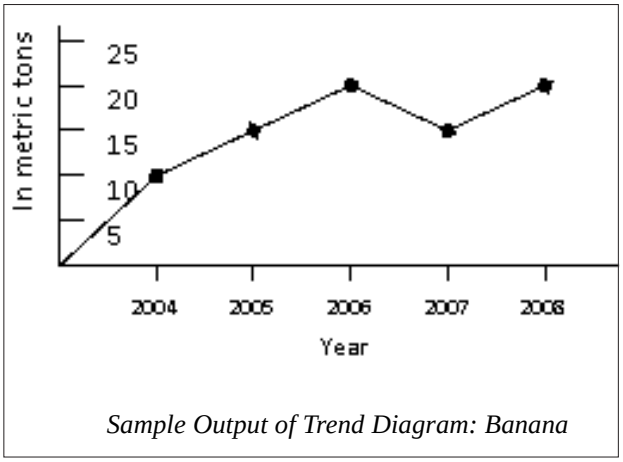
Data to be gathered from a Trend Diagram:

1. Patterns of increases and decreases in production yields of specific crops (3-5 years back):
   Ex: Rice, Banana, Coconut, Fish
2. Factors that contributed to the increase in production (prioritize according to factor with highest impact on the increase): Technology, Financing, Climate Marketing, etc.
3. Factors affecting the decrease in production yield (prioritize according to factor with highest impact on the decrease): Climate Change/Climate Risk Exposure, Technology/Training, Marketing, Financing
4. Other issues and concerns affecting production
5. Coping mechanisms employed in the past
6. Long/Short-term plans to be employed as coping mechanisms in similar situation (future).

How to construct the Trend Diagram:

1. Divide the assembly of participants into groups according to the number of major crops that the groups want to study.
   Ex. Group 1 – Rice ; Group 2 – Coconut;
   Group 3 – Banana; Group 4 – Fish
2. Allow the group to decide as to the harvest period that they are willing to cover (3-5 yrs. back, if possible)
3. Give the Group 5 minutes to review available data of crops before they construct the Trend Diagram.
4. Provide the following materials for the convenience of each group:
   Meter stick, manila paper,
   2 colored pentel pen : Blue and Black
5. Ask each group to report to the assembly their constructed diagram.
6. Compare the diagram to an overlay prepared from secondary sources to validate the information presented by each group.

7. Allow participants to ask 2-3 clarificatory questions.
8. When all groups have reported, you start asking the questions for analysis of the data as presented by the discussants



Sample Output of Trend Diagram: Banana

Guide Questions for Synthesis / Initial Analysis of the data gathered from the second FGD output – the Trend Diagram:

1. What factors caused the upward & downward trends in the production yields?
   A. Enumerate the contributing factors, issues & concerns, affecting the trend.
   B. How did you cope with those issues then?
2. What long-term or short term mechanism will you employ / start now to be able to cope with similar difficulties in the future?

C. Value Chain (VC) Mapping

VC Mapping helped facilitate discussions in identifying the sequences of related activities or functions and the operators performing these functions from the provision of specific inputs to production and to the transformation of the product; then, to trading and to the final consumption of a particular crop or product. Value chain is a data gathering and analyzing tool. It helped in analyzing relationships of related activities and functions and the operators performing these functions in a chain from the provision of inputs to the final consumption of a specific product or commodity.

A value chain map gives researchers a closer look at the business activities and actors involved in the different functions of producing the major products of a particular community. An analysis of these functions & Actors will help researchers pinpoint areas for intervention or support depending on the situation as can be seen from the value chains that will be established.

A separate day will be set for value chain mapping of specific crops.

Data to be gathered from a Value Chain Map:

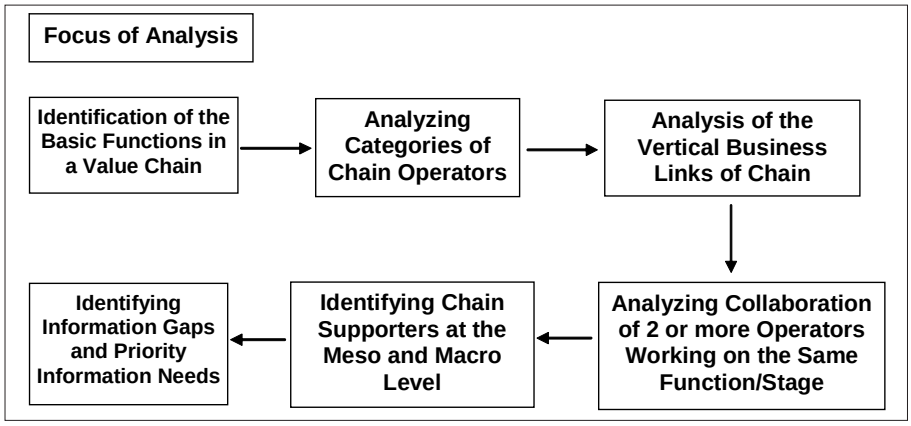
- Basic functions in a value chain of a particular product.
- The value chain operators performing these functions.
- Vertical business links between the operators.
- Chain supporters at the Meso Level.
- Macro Level Institutions and Players

How to construct a Value Chain Map in a plenary session:

- Briefly explain value chain to the discussants, present the symbols used and a model value chain.
- Ask the participants to decide on what commodity or product they would want to study.
- With a prepared metacard, put on the board the main functions in a value chain.
- Ask participants to enhance the functions with the specific activities.
- Ask participants to identify specific players for each function. Ask them to quantify the number of players.
- Using overlays, request them to map out support players in the meso and macro level.
- Ask 2-3 participants to read the value chain according to how he understands the relationships of the functions of the actors and the support players.

Guide Questions for Synthesis and Analysis of the Data Gathered:

- What are the activities under each basic function?
- Who are the operators performing the functions in the value chain?
- How are they related in the vertical links or horizontal collaborative links?
- Who are the players in the Meso and Macro Level?
- Where can we find the gaps in the Value Chain Map?
- What potential interventions can be seen from the Value Chain Map?



D. Production Cycle Calendar

Production Cycle Calendar will assist the FGD participants in identifying specific crops and the activities required from planting to harvesting indicating the months of the year when each production activity is done by farmers.

Data to be gathered in the Production Cycle Calendar:

- Type of Crops grown in the farming communities
- Production Activities of farmers / crop.
- Months of the year with the highest production activities / months with the least or no production activities.
- Other activities for livelihood engaged in during no production months.
- Other skills available in the farming communities.
- Training needs of Farmers

How to construct the Production Cycle Calendar:

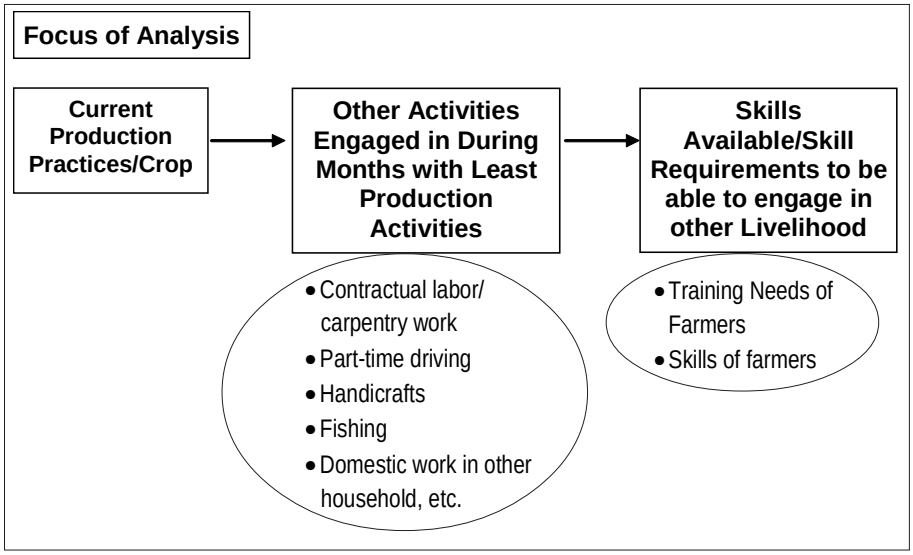
1. Ask the Assembly to decide what crops (include livestock & fisheries) will be their subject of study in the FGD.
   Example: Livestock, Corn & Fish
2. Group the participants according to their crop of interest.
3. Prepare the materials needed in the workshop
   Manila Paper
   Pentel Pen (2 colors)
   Meter Stick.
4. With the prepared standard production cycle of each crop, ask the groups to identify specific months when each activity is done.
5. Agree for the group sharing and construction of the calendar to last only 5-8 minutes.
6. Give each group 2-3 minutes time to mount their outputs in a gallery style and observe each calendar.

Guide Questions for Synthesis & Initial analysis of the data from the Production Cycle Calendar:

- What months of the year do farmers/fisherfolk engage in production activities? What months have no production activities? Why? Is this the normal cycle?
- How do farmers earn a living during months with least production activities? What other production activities do they engage in?
- What other activities do farmers/fisherfolk want to do? Why are you not doing it?
- What trainings do farmers want to enhance their coping mechanisms for survival during months with no production?

2.1.5 Synthesis of FGD

The facilitator/cluster head will synthesize the highlights of the topics discussed which will be followed by a validation process to be participated in, by the discussants themselves.



2.1.6 FGD Documentation Process

All of the above process flow in the preparations, to the formal conduct of the FGD will be documented in the following monitoring and evaluation tools:

- Attendance Sheets of FGD discussants
- Minutes of meetings of Research Teams
- FGD proceedings
- FGD outputs:
  - o Resource / Access Map
  - o Trend Diagram
  - o Value Chain Mapping
  - o Weekly Reports of Researchers
- o Consolidated Weekly Reports of the Cluster Heads

Type of Crops	Production Activities	J	F	M	A	M	J	J	A	S	O	N	D
1. Rice	* Land Preparation						■						
	* Seed Germinating						■						
	* Planting							■					
	* Maintenance Activities							■	■				
	- Fertilizing							■	■				
	- Weeding							■	■				
	- Spraying, etc.							■	■				
	* Harvesting									■			

Sample Output of Production Cycle Calendar

3. Key Informants Interview

The Key Informant Interview is another research tool that will be employed by the Research Team in the gathering of quantitative and qualitative information on specific subject of the study. It will focus on topics indicative contingent on the results of secondary data analysis as they are able to shed light on certain critical issues on account of their direct contacts or on-the-ground experience related to the subject. Key Informant interviews also serve to validate identified data gaps in the secondary data analysis.

Following are the questions:

KI Instrument No.: _____
Interviewer No.: _____

Key Informant Interview
Instrumento sa Pagpahigayun og Key Informant Interview

Municipality: _____ **Date of Interview**_____
Munisipyo *Petsa sa Pagpakisayod*
Barangay: _____

==========

Key Informant No. _____
Numero sa Key Informant

Age: _____ **Gender:** ☐ **Female** ☐ **Male**
Edad: *Kasarian* *Babaye* *Lalake*

Educational Attainment: ☐ **Elementary** ☐ **High School** ☐ **College** ☐ **Vocational** ☐ **Post Graduate**
Edukasyon nga nakab-ot

Household Size:
Pila kabuok ang miembro sa panimalay

☐ **Total No.** ☐ **Female** _____ **Ages** ☐ **Male** _____ **Ages**

==========

1. WHAT IS YOUR MAIN SOURCE OF INCOME?
Unsa ang gisaligan nga tinubdan sa kita?

☐ **A. Farming** *Pagpanguma* ☐ **B. Fishing** *Pagpangisda* ☐ **C. Enterprise** *Pagpaninda*

1.1 What? _____ **1.2 Since when?** _____
Unsa? *Sugod Kanus-a?*

2. WHAT ARE YOUR OTHER SOURCES OF INCOME?
Unsa'y laing tinubdan sa kita?

☐ **A. Farm Labour Contracting**
Pagpasuhol

2.1 What?
- ☐ Seeding *[pagpaturok]*
- ☐ Planting *[pagpananum]*
- ☐ Weeding *[pagpalampas]*
- ☐ Fertilizing *[pagfertilize]*
- ☐ Harvesting *[pagpang-ani]*
- ☐ Others _____ _____

☐ **B. Fishing**
Pagpangisda

☐ **D. Pension**
Pensyon

☐ **E. Wages [Non-Domestic Work]**
Sweldo [dili sa balay, opisina, uban pa]

2.5 Where?
- ☐ Within Municipality
- ☐ Outside Municipality_____
- ☐ Outside Country _____

☐ **F. Wages [Domestic Work]**
Pagpanarbaho sa laing panimalay

2.2 What?
- ☐ Culture *[binuhi]*
- ☐ Capture *[nakuha]*

2.3 Where?
- ☐ Sea *[Dagat]*
- ☐ Lake *[Danao]*
- ☐ River *[Suba]*

2.6 Where?
- ☐ Within Municipality
- ☐ Outside Municipality_____
- ☐ Outside Country _____

☐ **C. Small Business**
Ginagmay'ng Negosyo

2.4 What?
- ☐ Sari-sari Store
- ☐ Trading
- ☐ Carenderia
- ☐ Others _____
- _____

3. WHAT IS THE ESTIMATED HOUSEHOLD INCOME/DAY?
Pila'y bana-bana nga inyong kita kada adlaw?

4. WHAT IS THE ESTIMATED DAILY EXPENSES OF THE FAMILY?
Pila'y bana-bana nga gasto kada adlaw sa pamilya?

	3	4
A. Php 200.00 – below	☐	☐
B. Php 201.00 – 300.00	☐	☐
C. Php 301.00 – 400.00	☐	☐
D. Php 401.00 – 500.00	☐	☐
E. Php 501.00 – above	☐	☐

For those who answered A in QQ1, continue QQ5-QQ9
Kadtong nitubag ug A sa QQ1, padayon sa QQ5-QQ9

For those who answered B in QQ1, proceed to QQ10
Kadtong nitubag og B sa QQ1, diretso sa QQ10

5. HOW MANY HECTARES OF LAND ARE YOU TILLING NOW?
Pila ka iktarya ang yuta nga imong gi-tikad karon?

☐ **A. Below 1 hectare**
Ubos sa 1 ka iktarya

☐ **B. 1 hectare**
1 ka iktarya

☐ **C. More than 1 hectare** _____
Subra sa 1 ka iktarya *(kadak-on sa yuta)*

6. DO YOU OWN THE LAND YOU TILL?
Gipanag-iyahan ba nimo ang imong gitikad?
☐ **Yes** *Oo* ☐ **No** *Dili*

6.1 If No, who owns the land?
Kung dili, kinsa ang tag-iya?
☐ **Private** *(Pribado)* ☐ **Public** *(Publiko)*

6.2 What is your tenurial arrangement?
Unsa ang gikasabutan?
☐ **Fixed Rental** *Renta* ☐ **Borrowed w/out rent** *Pagamit*
☐ **Tenant** *Saop* ☐ **Lease** _____ *Bahinay sa abot*

7. IS THE FARM ☐ **Irrigated?** ☐ **Rain fed?**
Ang uma ba *patubig?* *Nagsalig sa ulan?*

7.1 If irrigated: ☐ **Irrigated (NIA)** ☐ **Water Impounding** ☐ **Self-Help**
Kung patubig: *Patubig sa NIA* *Kinaugalingon*

7.2 Source of Irrigation Water _____
Tinubdan sa patubig *Name of River, Lake etc.*
Ngalan sa suba, danao uban pa

8. WHERE DO YOU GET YOUR FARM INPUTS?
Asa nimo nakuha ang imong binhi ug uban pa nga mga "farm inputs"?

	Seeds	Fertilizer	Other inputs
Own Produce			
Given free			
Procured within Municipality			
Procured outside Municipality			

(For procured inputs specify name of Supplier)

9. WHAT CROPS DO YOU GROW / LIVESTOCK DO YOU RAISE AND HOW MUCH ARE YOUR COSTS AND PROCEEDS?
Unsa ang gitanum / hayop nga gibuhi ug pila ang gasto, ani ug kita?

Crops / Livestock *Tanum / Hayop* (1)	**Check if present** *Checkan kung naa* (2)	**Indicate C if Cash Crop / Livestock** *Isulat ang C kung ang produkto gibaligya* (3)	**Frequency of Harvest / year** *Kapila mag ani kada tuig* (4)	**Production Area (ha.)** *Sukod sa lugar sa produksyon* (5)	**Cost of Production (PhP)** *Gasto sa produksyon (Php)* (6)	**Yield / harvest (Kg)** *Abot kada ani (kilo)* (7)	**Income / harvest (PhP)** *Kita kada ani (Php)* (8)
Rice *Humay*							
Coconut *Lubi*							
Banana *Saging*							
Corn *Mais*							
Others *Uban pa.* _____							
Chicken *Manok*							
Hog *Baboy*							
Cow *Baka*							
Goat *Kanding*							
Carabao *Kabaw*							
Others							

9. A Has your harvest increased/decreased over the past 5 years?
Ang imo bang harvest ni-taas / nikunhod sa nilabay'ng 5 ka tuig?

- ☐ **A. Increased** *Nitaas*
- ☐ **B. Decreased** *Nikunhod*
- ☐ **C. Fluctuating** *Motaas / Mokunhod*
- ☐ **D. No increase / no decrease** *Wala ni taas / wala ni ubos*

Proceed to QQ#13
Padayon sa QQ#13

For those who answered B in QQ1, continue QQ10-QQ12
Alang niadtong nagtubag sa B sa QQ1, padayon sa QQ10-12

10. WHAT FISHING METHODS DO YOU USE? *Unsa ang pamaagi sa pagpangisda nga imong gigamit?*

- ☐ **A. Fish Culture** *Gibuhi nga isda*
- ☐ **B. Fish Capture** *Kuha nga isda*
  - ☐ **B.1 Sea** *Dagat*
  - ☐ **B.2 Lake** *Danao*
  - ☐ **B.3 River** *Suba*

11. WHAT FISHING GEAR/EQUIPMENT YOU OWN, RENT, OR USE FOR FREE?
Unsa ang gamit pangisda nga imong gipanagiyahan, gi-rintahan, o libring gipahulam?

Equipment *Ekwepo* (1)	**Own** *Kaugalingon* (2)	**Rented** *Renta* (3)		**Free use / Borrowed** *Libreng gipahulam* (4)
		Cash	**In kind**	
1. Boat *Bangka*				
2. Motorized Boat *Bangka de motor*				
3. Fishing Net / Cast Net *Pukot/Baling /Laya*				
4. Fish Cage *Hawla sa isda*				
5. Hook & Line/Spear *Bingwit / Pana*				
6. Fish Trap *Bubo*				
7. Petromax *Petromax*				
8. Others ***Uban pa*** _____				

12. AVERAGE CATCH / HARVEST & INCOME:
Kadaghanon sa makuha / pangisda ug kita niini:

12. A Fish Capture
Isda nga nakuha

Kinds of Fish Catch *Klase sa isda nga nakuha* (1)	**Frequency of Fishing Activity per month** *Kapila manguha kada bulan* (2)	**Catch per fishing activity (kilo)** *Kilo kada pangisda* (3)	**Expense / fishing activity (Php)** *Gasto kada pangisda* (4)	**Income / Harvest (Gross) (Php)** *Kita kada pangisda* (5)
Sardines *Tamban*				
Katambak				
Molmol				
Others *Uban pa* _____				
Carp *Carpa*				
Shrimp *Uwang*				
Bugwan				
Pijanga				
Catfish *Pantat*				
Mudfish *Haluan*				
Others *Uban pa* - _____ _				

12. A-1 Has your catch increased/decreased over the past 5 years?
Ang imo bang kuha ni-taas / nikunhod sa nilabay'ng 5 ka tuig?

☐ **A. Increased** *Nitaas*
☐ **B. Decreased** *Nikunhod*
☐ **C. Fluctuating** *Motaas / Mokunhod*
☐ **D. No increase / no decrease** *Wala ni taas / wala ni ubod*

12. B Fish Culture
Isda nga gibuhi

Type of Culture *Klase sa pagbuhi* (1)	**Check if present** *Checkan kung naa* (2)	**Indicate C if Cash Crop** *Isulat ang C kung ang produkto gibaligya* (3)	**Frequency of Harvest / year** *Kapila manguha kada tuig* (4)	**Production Area (ha.)** *Sukod sa lugar sa produksyon* (5)	**Cost of Production (PhP)** *Gasto sa produksyon (PhP)* (6)	**Yield / harvest (Kg)** *Abot kada pangisda (Kg)* (7)	**Income / harvest (PhP)** *Kita kada pangisda (PhP)* (8)
Milk fish *Bangus*							
Prawn *Lokon*							

Tilapia *Tilapya*							
Crab *Alimango*							
African Hito *Pantat*							
Others *Uban pa.* _____							

12. B-1 Has your harvest increased/decreased over the past 5 years?
Ang imo bang kuha ni-taas / nikunhod sa nilabay'ng 5 ka tuig?

- ☐ **A. Increased** *Nitaas*
- ☐ **B. Decreased** *Nikunhod*
- ☐ **C. Fluctuating** *Motaas / Mokunhod*
- ☐ **D. No increase / no decrease** *Wala ni taas / wala ni ubod*

Question for all
Pangutana alang sa tanan

13. HAVE YOU RECEIVED ASSISTANCE FROM GOVERNMENT/NON-GOVERNMENT ORGANIZATIONS RELATING TO YOUR LIVELIHOOD AND OTHER GENERAL NEEDS?
[Nakadawat kaba ug hinabang gikan sa goberno/NGO lambigit sa panginabuhi-an ug uban pa]

☐ **Yes** ☐ **No**

Assistance	Name of Institution		Name of the Project
	GO	NGO	
Marketing			
Training			
Technology			
Production			
Financing (Cash)			
Inputs in Kind			
Housing			
Education			
Food			
Water			
Others _____			

14. IF ANSWER TO 9A; 12A1 OR 12 B1 IS A, B OR C, WHAT COULD HAVE CAUSED THE INCREASE/DECREASE IN PRODUCTION / CATCH?
Unsa ang hinungdan sa pagtaas / pagkunhod sa produksyon / pangisda?

- ☐ **A. Inputs** _____ *Inputs*
- ☐ **B. Technology** *Teknolohiya*
- ☐ **C. Marketing** *Pagpamaligya*
- ☐ **D. Financial / Capital** *Pinansya / Kapital*
- ☐ **E. Climate Change** *Kabag-uhan sa klima*
- ☐ **G. Others** _____ *Uban pa*

15. HAVE YOU OBSERVED CLIMATIC CHANGES? ☐ **Yes** *Oo* ☐ **No** *Wala*
Duna ka ba'y na-obserbahan nga kabag-ohan sa klima?

15.1 If yes, what?
Kung Oo, Unsa?

- ☐ **A. Increase in Temperature** *Pag-init sa panahon*
- ☐ **B. Heavy Rainfall** *Kusog nga pag-ulan*
- ☐ **C. Flooding** *Pagbaha*
- ☐ **D. Drought** *Huwaw*
- ☐ **E. Siltation** *Pagkabanlas sa yuta*
- ☐ **F. Salt intrusion in water** *Pagsagol sa parat nga tubig sa tab-ang*
- ☐ **G. Pest infestation on Crops** *Pagkaylap sa peste ug dangan sa tanum*
- ☐ **H. Others** _____ *Uban pa.*

15.2 What are the effects?
Unsa ang mga epekto?

- ☐ **A. Decrease in Production** *Pagkunhod sa ani*
- ☐ **B. Decrease in Fish Catch** *Pagkunhod sa kuha nga isda*
- ☐ **C. Incidence of crop/fish diseases** *Pagkasakit sa pananum / isda*
- ☐ **D. Cropping Failure** *Kapakyas sa pagpananum/pamuhi sa isda*
- ☐ **E. Illness of family members** *Pagkasakit sa myembro sa pamilya*
- ☐ **F. Others** _____ *Uban pa.*

16. WHAT STEPS DID YOU TAKE TO COPE WITH CLIMATIC CHANGES AND ITS EFFECTS?
Unsa ang mga lakang nga gigamit aron sa pagsagubang sa kabag-uhan sa klima ug sa iyang epekto?

☐ **A. Engage in other forms of production activities**
Pagsulod sa laing porma sa produksyon

- ☐ **Farming** *Pagpanguma* — _____ **New Crop** *Bag-ong Tanum*
- ☐ **Fishing** *Pagpangisda* — _____ **New Method/Location** *Bag-ong paagi/lugar*
- ☐ **Business** *Negosyo*
  - ☐ **Sari-sari Store**
  - ☐ **Trading**
  - ☐ **Carenderia**
  - ☐ **Others**

☐ **B. Engage in Natural Farming Technology System**
Paggamit sa tecknolohiyang natural sa pagpanguma

What?

- ☐ **Mulching**
- ☐ **Composting**
- ☐ **Fermentation**
- ☐ **Others** _____
- ☐ **Use of IMO** _____

☐ **C. Paid Labor** *Pagpasuhol*
- ☐ **Domestic Work** *Sulod sa balay*
- ☐ **Non-Domestic Work** *Gawas sa balay*

☐ **D. Loan Accessing** *Pagpangutang*

☐ **E. Others *Uban pa*** _____

17. DID YOU RECEIVE ASSISTANCE FROM AGENCIES OF GOVERNMENT OR PRIVATE INSTITUTIONS DURING THESE SITUATIONS?
Aduna ka ba'y nadawat nga hinabang gikan sa gobyerno o pribado nga sektor?

- ☐ **Yes** *Oo*
- ☐ **No** *Wala*

17.1 If yes, specify most recent
Kung Oo, unsa ang pinakaulahi

	Name of Institution	
	GO	NGO
A. Technology *Teknolohiya*		
Equipment *Ekwepo*		
Training *Pag-bansaybansay*		
Natural Farming Technology *Teknolohiyang Natural sa pagpanguma*		
B. Financing *Pinansya*		
C. Relief Services *Serbisyong pagpanghatag*		
D. Rehabilitation of Farms & Houses *Rehab sa pagpanguma ug sa panimalay*		
E. Others _____ *Uban pa*		

17.2 If no, have you heard of projects providing support to other fishers / farmers?
Kung wala, duna ka ba'y nadunggan nga proyekto nga nagahatag og suporta ngadto sa laing mangingisda / mag- uuma?

☐ Yes _____ ☐ No
Oo *Name of Project* *Wala*

18. COMPARED TO PREVIOUS YEARS, HAS YOUR INCOME
Kompara sa niaging tuig, ang imong kita

☐ **A. Increased**
Nitaas
☐ **B. Decreased**
Nikunhod
☐ **C. Fluctuating**
Motaas / Mokunhod
☐ **D. No increase / no decrease**
Wala ni taas / wala ni ubod

19. DO YOU HAVE SOME SAVINGS?
Duna kaba'y naipon?

☐ **Yes**
Oo
☐ **No**
Wala

19.1 If yes, were do you keep your savings?
Kung Oo, asa nimo gitipigan ang imong naipon?

- ☐ **A. Bank** *Bangko*
- ☐ **B. House** *Balay*
- ☐ **C. Cooperative** *Kooperatiba*
- ☐ **D. Paluwagan** *Tampuhay*
- ☐ **E. Others** _____ *Uban pa.*

19.2 For what use is your savings?
Para asa idapat ang maong gitipon?

- ☐ **A. Retirement Age** *Alang sa pagritiro*
- ☐ **B. Children Education** *Pag-paeskwela sa anak*
- ☐ **C. Medical / Emergency needs** *Tambal/ panahon sa emergency*
- ☐ **D. Capital for Business / Farming** *Kapital sa negosyo / pagpanguma*
- ☐ **E. House Repair** *Pagpaayo sa balay*
- ☐ **F. Acquisition of appliances** *Pagpamalit sa aplayansis*
- ☐ **G. Acquisition of lands** *Pagpamalit og yuta*
- ☐ **H. Others.** _____ *Uban pa*

19.3 If you lose your regular income, how long can your savings support your family? _____
Kung nawala ang imong regular nga kita, hangtud kanus-a ang imong naipon maka suporta sa pamilya?

19.4 If no, why? *Kung wala, ngano man?*

- ☐ **A. Income enough for subsistence only** *Insakto lamang nga kita*
- ☐ **B . Income insufficient** *Dili igo ang kita*
- ☐ **C. No Institution** *Walay institusyon*
- ☐ **D. Others** _____ *Uban pa.*

20. HAVE YOU INCURRED A LOAN IN THE LAST 5 YEARS?
Nakapanghulam kaba sulod sa 5 ka tuig?

- ☐ **Yes** *Oo*
- ☐ **No** *Wala*

20.1 If yes, for what?
Kung Oo, Para asa?

- ☐ **A. Children Education** *Pag-paeskwela sa anak*
- ☐ **B. Medical / Emergency needs** *Tambal/ panahon sa emergency*
- ☐ **C. Capital for Business/Farming** *Kapital sa negosyo / pagpanguma*
- ☐ **E. House Repair** *Pagpaayo sa balay*
- ☐ **F. Acquisition of appliances** *Pagpamalit sa aplayansis*
- ☐ **G. Acquisition of lands** *Pagpamalit og yuta*
- ☐ **H. Others.** _____ *Uban pa*

20.2 From what source did you access loan?
Asa ang tinubdan sa imong gihulaman?

- ☐ **A. Bank** *Bangko*
  - ☐ **Commercial Bank** _____
  - ☐ **Rural Bank** _____
- ☐ **B. MFI** *Institusyon sa nagpahulam*
  - ☐ **QUEDANCOR**
  - ☐ **Lending Firm** _____
  - ☐ **CARD Inc**
  - ☐ **Others** _____
- ☐ **C. Government** *Gobyerno*
  - ☐ **Pag-ibig**
  - ☐ **GSIS**
  - ☐ **SSS**
- ☐ **D. Individual Lenders** *Nagpautang nga Individual*
  - ☐ **5-6**
  - ☐ **Neighbor**
- ☐ **E. Credit Cooperative** _____
- ☐ **F. Others** _____

20.3 Why did you choose this financing institution?
Nganong kini man nga institusyon imong gipili?

- ☐ **No other Choice** *Wala na'y kapili-an*
- **With Choices** *Adunay kapili-an*
  - ☐ **A. Low Interest** *Ubos ang interest*
  - ☐ **B. Easy Access [Physical Access]** *Sayon duolon*
    - ☐ **Within Municipality** *[sulod sa munisipyo lamang]*
    - ☐ **Outside Municipality** *[gawas sa munisipyo]*
  - ☐ **C. I have personal connections in the agency** *Duna'y koneksyon sa sulod sa ahensya*
  - ☐ **D. I'm a member** *Usa ako ka miyembro*

20.4. At what term was your previous loan?
Unsa'y termino sa imong ning-agi nga pagpanghulam?

- ☐ **A. Term of 1 yr. & above / amortized payment** *Subra sa 1 ka tuig / hulogan pagbayad*
- ☐ **B. Term of 3-6 mos. / amortized payment** *3 hangtod 6 ka bulan / hulogan pagbayad*
- ☐ **C. Term of 3-6 mos / lump sum payment** *3 hangtod 6 ka bulan / bayaran diretso*
- ☐ **D. Monthly Interest rate and monthly collection of interest** *Binulan nga interest ug dunay binulan nga pagpanukot sa interest*
- ☐ **E. Annual Interest rate and annual collection of interest** *Tinuig nga interest ug dunay tinuig nga pagpanukot sa interest*

20.5 If no, where do you get help when you need money?
Kung wala, asa ka moduol kung manginahanglan og kwarta?

- ☐ **A. Family / Friends** *Pamilya / Higala*
- ☐ **B. My savings in the Bank** *Sa gitipigan didto sa bangko*
- ☐ **C. My non-cash assets** *Sa akong mga kabtangan*
- ☐ **D. Others** _____ *Uban pa*

20.6 If no, would you be willing to obtain loan?
Kung wala, gusto ba nimo?

☐ **Yes** *Oo* ☐ **No** *Wala*

20.7 If willing, how much are you willing to avail?
Kung interesado, pila'y imong gusto hulamon?

- ☐ Less than 1,000.00
- ☐ Php. 1,001.00 – 3,000.00
- ☐ More than 3,000.00

20.8 At what terms

- ☐ **Annual [*Tuig*]**
- ☐ **Quarterly**
- ☐ **Monthly [*Binulan*]**
- ☐ **Weekly [sinimana]**
- ☐ **Daily [inadlaw]**

21. DO YOU HAVE INSURANCE?
Duna kaba'y insurance?

☐ Yes *Oo* ☐ No *Wala*

21.1 If yes,

- ☐ **Crop**
- ☐ **Personal**
- ☐ **Life**
- ☐ **Medical**
- ☐ **Others** _____

21.2 From what source did you access insurance?
Asa ang tinubdan sa imong insurance?

- ☐ **A. SSS**
- ☐ **B. GSIS**
- ☐ **C. Pag-ibig**
- ☐ **D. PhilHealth**
- ☐ **E. Cooperative**
- ☐ **F. Mortuary *(Dayong)***
- ☐ **G. Red Cross**
- ☐ **H. Philippine Crop Insurance Corp.**
- ☐ **I. Others** _____

21.3 Why did you choose this insurance?

☐ No other Choice *Wala na'y kapili-an*

With Choices *Adunay kapili-an*

- ☐ **A. Low Interest** *Ubos ang interest*
- ☐ **B. Easy Access [Physical Access]** *Sayon duolon*
  - ☐ **Within Municipality** [*sulod sa munisipyo lamang*]
  - ☐ **Outside Municipality** [*gawas sa munisipyo*]
- ☐ **C. I have personal connections in the agency** *Duna'y koneksyon sa sulod sa ahensya*
- ☐ **D. I'm a member** *Usa ako ka membro*

21.4 If no, why? *Kung wala, ngano man?*

- ☐ **A. Income enough for subsistence only** *Insakto lamang nga kita*
- ☐ **B. Income insufficient** *Dili igo ang kita*
- ☐ **C. No Institution** *Walay institusyon*
- ☐ **E. Others** _____ *Uban pa.*

21.5 If no, would you be willing to obtain insurance? *Kung wala, gusto ba nimo?*

☐ **Yes** *Oo* ☐ **No** *Wala*

For what? *Para asa?*

- ☐ **Crop**
- ☐ **Personal**
- ☐ **Life**
- ☐ **Medical**
- ☐ **Others** _____

21.6 If willing, how much are you willing to pay as premium?
Kung interesado, pila'y imong kagustuhan sa pagbayad

- ☐ Php. 100.00
- ☐ Php. 200.00
- ☐ Php. 300.00
- ☐ Php. 400.00
- ☐ Php. 500.00
- ☐ More than Php. 500.00

21.7 At what terms

- ☐ **Annual** *[Tuig]*
- ☐ **Quarterly** []
- ☐ **Monthly** *[Binulan]*

END OF INTERVIEW
Tapos sa pakisayod

KI respondents will be identified and selected with the help of the Municipal Agriculture Office (MAO) to include any or all of the following individuals engaged in farming or farm-related activities, as follows:

- Ordinary farmer-tiller/fisherman;
- Farmer/Fisher PO-leader;
- Farm product buyer/trader;
- Financier (formal/informa)
- Farming/Fishing facility owners;
- Farming/Fishing input supplieS;
- Barangay leaders;
- Academe representatives;
- Fisherfolk-vendor;

The Research Team will make a master list of KI respondents for purposes of easy retrieval and monitoring should the need to validate specific responses from Key Informant Interviewees arise. Pre-determined respondents who will signify unavailability or who will not be around during the actual interview will be replaced by the Research Team.

It is to be noted in the table that the Research Management assumed to employ the total population of rural barangays in the entire province as its base point in the computation to come up with the 300 KI respondents. The assumption is that farming communities generally are seated in the rural barangays. The assumption is based on the following points: rural barangays generally are where agricultural areas are located; concentration of agricultural farm; presence of farmers and fisherfolk, and where households are most dependent on farming and fishing activities as major sources of income.

The 300 KI respondents will represent the whole farming population of Agusan del Norte as they will constitute the minimum sample size of the total population of the rural barangays assumed to be farming barangays/communities of the province. As discussed in the previous section, the Local and Regional Economic Development (LRED) employed a representative sampling of 60-80 respondents in a locality of 50, 000 inhabitants for them to have come up with a representative sample that reflects the economic situation of local areas.

Thus, in the case of getting representative sample

of the farming communities in Agusan del Norte, the Research Management employs the same sampling as used by the GTZ in its LRED approach and has thus identify 300 individuals who will be the Key Informants for the Baseline Study duly distributed according to the computed weighted mean of the total population of rural barangays of every municipality against the total population of the rural barangays of the province.

The mechanics of getting representative sample from the municipalities to fill the 300 Key Informant Interviewees is to be drawn by lot based from the names to be furnished by the Municipal Agriculture Office (MAO).

Detailed presentation of the distribution of sample size of the KIs per municipality is shown below.

Table 2. Distribution of Respondents/Sample Size of Key Informants

Municipality Agusan del Norte		No.of Brgys	Rural Barangay	Population of Rural Barangays	Weighted Mean	Sample Size/per Municipality
1	Buenavista	26	15	35,544	0.17	50
2	Cabadbaran	31	19	38,458	0.18	55
3	Carmen	8	7	12,766	0.06	18
4	Jabonga	15	14	17,461	0.08	25
5	Kitcharao	10	8	9,193	0.04	13
6	Las Nieves	21	18	20,334	0.10	29
7	Magallanes	8	7	17,347	0.08	25
8	Nasipit	19	12	27,004	0.13	38
9	RTR	8	6	9,634	0.05	14
10	Santiago	8	6	9,211	0.04	13
11	Tubay	13	11	14,300	0.07	20
	Total	**167**	**123**	**211,252**	**1.00**	**300**
			0.74			

Table 3. Distribution of KI Respondents in Buenavista

Rural Barangays		Total *HH Pop*	Wt Mean	Respondents *per barangay*
1	Abilan	303	0.1	3
2	Agong-agong	243	0.04	2
3	Alubihid	465	0.08	4
4	Ginabsan	738	0.13	6
5	Macalang	253	0.04	2
6	Malapong	312	0.06	3
7	Malpok	257	0.05	2
8	Manapa	240	0.04	2
9	Rizal	413	0.07	4
10	Sacol	511	0.09	5
11	Sangay	449	0.08	4
12	Taloao	623	0.11	5
13	Lower Olave	322	0.06	3
14	Simbalan	518	0.09	5
	Total	**5647**	**1.0**	**50**

Table 4. Distribution of KI Respondents in Cabadbaran

Rural Barangays		HH Pop	Wt Mean	Respondents/Barangay
1	Antonio Luna	186	0.03	1
2	Bay-ang	204	0.03	2
3	Bayabas	195	0.03	1
4	Caasinan	169	0.02	1
5	Cabinet	304	0.04	2
6	Calamba	460	0.06	3
7	Calibonan	527	0.07	4
8	Comagascas	487	0.07	4
9	Concepcion	117	0.02	1
10	Del Pilar	467	0.06	4
11	Katugasan	246	0.03	2
12	Kauswagan	384	0.05	3
13	La Union	888	0.12	7
14	Mabini	671	0.09	5
15	Mahaba	172	0.02	1
16	Puting Bato	306	0.04	2
17	Sanghan	429	0.06	3
18	Soriano	272	0.04	2
19	Tolosa	799	0.11	6
	Total	**7283**	**1.00**	**55**

Table 5. Distribution of KI Respondents in Carmen

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Cahayagan	378	0.15	3
2	Gosoon	317	0.12	2
3	Manoligao	322	0.13	2
4	Rojales	373	0.15	3
5	San Agustin	213	0.08	2
6	Tagcatong	574	0.23	4
7	Vinapor	365	0.14	2
	Total	**2542**		**18**

Table 6. Distribution of KI Respondents in Jabonga

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Balegian	329	0.10	3
2	Bagonay	456	0.14	4
3	A. Beltran	164	0.05	1
4	Bunga	174	0.05	1
5	Colorado	242	0.08	2
6	Cuyago	276	0.09	2
7	Libas	286	0.09	2
8	Magdagooc	258	0.08	2
9	Magsaysay	160	0.05	1
10	Maraiging	63	0.02	1
11	San Jose	176	0.06	1
12	San Pablo	158	0.05	1
13	San Vicente	285	0.09	2
14	Sto. Nino	157	0.05	1
	Total	**3,184**	**1.00**	**25**

Table 7. Distribution of KI Respondents in Kitcharao

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Bangayan	171	0.11	1
2	Canaway	204	0.13	2
3	Hinimbangan	39	0.02	0
4	Jaliobong	251	0.16	2
5	Mahayahay	329	0.21	3
6	San Isidro	168	0.11	1
7	San Roque	307	0.19	3
8	Sangay	116	0.07	1
	Total	**1585**	**1.00**	**13**

Table 8. Distribution of KI Respondents in Magallanes

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Buhang	622	0.20	5
2	Caloc-an	531	0.17	4
3	Guiasan	190	0.06	2
4	Marcos	610	0.19	5
5	Sto. Nino	270	0.09	2
6	Sto. Rosario	688	0.22	5
7	Taod-oy	262	0.08	2
	Total	**3,173**	**1.00**	**25**

Table 9. Distribution of KI Respondents in Las Nieves

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Ambacon	129	0.04	1
2	Bonifacio	160	0.04	1
3	Consorcia	188	0.05	2
4	Katipunan	130	0.04	1
5	Lingayao	381	0.11	3
6	Malicato	151	0.04	1
7	Maningalao	222	0.06	2
8	Marcos Calo	134	0.04	1
9	Mat-i	304	0.08	2
10	Tinucoran	133	0.04	1
11	Balungagan	97	0.03	1
12	E. Montilla	154	0.04	1
13	Durian	581	0.16	5
14	Ibuan	184	0.05	1
15	Rosario	204	0.06	2
16	San Roque	84	0.02	1
17	San Isidro	181	0.05	1
18	Pinana-an	189	0.05	2
	Total	**3,606**	**1.00**	**29**

Table 10. Distribution of KI Respondents in Nasipit

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Aclan	337	0.06	2
2	Amontay	317	0.06	2
3	Ata-atahon	242	0.05	2
4	Camagong	675	0.13	5
5	Cubi-cubi	198	0.04	1
6	Culit	535	0.10	4
7	Jaguimitan	196	0.04	1
8	Kinabjagan	480	0.09	4
9	Talisay	773	0.15	6
10	Punta	685	0.13	5
11	StA. Ana	342	0.07	3
12	Ttriangulo	476	0.09	3
	Total	**5,256**	**1.00**	**38**

Table 11. Distribution of KI Respondents in Remedios T. Romualdes

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Balangbalang	380	0.21	3
2	Basilisa	350	0.19	3
3	Humilog	235	0.13	2
4	Panaytayon	162	0.09	1
5	San Antonio	296	0.16	2
6	Tagbongabong	382	0.21	3
	Total	**1805**	**1.00**	**14**

Table12. Distribution of KI Respondents in Santiago

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Curva	227	0.17	2
2	Jagupit	330	0.24	3
3	La Paz	134	0.10	2
4	San Isidro	310	0.23	3
5	Tagbuyacan	232	0.17	2
6	E. Morgado	132	0.10	1
	Total	**1365**	**1.00**	**13**

Table 13. Distribution of KI Respondents in Tubay

Rural Brgys		HH Pop	Wt Mean	Respondents per barangay
1	Binuagan	157	0.05	1
2	Cabayawa	277	0.09	2
3	Dona Rosario	374	0.13	3
4	La Fraternidad	369	0.12	2
5	Lawigan	309	0.10	2
6	Sta. Ana	352	0.12	2
7	Tagmamarkay	432	0.14	3
8	Tagpangahoy	339	0.11	2
9	TinIgbasan	72	0.02	1
10	Victory	149	0.05	1
11	Dona Telesfora	152	0.05	1
	Total	**2982**	**1.00**	**20**

4. General Poll/Survey

The general poll / survey will be employed by the research group to gather data on how people perceive Micro-Finance & lending services and climatic changes in Agusan del Norte. This tool has been added to the research approach because in the trial Survey Conducted in one barangay within the province, some respondents showed tendencies of "non-transparency" when the interview questions dealt with Microfinance & lending practices and climatic changes.

To be able to secure reliable data on the subject of Micro-finance services and climatic changes, the research team will utilize the general polls/survey to 1,200 respondents who will be asked to answer five quick questions. Following are the questions:

1. HAVE YOU OBSERVED CLIMATIC CHANGES? ☐ **Yes** ☐ **No**
Duna ka ba'y na-obserbahan nga kabag-ohan sa klima? *Oo* *Wala*

1.1 IF YES, WHAT?

- ☐ **A. Increase in Temperature** *Pag-init sa panahon*
- ☐ **B. Heavy Rainfall** *Kusog nga pag-ulan*
- ☐ **C. Flooding** *Pagbaha*
- ☐ **D. Drought** *Huwaw*
- ☐ **E. Siltation** *Pagkabanlas sa yuta*
- ☐ **F. Salt intrusion in water** *Pagsagol sa parat nga tubig ngadto sa tab-ang*
- ☐ **G. Pest infestation on Crops** *Pagkaylap sa peste ug dangan sa tanum*
- ☐ **H. Others** _____ *Uban pa.*

1.2 WHAT ARE THE EFFECTS?
Unsa ang mga epekto?

- ☐ **A. Decrease in Production** *Pagkunhod sa ani*
- ☐ **B. Decrease in Fish Catch** *Pagkunhod sa kuha nga isda*
- ☐ **C. Incidence of crop/fish diseases** *Pagkasakit sa pananum/isda*
- ☐ **D. Cropping Failure** *Kapakyas sa pagpananum / pamuhi sa isda*
- ☐ **E. Illness of family members** *Pagkasakit sa myembro sa pamilya*
- ☐ **F. Others** _____ *Uban pa.*

2. WHAT STEPS DID YOU TAKE TO COPE WITH CLIMATIC CHANGES AND ITS EFFECT?
Unsa ang mga lakang nga gigamit aron sa pagsagubang sa kabag-uhan sa klima ug sa iyang epekto?

☐ **A. Engage in other forms of production activities**
Pagsulod sa laing porma sa produksyon

- ☐ **Farming** *Pagpanguma* — _____ **New Crop** [*Bag-ong tanum*]
- ☐ **Fishing** *Pagpangisda* — _____ **New Method/Location** *Bag-ong pamaagi/lugar*
- ☐ **Business** *Negosyo* — **If Business**
  - ☐ **Sari-sari Store**
  - ☐ **Trading**
  - ☐ **Carenderia**
  - ☐ **Others** _____

☐ **B. Engage in Natural Farming Technology System**
Paggamit sa Tecknolohiyang natural sa pagpanguma
What?

- ☐ **Mulching**
- ☐ **Fermentation**
- ☐ **Use of IMO**
- ☐ **Composting**
- ☐ **Others** _____ _____

☐ **C. Paid Labor** *Pagpasuhol*
☐ **Domestic Work** *Sulod sa balay*
☐ **Non-Domestic Work** *Gawas sa balay*
☐ **D. Loan Accessing** *Pagpangutang*
☐ **E. Others *Uban pa*** _____

3. DO YOU HAVE SOME SAVINGS?
Duna kaba'y naipon?

3.1 IF YES, WHERE DO YOU KEEP YOUR SAVINGS?
Kung Oo, asa nimo gitipigan ang imong naipon?

☐ **A. Bank** *Bangko*
☐ **B. House** *Balay*
☐ **C. Cooperative** *Kooperatiba*
☐ **D. Paluwagan** *Tampuhay*
☐ **E. Others** _____ *Uban pa.*

3.2 IF YOU LOSE YOUR REGULAR INCOME, HOW LONG CAN YOUR SAVINGS SUPPORT YOUR FAMILY _____
Kung nawala ang imong regular nga kita, hangtud kanus-a ang imong naipon maka suporta sa pamilya..

3.3 IF NO, WHY? *Kung wala,*

☐ **A. Income enough for subsistence only** *Insakto lamang nga kita*
☐ **B . Income insufficient** *Dili igo ang kita*
☐ **C. No Institution** *Walay institusyon*
☐ **D. Others** _____ *Uban pa.*

4. DO YOU HAVE INSURANCE?
Duna kaba'y insurance?

☐ **Yes** *Oo*
☐ **No** *Wala*

4.1 IF YES,

☐ **Crop**
☐ **Personal**
☐ **Life**
☐ **Medical**
☐ **Others** _____

4.2 IF NO, WHY? *Kung wala, ngano man?*

☐ **A. Income enough for subsistence only** *Insakto lamang nga kita*
☐ **B. Income insufficient** *Dili igo ang kita*
☐ **C. No Institution** *Walay institusyon*
☐ **D. Others** _____ *Uban pa.*

B. HANDLING AND PROCESSING OF DATA

1. Secondary Data Process Flow

1.1 Collection of written materials (segregated into folders per source/office)
1.2. Compilation of written materials
1.3. Sorting of relevant and irrelevant data according to the required structure
1.4. Follow-up collection of secondary data that apparently are gaps
1.5. Compilation of relevant data according to the required structure
1.6. Processing/Tabulation of relevant data according to the required structure
- Encoding of relevant data
- Tabulation of relevant data
- Proofreading of the encoded/processed data vis-à-vis the sources of the secondary data
- Final Tabulation

1.7. Storage of data
- Print hard copy
- Back up and storage of electronic copy

2. Focus Group Discussion Process Flow (per Research Team)

2.1. Compilation of FGD results
2.2. Consolidation of FGD results according to the required structure
2.3. Tabulation/Processing of FGD results according to the required structure
2.4. Analysis of the processed FGD results
2.5. Presentation of the final data according to the required structure

3. Key Informant Interview Process Flow (per Research Team)

3.1. Compilation of the fully-accomplished KI answer sheets/forms
3.2. Processing/Tabulation of data according to required structure *(to ensure correctness of the processed data according to the accomplished answer sheets, the Research Management shall see to it that data processors/encoders will have an accompanying reader of the answer sheets who will also serve as second eye or checker of the encoders)*
3.3. Proofreading
3.4. Synthesis of the data according to the required structure
3.5. Analysis of the data
3.6. Presentation of the final data according to the required structure

4. General Poll/Survey Process Flow (per Research Team)

4.1. Compilation of FGD results
4.2. Processing/Tabulation of data according to required structure *(to ensure correctness of the processed data according to the accomplished answer sheets, the Research Management shall see to it that data processors/encoders will have an accompanying reader of the answer sheets who will also serve as second eye or checker of the encoders)*
4.3. Proofreading
4.4. Synthesis of the data according to the required structure
4.5. Analysis of the data
4.6. Presentation of the final data according to the required structure

5. Consolidation of Data

5.1. Consolidation of FGD results
- Compilation of FGD results from the 5 Research Teams
- Consolidation of the FGD results from the 5 Research Teams
- Tabulation/processing of the consolidated FGD results according to the required structure
- Analysis of the processed FGD results
- Presentation of the final data according to the required structure

5.2. Consolidation of KI Results
- Compilation of KI results from the 5 Research Teams
- Consolidation of KI results from the 5 Research Teams
- Tabulation/processing of the consolidated KI results according to the required structure
- Analysis of the processed KI results
- Presentation of the final data according to the required structure

5.3. Consolidation of General Poll/Survey from 5 Research Teams
- Compilation of Survey results from the 5 Research Teams
- Consolidation of the Survey results from the 5 Research Teams

- Tabulation/processing of the consolidated Survey results according to the required structure
- Analysis of the processed Survey results
- Presentation of the final data according to the required structure

6. Writing of the First Draft of Baseline Study Report

7. Writing of the Final Baseline Study Report

FGD Guide

Volume 1

FOREWORD

This "**Guide to the Conduct of the Focus Group Discussions (FGD) Volume 1"** is prepared to ensure the smooth conduct of the FGDs particularly **Workshop I** which is focused on the three areas: ***Resource Access Mapping, Trend Diagram and Production Cycle Calendar***. **Volume 2** is prepared covering Value Chain Mapping and Analysis.

This is prepared for use by the FGD Cluster members of the Baseline Study Group- Propegemus Foundation, Inc. (PFI) as well as for reference by others concerned including the members of the Baseline Study Technical Working Group.

This guide is prepared by Lurraine Baybay Villacorta, Project Manager, ILO MDG-F Climate Change Adaptation Project.

CONTENTS

Project Brief

The ILO MDG-F Climate Change Adaptation Project: *Climate Resilient Farming Communities in Agusan del Norte* is a three year undertaking by the **International Labour Organization (ILO)**, a specialized agency of the **United Nations**, together with partners: the **Department of Labor and Employment (DOLE); Department of Trade and Industry (DTI)** and the **Province of Agusan del Norte.** This is being implemented starting 2009.

> *The Project is a component of the **Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change,** a joint programme of the United Nations and the Government of the Philippines funded by the Millennium Development Goals Achievement Fund (MDG-F), under its thematic Window on Environment and Climate Change. **The MDG-F is a United Nations Resource created to finance and support efforts to accelerate the achievement of the MDGs.***
>
> *Specifically this Project will contribute towards the attainment of Outcome 3 of the Joint Programme which is "Coping Mechanisms improved through pilot schemes with national up-scaling potential"*

A key premise of this Project is that **economic condition** of populations at risk, whether in terms of economic assets, capital resources or financial means is a very important determinant of adaptive capacity to climate change impacts. Poor people are more vulnerable to projected impacts while the wealthy ones are better equipped to deal with the costs of adaptation. Another Project premise is that **access to, and not only availability of resources** is another important determinant which could spell the difference in a population's capacity to adapt to climate change and other similar phenomena. These resources include not only financial resources but also access to productive resources such as training, markets and technology. It is recognized that adaptive capacity of vulnerable communities will be greater if social institutions and arrangements governing the allocation of power and access to resources is more equitably distributed.

This Project thus aims to showcase these determinants at work, where target vulnerable populations are provided access to financial and productive resources for purposes not only of helping them cope in the event of climate change triggered disasters but of improving their socio-economic lot, especially through diversified livelihoods schemes. Risk transfer mechanisms like revolving funds and innovative insurance schemes are expected to help develop resiliency through opportunities for farmers to diversify their livelihood base and reduce risk exposure through flexible financial mechanisms. Providing the enabling conditions for livelihood diversification is critical as new types of livelihoods are often required to effectively adapt to disasters and climate change vulnerabilities.

The specific project objectives are:

(1) To develop and test financial safety nets for vulnerable populations, especially women; and
(2) To develop the capacities of vulnerable populations to participate and avail of the benefits under economic diversification and a democratized governance system.

The primary output expected of the Project is an **"innovative financing scheme for climate change adaptation**"developed and tested in priority vulnerable area/sector in Agusan del Norte.

In this context, the ILO is starting the Project with the conduct of a baseline study of Agusan del Norte with primary focus on its farming communities. The study is expected to present a general profile of the farming communities which will serve as the basis for the selection of priority vulnerable areas and/or sectors for the project.

The Baseline Study of
Agusan del Norte Farming Communities

An up-to-date general profile of the farming communities in Agusan del Norte which presents not only their social and economic condition but also other information deemed crucial for the selection of the priority vulnerable area or sector of the Project such as natural environment and climatic conditions, existence of support institutions/productive resources as well as the financial structures and schemes existing in these communities.

Minimum Information Set

The minimum set of information to be collected, presented and synthesized in the Baseline study report are as follows:

1. Mapping of farming communities in Agusan del Norte according to crop/sector and by municipality
2. "Ecological Profile" of the province and these farming communities to include social, economic, environmental, political and peace and order condition
3. General environmental conditions and climate risk exposure including but not limited to extreme events or disasters along with coping strategies employed
4. GO, LGU, NGO/PO and/or collaborative initiatives, projects and programmes relating to agri-business as well as climate or disaster risk reduction and enhanced coping mechanisms
5. Key players in the major farming value chains in these farming communities
6. Support institutions pertaining to training, markets and technology
7. Financial institutions, structures and schemes in the including existing informal financing schemes
8. Existing insurance schemes and other risk transfer mechanisms
9. Knowledge and skills as well as training needs of farmers, especially women farmers, in existing and/or alternative lines of work and/or business.

General Methodology for the Baseline Study

The baseline study will consider and analyze both secondary and primary data. Secondary data will be collected from both government and non-government sources; utilizing whenever possible- official data sets. Primary data will be collected through a combination of tools and data collection methods including ***Key Informant (KI) Interviews***; ***General Poll***; and ***Focus Group Discussions (FGDs).*** The FGDs as well as the KIs and the General Poll in addition are expected to validate available data from secondary sources.

This guide is specifically prepared to provide a ready and easy reference for FGD facilitators and/or moderators in preparing for and in the conduct of the FGDs. Note that a separate guide has been prepared for the conduct of the KI interviews and the General Poll which serves as an accompanying document to the instruments and questionnaire.

Focus Group Discussions (FGDs)

As cited in the previous section, the baseline study will utilize the Focus Group Discussions as a data collection and validation methodology.

Focus Group Discussions (FGD) is a group discussion guided by a facilitator or a moderator [as in the case of the Value Chain Mapping and Analysis sessions], during which group members talk freely and spontaneously about a certain topic. The idea is that the group members discuss the issue among themselves, with the guidance of the facilitator. It is more than a question-answer interaction.

The FGD is a qualitative method. Its purpose is to obtain in-depth information on concepts, perceptions and ideas of a group. FGDs are used in a variety of purposes. If done at the beginning of a research, they may be used to (a) *focus research and develop research hypothesis*; or (b) *formulate appropriate questions for structured surveys*. If done during the course of the implementation a project or an intervention; they may be used to *help understand and solve unexpected problems*. They may also be used *to develop education and communication programmes* where appropriate messages, i.e. relevant local concepts, can be obtained from FGD participants. Drafts of these messages may also be tested during the FGDs.

Any FGD requires good knowledge of local conditions. Communities are seldom or never homogeneous. There are always differences between community members, for example in education, political power, gender, economic status and ethnic group. These differences will be reflected in their perceptions of the condition of their communities, the problems besetting them as well as of the possible solutions. Researchers and/or facilitators must be aware of these differences, otherwise he or she may miss important groups of participants or obtain a hotchpotch of information. Similarly, he or she must know which key persons or organizations could be good entry points for the selection of participants in the FGDs (e.g.: farmers or fishers associations; women's groups). The situation analysis that precedes the FGD should also preferably be carried out in a participatory way, with representatives of the study population on which the FGD focuses.

Implementation of FGDs is an *iterative* process; each focus group discussion builds on the previous one, with a slightly elaborated or better-focused set of themes for discussion. Provided the groups have been well chosen, in terms of composition and number. FGDs can be a powerful research tool which provides valuable spontaneous information in a short period of time and at relatively low cost.

FGD Topics

The FGDs as in the case of the "***Baseline Study of Agusan del Norte Farming Communities***" can be regarded as mini study it itself with specific focus on the following:

1. ***Availability and Access to Resources (Resource Mapping)***
2. ***Production Trends***
3. ***Production Cycle and Participation***
4. ***Farming Value Chains***

The first three focus areas will be tackled in one FGD while another will be devoted solely to farming value chain mapping and analysis.

FGD Outputs and Analysis

The FGDs are expected to produce the following document outputs and analysis of condition of farming communities:

1. ***Availability and Access to Resources (Resource Mapping)***

   Resource Access Maps for each Municipality reflecting the following: Land Use; Relevant Infrastructures and Facilities; Institutions (Training and other Support; Financial others). An accompanying matrix will also be produced which provides as much as possible: listing of the facilities and institutions, location, as well as in terms of the facilities, ownership and capacities.

   Analysis: **Availability and access to resources (productive and financial)**

2. ***Production Trend***

   Trend Diagram(s) for the main source(s) of income for each municipality. The main source(s) of income is/are derived from secondary sources and not from the Key Informant Interviews (KIs). The trend diagram will also contain information on the causes of the upward and/or downward trend of production.

   Analysis: **Levels of production and effects of various factors (social, environmental/climatic, availability and access to productive [technology, markets and training] and financial resources)**

3. ***Production Cycle and Participation***

   Calendar/Matrix showing production activities, flow and period of conduct, participation of men and women in these activities, training received and training needed for the main source(s) of income for each municipality.

   Analysis: **Actual knowledge, skills, training and need for training. Time constraints as well as availability of farmers to engage in other forms of production.**

4. ***Farming Value Chains***

   An illustration of the sequence of activities to bring the product [pertaining to the main source(s) of income] to the market, the listing and relationships of persons involved in bringing the product to the market as well as the product forms at each stage.

   The value chain map drawing the market(s), actual activities, persons/groups involved, product forms, value adding done [selling prices, costs, margins], existing support services [sources of financing, marketing assistance, organizational strengthening, capability-building/training, technology, information, policies, laws and regulations.

   Analysis: **Opportunities and constraints [gaps] for improved cooperation and coordination along the value chain as well as improved condition/situation of local players [improved productivity]**

Participants to the FGDs

Commonly, FGDs involve about 6 to 12 persons or a number small enough to be managed by the facilitator. For this baseline study, FGDs are expected to involve around 15 group members with a facilitator and a co-facilitator. Refer to recommended set of participants in the following section.

It is recommended that participants are roughly of the same socio-economic group or have a similar background in relation to the issue under investigation. The age and sexual composition of the group should facilitate free discussion. As cited above, Communities however are often or are never homogenous. Furthermore, one needs to obtain information on the topic from several different categories of informants who are likely to discuss it from different perspectives. As such, separate FGDs or discussions in sub-groups may be conducted, though will be joined towards the end of the FGD.

The participants to the FGDs include an estimated 15 representatives of farmers; fishers; and entrepreneurs themselves as well as from concerned government and non-government organizations. These are:

For the Resource Access Mapping, Trend Diagram and Production Cycle:

- President/Key Representative of the Farmers Association
- President/Key Representative of the Fishers Association
- President/Key Representative of the Women's Association
- President/Key Representative of the Farmers/Fishers Cooperatives
- Farmers/Fishers representing various geographical groupings: upland, lowland or coastal areas, selected from Key Informants, chosen at random.
- President of the Association of Barangay Captains (or representative)
- Municipal Agricultural Officer (MAO)
- Municipal Planning and Development Officer (MPDO)
- Municipal Agrarian Reform Officer (MARO)
- Municipal Environmental and Natural Resources Officer (MENRO)
- Representative of relevant NGOs (working with Farmers)
- Representative of relevant Higher Education Institution/T-VET Institution in the area

For the Value Chain Mapping:

Note that the representatives should belong to the sector deemed main source(s) of income.

- President/Key Representative of the Farmers/Fishers Association
- President/Key Representative of the Women's Association
- President/Key Representative of the Farmers/Fishers Cooperatives
- President/Key Representative of the Traders Associations
- Farmers/Fishers representing various geographical groupings: upland, lowland or coastal areas, selected from Key Informants, chosen at random.
- Traders or Entrepreneurs representing various groupings (obtained from the Masterlist of "Permitees" or "licensees" from the Municipal Treasurer or Mayors Office)
- President of the Association of Barangay Captains (or representative)
- Municipal Agricultural Officer (MAO)
- Municipal Planning and Development Officer (MPDO)
- Municipal Agrarian Reform Officer (MARO)
- Municipal Environmental and Natural Resources Officer (MENRO)

Preparing for the FGDs

LGU Entry Protocol and Preparatory Tasks

Tasks

1. Communicate with or conduct audience with LCE, concerned municipal department heads as well as line government agency (if done per municipality) or Schedule of Orientation (if done at Provincial level)

   1.1. Present: *Brief of the ILO MDG-F Climate Change Adaptation Project and the Baseline Study and activities –KI, Gen Poll and the FGDs (including study group members, target participants, tentative schedules)*

   1.2 Obtain copies of "Masterlists" of farmers, fishers and their associations/cooperatives including those of women from Municipal Agriculture Officer (MAO). Also obtain list of business permitees/licensees from Municipal Treasurer and/or Mayor's Office.

   1.3 Seek recommendations from MAO re Key Informants and/or participants to FGDs as well as schedules of FGDs and venues.

2. Prepare list of selected participants and set schedules of FGDs in coordination with MAO. Final meeting of FGD Team Members.

3. Tasking, preparation of working drafts and conduct of Dry run of FGD Clusters including: Facilitators, co-facilitators, Assistants and Documentors.

4. Procurement of Supplies, materials including necessary transportation, venues and food services.

Items and Documents to Prepare

1. Letter to Mayors and MAOs from Baseline Study Group. This would be better supported by letter from ILO and the Provincial Governor.
2. Project Brief and Flyer on Baseline Study of Agusan del Norte Farming Communities. Also brief powerpoint presentation.
3. Schedule of Orientation or Municipal Visits
4. List of selected participants to the FGDs including "alternates"
5. Letters of invitation to FGD participants or arrangements for their invitations.
6. Supplies, materials and equipment for each FGD session (refer to section on running the FGDs for more details)

   Muncipal land-use maps (scale: 1:120,000), map pins, cut-out symbols in colored sticker papers or art papers, "colored chadz - from punchers", manila papers, pentel pens, metacards, masking tapes, meter stick, crayons, OHP or LCD projector, whitescreen, flip charts or whiteboards

7. Working "drafts" of the Resource Access Maps, Trend Diagrams, Production Cycles and Value Chains based on analysis of secondary data and results of Key informant interviews (KIs).
8. Attendance/Registrations Sheets, IDs or tags and Certficates of Participation.

Expected Results: Before the actual conduct of the FGDs, it is expected that:

- there is "concurrence" if not "buy-in" of the Local Chief Executive (LCE) re the conduct of the Baseline Study
- Key Informants /Participants to the FGDs identified and invited.
- FGD schedules and venues are set
- "Drafts of Resource Access Maps, Trend Diagram, Production Cycle and Value Chains prepared based on Secondary Data and results of KIs and Gen. Poll" Note that in this case, the FGDs are done after the KIs and the General Poll.
- FGD facilitators/co-facilitators, assistants and documentors are fully-prepared.

Running the FGDs

This section will provide tips on running FGDs in general, i.e. how to get the discussion started and on track and how to manage risk that could arise during discussions. Likewise, this section will discuss specifically how the two sessions of FGDs under the baseline study will be conducted from the (a) preliminaries to the (b) actual discussions, and (c) wrap-up or synthesis.

Tips

Since the FGD involves participants from all over the municipality, it may be appropriate to provide them name tags and allow brief introductions at the beginning [in cases however when the Facilitator could sense that no introductions would be necessary, this could be done away with]. This step is generally useful in getting the participants familiar with each other up front. Furthermore, the Facilitator/Moderator should try to put the participants at ease from the beginning by using language and terms they are familiar with and impressing upon each how valuable his/her contribution/ideas would be. Similarly, focus groups should end with the Facilitator/Moderator winding-up the session by stressing all that has achieved and casting it in a positive light.

To facilitate useful, free-flowing discussion during the FGD, the Facilitator/Moderator, could use some of these tips:

- Ask participants to think about the issues/topic at hand for a few minutes and write down their responses in meta cards or appropriate matrix.
- Ask each participant to read and elaborate on his/her response (in case there are many, one of the responses). This will ensure, each participant is able to speak or talk about his/her idea out loud.
- Note responses or ideas even when they do not seem to directly address the issue/topic at hand. Prepare a manila paper as “Parking lot” for these ideas and responses.
- Once everyone has given a response, participants will be asked for a second or third response, as time permits, until all of their answers have been noted
- These responses can then be discussed.

The moderator should encourage free-flowing discussion around the relevant issue(s). It is important that the moderator realizes however that there are risks and these should be managed.

Keeping sessions on track: While generally, an FGD is a discussion among participants, it may be necessary for the Facilitator/Moderator to step in and keep the session on-track

Issues of power and privacy: This needs to be managed sensitively. Providing each a time to speak may counteract problems arising out of power differences in participants. Respect someone's right to be quiet, but do give them a chance to share their ideas 1-to-1. This may be possible during the break.

Dominating participants and cliques: If one participant tries to dominate the session, the Facilitator/Moderator should **invite each person to speak in turn.** To avoid personal confrontation, it would be best to allow the group to police itself, for example the Facilitator/Moderator may ask: ***Do others in the group agree?***

Avoid interviewing friends in the same group as they can form cliques - if cliques do form, suggest taking a break and changing seating positions upon returning from the break

Disagreements and debates. Use differences of opinion as a topic of discussion - the moderator should avoid taking sides. Disagreements and debates are useful when they lead to new and interesting ideas, but have to be managed carefully

Concentration and energy levels. The facilitator/moderator needs to be constantly aware of participants' energy and concentration levels and provide short breaks if necessary.

General Flow of FGD Workshop I

Municipal FGD/Workshop I as mentioned earlier is devoted to the first three topics: Resource Access Mapping, Trend Diagram and Production Cycle. The flow for this is presented below. The Municipal FGD/Workshop II is devoted to Value Chain Mapping and Analysis and the general flow will be presented in a separate document [FGD Guide Volume 2].

Table 1 FGD Workshop I Activity Flow

Time/ Allocation	Activity/Session	Requirements	Person In-Charge
8:00-8:30 AM (30 mins)	**Registration**	Attendance/Registration Sheets Name Tags or IDs Pens/Pencils Pentel Pens	Assistant/ Documentor
8:30-9:00 (30 mins)	**Preliminaries** • Prayer/Moment of Silence	Prepared Prayer	Facilitator/Co-Facilitator
	• Acknowledgment of Participants and FGD Team	List of participants	
	• Welcome Remarks	*Confirmed Speaker	Mayor or MAO or representative of Host LGU or Institution
	• Opening Remarks and Presentation of Project Brief/Baseline Study	Project and Baseline Study Brief in Powerpoint ***LCD Projector & Screen****	ILO Manager/ TWG member/Facilitator/ Co-Facilitator
	• Presentation of FGD Objectives and Flow	FGD Objectives and Flow in Powerpoint	Facilitator/ Co-Facilitator/ Assistant
9:00-9:45 (45 mins)	**Resource Access Mapping** ***Requirements: Powerpoint on Brief of Tool, Objective of Session and Flow*** Draft Resource Access Map for reference (mounted on Cork or Styrofoam) & Sample Map, Clear Muncipal land-use maps (scale: 1:120,000) Sheets/Matrix of Resource /Facilities Listing , Map pins, Cut-out Symbols in colored sticker papers or art papers/"Colored chadz-from punchers", Manila papers, Metacards, Pentel pens, Masking tapes ***Flipcharts/whiteboards for responses and "parking lot"****		
9:45-10:00 (15 mins)	**Break**	Snacks	
10:00-10:45 (45 mins)	**Trend Diagram** ***Requirements: Powerpoint on Brief of Tool, Objective of Session and Flow*** Draft Trend Diagram for reference & Sample Diagram, Prepared clear chart in manila papers, pentel pens, metacards, masking tapes, meter stick		
10:45-11:45 (45 mins-1 hr)	**Production Cycle and Participation** ***Requirements: Powerpoint on Brief of Tool, Objective of Session and Flow*** Draft Production Cycle Calendar/Matrix for reference & Sample Chart Prepared clear chart in manila papers, pentel pens, metacards, masking tapes, meter stick		
11:45-12:00 (15 mins)	**Wrap-up and Closure**		Facilitator/Co-Facilitator & Documentor
	• Synthesis	Draft Synthesis	
	• Closing Remarks and Distribution of Certificate of Participation	Certificate of Participation	

Session: Resource Access Mapping

Session Objective

At the end of the discussion local land use and natural resources are identifed and indicated in the map. Additionally, available agricultural facilities and infrastructures, agribusiness related establishments, financial institutions, technology, training and marketing support providers are identified, indicated in the map and access by farming communities established.

Specific Data Outputs

1. Land Use and Natural Resources: Land Use, Farmlands/Crops, Waterbodies/Sources of Irrigation

2. Agricultural Facilities/ Basic Infrastructure:

e.g. Rice Mills	Corn Mills
Dryers	Shredder
Stripping Machine (abaca)	Irrigation System
Tapahan/Ganggangan (copra)	Farm to Market Roads (FMR)
Corn Shellers, ***others***	Markets

3. Agribusiness related establishments:

Farm Inputs Stores/Suppliers	Warehouses
Farm Facilities Suppliers	Wholesalers/Retailers
Trucking Services	Traders, etc.

4. Financing Institutions:
Banks (Rural/Commercial)
Micro-Finance Institutions
Informal Groups (Dayong)
Private/Individual Lenders

5. Service/Support Providers
Government or Non-Government Organization/Cooperative- run Training Centers, Technology and/or Marketing Support Providers

Session Flow

1. Begin the session by briefly introducing the tool and presenting the objectives and flow of the session. Use powerpoint. Also use the sample map to illustrate identification of available resources or facilities as well as access to them. Show them upfront the clear municipal land use map which will be their base map for their own Resource Access Map.

2. Ask the participants to divide themselves into four (4), choosing the subgroup they would be most comfortable working on. The groupings could be as follows:

Group1: Land Use/Natural Resources, Agri facilities and Infrastructure
Group2: Agribusiness Ralated Establishments
Group3: Financing Institution
Group4: Service/Support Providers

2.1 The participants may however be divided according to clusters of barangays and work on all the above. Allow the groups **10 minutes** to work aided by a matrix/listing template shown in the next page. They may choose their group leader and documentor who will write the identified items on the sheet (which will collected but not to be presented).

Sample Matrix/List of Resource Facilities (printed form to be provided to subgroups)

Resource/Facility/ Institution/Provider	**Number of Units**	**Location**	**Capacity**	**Users (Indicate Purok or Barangays**	**Ownership (GO or NGO) indicateowner if possible only)**

2.2 Provide each group the correpsonding symbols or chadz for the identified items. In cases where they have identified resources/facilities without a set symbol, allow them to set one. (See Annex I for the suggested symbols)

3. After 10 minutes, call on groups to place the symbols or chadz on the map using map pins (if not using sticker papers) one group after another. This may take **five to ten minutes.** Also request the groups to turn over their filled-up sheets.

4. After all the groups have placed their symbols on the map, refer to the resources/facilities indicated therein and pose the following questions to the participants:
   - Are the resources/facilities being accessed/utilized by all the barangays? Which barangays? Why or Why not?
   - Is there a resource/facility which is unused/under-utilized or difficult to access? Why?
   - What other resources/facilities/establishments are needed but not available?
   - Are there other issues and concerns relating to these resources/facilities?
   - What is your picture of sustainability as farmers considering these resources?

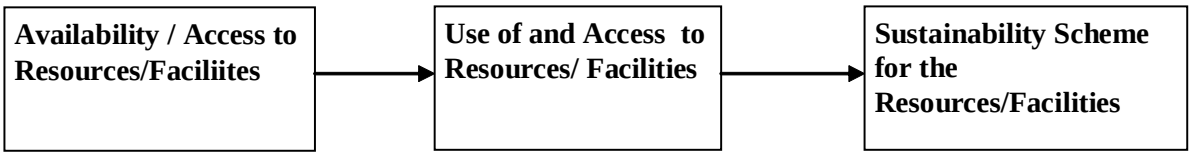
4.1 These questions may be written in manila paper or flashed on the screen using a powerpoint. Provide colored metacards for the participants to write their responses/points on. Use color codes [you need five colors]. Collect these metacards and organize in manila paper placed beside the map. ***Obtain consensus on responses/points raised. Park responses/points which cannot be accepted by consensus.***

N.B. Inform participants re the metacard rule: one idea, one card. Also, no more than three lines per card, legible writing.

Alternatively, the Facilitator/Co-Facilitator may write on metacards the responses/points raised and place these on the manila paper for all to see and comment on.

Depending on time available (total allocation for this portion is **20 minutes**), the Facilitator/Co-Facilitator may do a second round of responding and commenting.

5. To end the session, a synthesis should be given by referring to the Resource Access Map and responses organized in the manila paper summarizing these points accordingly:



- What are available?
- What are needed but not available?

- Maximized use
- Minimal
- No Knowledge of its usage
- Ease and difficulty in access (distance/Costs/Capacity)

- Example: Sustainable farming technologies
- Capacity Building
- Technology
- Support Programmes needed

Session: Trend Diagram

Session Objective

At the end of the discussion, the group is able to plot upward (increases) or downward (decreases) trend in production relating to their main source(s) of income within a certain length of time (past five years). Furthermore, they would be able point to the factors contributing to these trends.

Specific Data Outputs

1. Patterns of Increases and Decreases in Production Yields of Specific Crops

2. Factors contributing to increase in production: (prioritized according to impact or contribution) ***e.g.*** New Technology /Acquired skills Additional Financing Support

3. Factors negatively impacting on production (prioritized according impact/effect) ***e.g.*** Climatic changes/Extreme Events Market changes

4. Coping Mechanisms Employed (past)
5. Needed support and coping mechanisms to be employed in the future

Session Flow

1. Begin the session by briefly introducing the tool and presenting the objectives and flow of the session. Use powerpoint. Also use the sample trend diagram to illustrate upward-downward trends along with causes or factors affecting production. Show to them the clear chart on which they can draw their municipality's trend diagram.

2. In cases where there is more than one main source of income established for the municipality (as per validated secondary data), or when the participants wish to tackle more than one type of production, ask the participants to divide themselves accordingly. For example, one group will tackle rice, while another coconut.

   2.1 Provide the groups **ten minutes** to discuss and work on their sub-groups. Provide them with the clear trend dagram chart, pentel pens, meter sticks and metacards.

   2.2 Ask the groups to write their perceived causes of the change in production in metacards (color coded as to causes of decrease or increase). Also ask the group to prioritixe these causes by placing the metacard which has greatest impact/contribution on the top, followed by the next and so on. These should be placed on the chart itself beside the points.

3. Ask each group to place their diagrams on the board. Allow clarificatory questions or comments from the other group(s) to finalize the trend diagrams. If the prepared trend diagram largely deviates from the "draft"/reference diagram prepared by the FGD team, pose questions to validate the diagram. For example: *Has everyone been affected by the said **event/cause?** Is it really enough to bring down average production?*

4. Afterwhich, facilitate discussion by posing the following questions:
   - For the increases and positive factors: What facilitated the use of ***e.g. new technology***?
   - For the decreases and negative factor: How did you cope with the decrease in production? Income? What coping mechanisms did you employ?
   - What coping mechanisms do you intend to use in the future?

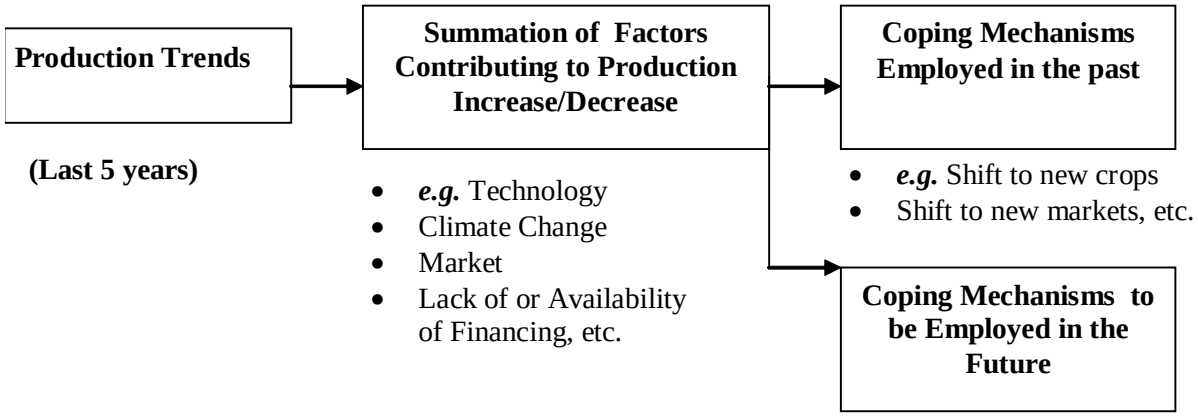
4.1 These questions may be written in manila paper or flashed on the screen using a powerpoint. Provide colored metacards for the participants to write their responses/points on. Use color codes [you need at least three colors]. Collect these metacards and organize in manila paper placed beside the map. ***Obtain consensus on responses/points raised. Park responses/points which cannot be accepted by consensus***

N.B. Remind participants re the metacard rule: one idea, one card. Also, no more than three lines per card, legible writing.

Alternatively, the Facilitator/Co-Facilitator may write on metacards the responses/points raised and place these on the manila paper for all to see and comment on.

Depending on time available (total allocation for this portion is **20 minutes**), the Facilitator/Co-Facilitator may do a second round of responding and commenting.

5. To end the session, a synthesis should be given by referring to the Trend Diagram and responses organized in the manila paper summarizing these points accordingly:



Session: Production Cycle Calendar

Session Objectives

At the end of the session, the participants have established the production cycle, identified the participants in the activities in the production cycle along with their current knowledge, skills and training needs pertaining to the main source(s) of income. Furthermore, the participants will be able to identify periods when they would be available to engage in other production or training activities.

Specific Data Outputs

1. Specific production activities pertaining to the main source of income in the community
2. Participation of men and women farmers in these activities
3. Months or period during the year with greated number of activities (peak)/ months or periods with least or no production activities (lean).
4. Other economic activities during lean months or periods.
5. Current knowledge and skills of men and women farmers
6. Training needs of men and women farmers

Session Flow

1. Begin the session by briefly introducing the tool and presenting the objectives and flow of the session. Use powerpoint. Also use the sample production cycle calendar/matrix to illustrate the tool.

2. In cases where there is more than one main source of income established for the municipality (as per validated secondary data), or the participants which to tackle more than one type of production, ask the participants to divide themselves accordingly. For example, one group will tackle rice, while another coconut.

   2.1 Provide the groups **ten minutes** to discuss and work on their sub-groups. Provide them with the clear manila paper chart, pentel pens, crayons and metacards. Instruct them to use crayons to fill the cells corresponding to the months/periods activities are being done.
   2.2 Ask them to indicate W for Women or M for Men on the apprpropriate column for participants.
   2.3 Ask them to assess current knowledge and skills to carry out particular activity by ticking yes or no under column for Training Still Needed and indicating **Type of Training Required if Yes**

3. Ask each group to place their calendars/matrices on the board. Allow clarificatory questions or comments from the other group(s) to finalize the calendar. If the prepared calendar largely deviates from the "draft"/reference diagram prepared by the FGD team, pose questions to validate the calendar. For example: *Do everyone engaged in this production, follow this calendar? Is this the normal calendar?*

4. Afterwhich, facilitate discussion by posing the following questions:

   - What are the peak/lean months/periods?
   - How do you earn a living during the lean months/periods? How do you cope?
   - What other production activities do you engage in during these periods?
   - What other activities do you want to engage in? What is preventing you from engaging on it?
   - What other trainings do you want to enhance your coping mechanisms for survival during the lean months/periods?

   These questions may be written in manila paper or flashed on the screen using a powerpoint. Provide colored metacards for the participants to write their responses/points on. Use color codes [you need at least five colors]. Collect these metacards and organize in manila paper placed beside the calendar/matrix. ***Obtain consensus on responses/points raised. Park responses/points which cannot be accepted by consensus.***

   N.B. Remind the participants re the metacard rule: one idea, one card. Also, no more than three lines per card, legible writing.

   Alternatively, the Facilitator/Co-Facilitator may write on metacards the responses/points raised and place these on the manila paper for all to see and comment on.

   Depending on time available (total allocation for this portion is **20 minutes**), the Facilitator/Co-Facilitator may do a second round of responding and commenting.

Sample Output: Production Cycle Calendar

	Month of the Year/Period of Production												P*	T**	Indicate Training Needed if T is Yes
Production Activities	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**			
Land Preparation															
Seed Germinating															
Planting															
Maintenance Activities															
- Fertilizing															
- Weeding															
- Spraying, etc.															
Harvesting															

* P =Participants: Enter either W or M if pre-dominantly a Women's/Men's activity or W/M if equally shared

** T= Training Still Needed: Enter Y or N to indicate Yes or No

5. To end the session, a synthesis should be given by referring to the Calendar/Matrix prepared and responses organized in the manila paper summarizing these points accordingly:

Current production practices (Set of Activities)	→	**Other Activities Engaged in Lean Months**	→	**Skills Available/ Skill Requirements/Training Needs to be able to Engage in other Livelihood Activities**

- ***e.g*** Contractual labor/carpentry work
- Part-time driving
- Handicrafts
- Fishing
- Domestic work in other household, etc.

- ***e.g.***Training re Organic Farming
- Upgrading of skills for carpentry/basket making etc.

Final Session: Wrap-up and Closure

While the synthesis are provided at the end of each session or activity, the Facilitator/Co-Facilitator would still need to synthesize the FGD/Workshop as a whole. This could be done by quickly reviewing the consensus reached on key points [**NOT** reading all of them again] but providing a "gist" and pointing to them as they are placed around the venue.

The Facilitator/Co-Facilitator should also also remind the participants re the use of the information obtained in the overall baseline study of farming communities in Agusan del Norte.

Finally, a brief thanks from the ILO Manager/TWG Group Member or the Facilitator/Co-Facilitator as well as the representative from the host LGU.Certificates of participation can be distributed by the Assistants as participants leave the FGD venue.

Roles of the FGD Team Members

Team Member	Number per FGD	Main Responsibilities
Facilitator	1 person	• Overall Team Leader • Coordinates with the Baseline Study Leader to ensure that all **preparatory activities are carried-out**, including selection and invitation of participants, arrangements for venue, transportation, catering of snacks [and /or lunches as needed], supplies, equipment, materials [especially reference materials and drafts] • Together with the Co-Facilitator and whole team, conduct a walk-through of the activity flow. • Coordinates with the Co-Facilitator for the actual conduct of the FGD and in the conduct of the specific sessions • Together with the Co-Facilitator writes-up the report for the FGD conducted and assist the Baseline Study Leader in integrating findings in the Baseline Study Report..
Co-Facilitator	1 person	• Provides support to the Facilitator in the preparatory activities as well as actual conduct. • Takes charge of the venue lay-out and set-up. • Handles specific sessions as agreed with Facilitator • Support the Facilitator in writing the report for the FGD conducted and the Baseline Study Leader in integrating findings in the Baseline Study Report..
Assistant	1 person	• Handles the registration. Prepares summary list of participants for the acknowledgements. • Provides support to the Facilitator/Co-Facilitator during sessions by making sure all supplies, materials are within reach, readily available and that equipment are working. • Ensures that snacks [and /or lunch] is served on time.
Documentor	1 person	• Takes note of the discussions [also may record the discussions and thereafter prepare transcription] • Takes photos of all key events during the FGD. • Acts as over-all time keeper. • Acts as overll record keeper and thus will ensure that all document outputs are properly labelled and packed before leaving the venue.

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1. www.pids.gov.ph
2. Reyes, Celia et al. 2009. *Fighting Poverty with Facts: Community Based Monitoring Systems.* IDRC, Ottawa, ON, Canada. www.idrc.ca/in_focus_poverty.
3. Posthuma A.C. 2007. *ILO Methodology and Capacity-Building in Local Economic Development An Employment-Centered Approach.* International Labour Organization. www.ilo.org
4. Manual for LRED Facilitators.2005. Germany Agency for Technical Cooperation (GTZ).
5. Baybay-Villacorta, L.2008. *LRED Process Documentation Report in Talacogon, Agusan del Sur*. Caraga Learning Service Providers Network.
6. Donnges, C. et al. 2006. *Philippines Infrastructure and Rural Productivity Enhancement, Tools for Identifying Rural Infrastructure Investment Priorities.* International Labour Organization. www.ilo.org/publns
7. Baybay-Villacorta, L. 2000. IRAP Theory, Concepts and Application. International Labour Organization.

Resource and Access Mappings

BUENAVISTA

Group I - Identified Agricultural Facilities / Infrastructure and Agribusiness Related Establishments

Res./Facilities	# of units	Location	Capacity	Users	Ownership
Dryer (Mech.)	1	Agong-ong			
Stripping Machine	1	Brgy.2			
	1	Lumboyan			Private
	1	Linao-linao			
Tapahan	1	Manapa			
	1	Brgy.2			
Corn Shredder	1	MAO office			GO
Irrigation	7	Calayagon, Agong-ong			CACEA
		Rizal, Malpoc, Lauag			DIMACULLAO
		Macalang,			MACAGONG
		Nakanan, Sangay			SWIP
		Matabao, Talo-ao, Abilan, Malapong			SWIP
		Guinabsan			
FMR	7	Macalang to Cabag-ayan			GO
		Guinabsan- Malagi			Private
		Sangay- Kipandao			
		Kabalalahan-Sangay			
		Macalang-Calagayon			
SPOTS	3	Sangay			GO/DAR
		Upper Olave			
		Lumboyan			
		Simbalan			
Rice Mills	1	Alubihid			
	1	Manapa			
	1	Matabao			
	1	Agong-ong			
	1	Brgy.I			
	1	Brgy.II			
	1	Rizal			
Corn Mills	1	Matabao			
	1	Rizal			
	1	Guinabsan			
	1	Brgy.I			
	1	Brgy.II			
	1	Malague			

Res./Facilities	# of units	Location	Capacity	Users	Ownership
Dryer (Solar)	2	Alubihid			Private
	2	Manapa			Private
	3	Matabao			GO
	1	Agong-ong			GO
	3	Brgy.II			
	1	Rizal			
	1	Guinabsan			
	2	Sangay			
	1	Abilan			
	2	Brgy.I			
Tradings Services	6				Private
Warehouses	11				
Wholesale/retail	many				

Group II - Identified Financing Institutions and Service / Support Providers

Res./Facilities	# of units	Location	Capacity	Users	Ownership
Technology Financial Livelihood		Matabao		4	ALTERDEV
Livelihood		Simbalan		2	TOUCH Foundation
Center	1	Matabao & Navintalan		All Barangays	NGO
Health Assistance		Poblacion		All Barangays	RHU
Livelihood		Poblacion		All Barangays	Women's Asso.
RBO Training Hall	1	Poblacion	110 has.	All Barangays	GO (MAO)
NMSF Training Center/technology	1	Matabao	200 Has.	All Barangays	GO
Rural Improvement Club (Livelihood)		Whole Municipality		All Barangays	RBO
SRBC	1	Barangay II		Entire Municipality	NGO
Cantilan Rural Bank	1	Barangay 3		Entire Municipality	NGO
Green Bank of Caraga	1	Barangay 3		Entire Municipality	NGO
BAUG-CARP lending/Microfinance	1	Barangay 6		Entire Municipality	
MELAMBEC	1	Barangay 6		Entire Municipality	
KMBI	1	Whole Municipality		Entire Municipality	Private
People's Bank of caraga	1	Whole Municipality		Entire Municipality	Private
CARD	1	Whole Municipality		Entire Municipality	

CABADBARAN

Group I - Identified Agricultural Facilities / Infrastructure and Agribusiness Related Establishments

IDENTIFIED FINANCING INSTITUTION

Resource / Facilities	# of units	Location	Ownership
Rural Bank of Cabadbaran	1	Poblacion	NGO
Green Bank	1	Poblacion	NGO
One Network Bank	1	Poblacion	NGO
Bank Of Placer	1	Poblacion	NGO
Surigaonon Rural bank of Placer	1	Poblacion	NGO
Cantilan Bank	1	Poblacion	NGO
People's Bank of Caraga	1	Poblacion	NGO
Land Bank	1	Poblacion	NGO
First Consolidated Bank	1	Poblacion	NGO
King Coop	1	Brgy.10	NGO
UBI	1	Brgy. 4	NGO
Cabadbaran Community Coop	1	Brgy. 5	NGO
BAUG Carp MPC	1	Brgy. 1	NGO
ANTRECCO	1	Brgy. 10	NGO
Starjed	1	Brgy. 11	NGO
Panaghiusa Coop	1	Calibunan	NGO
KKMPK Coop	1	Puting Bato	
Mahaba Coop	1	Mahaba	NGO
Putting Bato Coop	1	Puting Bato	NGO
Calamba Coop	1	Calamba	NGO
Avancena MPC	1	Sanghan	NGO
VACPM Coop	1	Brgy. 1	NGO
NMCAST Coop	1	Brgy. 11	NGO
Camarco	1	Poblacion, Public Market	NGO
Cabadbaran Meat vendors Coop	1	Poblacion, Public Market	NGO
Grain Retailer Coop	1	Calibunan	NGO
Calibunan MPC	1	Calibunan	NGO
Sea – K (DSWD)	1		GO
DA Mangrove Reforestation	1		DA
Taytay Kauswagan Inc.	1	Poblacion	NGO
Arawan	15 – 100		NGO
Turko	2 – 5		NGO
5-6	15 – 50		NGO
Carloto Lending Institution	1	Tolosa	NGO
Dagani Lending Institution	1	Tolosa	NGO

IDENTIFIED AGRICULTURAL RESOURCES

Resource / Facilities	# of units	Location	Ownership
Stripping machines	10	Mahaba	DA
	1	Puting Bato	Private
	1	Calamba	Private
Rice thresher	1	Sanghan	Private
	1	A. Luna	Private
	1	Calamba	Private
	1	Bay – ang	Private
	1	Bayabas	Private
	1	La	Private
	1	Calibunan	Private
	1	Brgy. 12	Private
	1	Soriano	Private
Solar power	1	Comagascas	DAR
Tambis Copra Dryer	1	Comagascas	Private
Ranem Copra Dryer	1	Comagascas	
Cong Copra Dryer	1	Comagascas	Cong
Corn sheller	1	Brgy. 1	Private
Power sprayer	1	Poblacion	Emmanuel Atega
	1	Poblacion	Private
	1	Soriano	Soriano
Mud Boat/ Turtle	1		
Corn mill	1	Comagascas	
Cabadbaran Electric Rice and Corn mill	1	Brgy. 12	
Sanchez rice mill	1	Brgy. 12	Sanchez
GD rice mill	1	Mabini	GD
Cabadbaran Electric Rice and Corn mill	1	Brgy. 12	
Avancena rice mill	1	Sanghan	Avancena
Calibunan rice mill	2	Calibunan	
La Union rice mill	2	La Union	
Pandanon irrigation association			
		La Union	
		Sanghan	
		Antonio Luna	
Tapahan	1	Poblacion	Cong
	1	Poblacion	Ong Oh
	1	Poblacion	Atega
	1	Comagascas	Concha
	1	Comagascas	Ranim
	1	Bayabas	Carp Beneficiaries
	1	Comagascas	Carp Beneficiaries
	1	Del Pilar	Carp Beneficiaries
	1	Comagascas	Celebes

IDENTIFIED NATURAL RESOURCES

Resource / Facilities	Location
Sea	Caasinan
	Kauswagan
	Cabinet
	Calibunan
	La union
	Tolosa
Watershed areas	Mahaba
	Puting Bato
	Pilar
	Conception
	Bayabas
River	Cabadbaran
	Managat
	Catangan
Creek	Pandanon
Falls	Mahaba

Group II - Identified Agri-Business Establishments, Service / Support, Crops

IDENTIFIED CROPS

CROPS	LOCATION	CROPS	LOCATION	CROPS	LOCATION
Corn	Comagascas	Coconut	Conception	Rice	A. Luna
	Puting Bato		Del Pilar		Sanghan
	Katugasan		Kauswagan		Mabini
	Del Pilar		Kaasinan		Calibunan
	Kauswagan		Cabinet		La Union
	Mabini		Tolosa		Calamba
	Soriano		Calibunan		Bay-ang
	Bay-ang		La Union		Soriano
	La Union		Soriano		Brgy. 12
	Calamba		Sanghan	Banana	Comagascas
	Mahaba		A. Luna		Puting Bato
	Sanghan		Bay-ang		Katugasan
Root crops	Conception		Calamba		Del Pilar
	Del Pilar		Mahaba		Kauswagan
	Comagascas		Mabini		Calamba
	Puting Bato		Brgy. 12		Mahaba
	Katugasan		Brgy. 9		Sanghan
	Bay-ang		Mabini		Conception
	Calamba		Brgy. 12		Bayabas
	Mahaba		Brgy. 9		Calibunan

CROPS	LOCATION	CROPS	LOCATION	CROPS	LOCATION
Fish	La Union		Puting Bato	Fruit trees	Conception
	Calibunan		Katugasan		Mahaba
	Tolosa		Comagascas		Katugasan
	Cabinet	Falcata	Mahaba		Bay-ang
	Kauswagan		Katugasan		Kauswagan
	Caasinan		Puting Bato		Mabini
Vegetables	Katugasan		Bayabas		La Union
	Comagascas		Conception		Del Pilar
	Bay-ang		Del Pilar		
	Calamba				
	Sanghan				
Abaca	Mahaba	Banana	Mabini		
	Puting Bato		Soriano		
	Calamba		Bay-ang		
	Bayabas		La Union		

IDENTIFIED AGRI-BUSINESS ESTABLISHMENTS

Resource / Facilities	# of units	Location	Ownership
Farm Supply			
Agrivets	1	Brgy. 5	Sano
		Brgy. 10	Jessels
		Brgy. 5	Beto
		Brgy. 5	Dy
Seed producer	1	Brgy. 4	Rao
		Brgy.12	Forteza
		Tolosa	Borja
Organic			MPQ
			Nelsa Caneco
Wholesaler	1	Brgy. 2	King Kiang
		Brgy. 10	Jorecko
		Brgy. 7	Obeth
		Brgy. 12	
		Brgy. 2	
		Brgy. 4	Kotsay
		Brgy. 12	Sanchez
			Aneco/Dy
		Brgy. 12	Udarbe
		Comagascas	Concha
		Brgy. 12	
		Brgy. 12	Balinos
		Brgy. 6	Ong-o

IDENTIFIED SERVICE/SUPPORT

Government training
- Farmers field school
- Vegetable production
- Livelihood projects (coco processing)
- Abaca production
- Rice production (Palay check)
- Corn production
- Banana production
- Flower induction training

Government/NGO's Project
- CIDP
- MRDP
- OTOP

Technical Vocational School
- TESDA
- NORMISIST
- Bishop Haden
- Phil. Rice

NGO
- Pascres
- Pakisama
- CCEPSD
- CCARD

Higher Educational Institution
- NORMI Institute
- NORMISIST
- Mondejar

CARMEN

Group I - Agricultural Facilities / Basic Infrastructure

Resource / Facility / Institution / Provider	Number of units	Location	Capacity	Users (indicate purok or barangay)	Ownership (GO / NGO) indicate owner if any
Mango	Kilos	Entire Carmen	3,300 kilos/yr	All 8 barangays	Individual
Coconut	Kilos	Entire Carmen	14,300 kilos/yr	All 8 barangays	Individual
Banana	No. of plants	Entire Carmen	4,900 kilos/yr	All 8 barangays	Individual
Corn	Sacks	Entire Carmen	700 sacks/yr	All 8 barangays	Individual
Other crops	Kilos	Entire Carmen	500 kilos/yr	All 8 barangays	Individual
Corn Mill	2	Poblacion	20 sacks/day	Poblacion and nearby barangays	Private
Tapahan	5	Tagcatong Poblacion Cahayagan	30 has.		Private
Power sprayers	20	Poblacion	50 has	Poblacion and all 8 barangays	Private
FMR	15	All barangays			Barangays/Public
Market	1	Poblacion	General		Public / Municipality
Resorts	3 2	Rojales Vinapor			Private
Noodles Factory	1	Tagcatong			Private
Fish		Coastal barangays			

Group II - Agribusiness Establishments

Resource / Facility / Institution / Provider	Number of units	Location	Capacity	Users (indicate purok or barangay)	Ownership (GO / NGO) indicate owner if any
Agricultural supply	6	Carmen		All barangays	Private
Bol-anon Jhorimie	2	Carmen		All barangays	Private

Group III - Financial Institutions

Resource / Facility / Institution / Provider	Number of units	Location	Capacity	Users (indicate purok or barangay)	Ownership (GO / NGO) indicate owner if any
Green Bank				All Barangays	Private
Coop banks				All Barangays	Private
People's Bank				All Barangays	Private
SRBC				All Barangays	Private
KMBI				All Barangays	Private
ANTRECO				All Barangays	Private
LGU				All Barangays	Private

Group IV - Service / Support Providers

Resource / Facility / Institution / Provider	Number of units	Location	Capacity	Users (indicate purok or barangay)	Ownership (GO / NGO) indicate owner if any
MAO	250 sachets	Poblacion		All Barangays	GO
	Livelihood	Poblacion		5 barangays	GO
	Cassa Prod'n	Poblacion		5 barangays	GO
	Mango Prod'n	Poblacion		5 barangays	GO
	Banana Prod'n	Poblacion		5 barangays	GO
DAR	Training to ARC Beneiciaries	Poblacion		2 barangays	GO
MPDO / CTEC	Skills development	Poblacion		All barangays	GO
MHO	_ dispersal	Poblacion		RUFA/MFA	GO
Brokenshire		Gosoon		All barangays	NGO

JABONGA

BARANGAY SAN JOSE

1. Agricultural resources
   - Upland
     - Coconut - main
     - Camote
     - Abaca
     - Saging
     - Other rootcrops
   - Sea
     - Panit – main
     - Tamban
     - Carpa, etc
     - Nukos
     - Tamorong

2. Agricultural Facilites
   - From government
   - From ALterDev

3. Agri-Business
   - COOP women
   - AlterDev

4. Support Institutions
   - AlterDev
   - EMPRESS

BARANGAY SAN PABLO

1. Agricultural Resources
   - Lake
   - Corn
   - Kalibre
   - Abaca
   - Coconut – main
   - Camote
   - Isda

2. Agricultural Facilities – none

Note: Per consensus of participants FGD to focus according to Barangay to identify the 4 categories: Agricultural Resources, Agricultural Facilities, Agri-business, and Support Institutions

Lacking symbols:

1. Rootcrops – camote, kalibre
2. Abaca
3. Coconut
4. Corn
5. Vegetables – squash
6. Fruit Trees
7. Saging
8. Covered Court

} Agricultural Resources

3. Agri-business
   - Traders – coco

4. Support Institutions
   - KALAHI (DSWD)
   - PAPED
   - ALTERDEV
   - NCIP
   - MAKAMASANG TUGON (DSWD)
   - HEED
   - PACAP-

** Suggestion - NGO not included in the mapping but included in the listing (Ma'am Lurraine)*

BARANGAY STO. NIÑO

1. Agricultural Resources
   - Falcata
   - Coconut – main
   - Corn
   - Saging
   - Sea
   - Abaca
   - Camote
   - Isda – panit, tamban, etc

2. Agricultural Facilities
   - Farm to Market Road
   - Tapahan

3. Agri-business –

4. Support Institutions
   - AlterDev
   - Lending from Association
   - ARSP –DAR

BARANGAY POBLACION – 70% FISHERFOLKS

1. Agricultural Resources
   - Fish
   - Lagutmon – for consumption
   - Coconut

BARANGAY COLORADO

1. Agricultural Resources
   - Coconut
   - Humay
   - Vegetables – kalabasa
   - Mais
   - Fruit trees
   - Isda – carpa, haluan, tilapia

2. Agricultural Facilities
   - Corn sheller
   - Turtle
   - Drier (2) - CFMPC

3. Agri-business
   - Traders – mais, saging, coconut

4. Support Institutions
   - Government – MAO, MSWD, DAR
   - For IPs
   - NGO – ALTERDEV, ABC, HEED, IFAD

BARANGAY MAGSAYSAY – SAME WITH COLORADO

KITCHARAO

Group "EARTH" - Land Use / Natural Resources, Agricultural Facilities and Infrastructure

Resources / Facilities / Institution / Provider	# of units	Location	Capacity	Users (Indicate *Purok or Barangay)*	Ownership (GO / NGO) Indicate owner if any
Rice seller	1	Jalionong			Kag. Vidal, Montante, Samuseno, Bahalag
Rice Thresher	1 1	San Roque Canaway			Capt. Welmer Banteque DA/Arge Acqua
Dryer	1 1 1	San Roque Jaliobong Bangayan	100 sacks rice 100 sacks rice 100 sacks rice	Purok 5 Purok 6 Purok 2	DA DA DA
Water refounding	1	San Roque		Purok 6	MRDP/DA
Irrigation		Jaliobong Anibongan Canaway			NIA
Rice Mill	1 1 1	Kitcharao Jaliobong Anibonga			Swella Belfran Banjing
Farm to Market Road	1 1 1	Bangonay Jaliobong San Isidro		Purok 3 Purok 5 Purok 4	IFAD Provincial Aid IFAD
Banana		Jaliobong Canaway San Roque San Isidro Bangayan Zapanta Valley			Eva Domingo/Lampitao Reyes Mordeno/Banteque Iligan Sinones Nonito
Coconut		Jaliobong Bangayan San isidro Canaway			Montante/Matugas Senones Pablo Bongcag Reyes
Fish		Bangayan San Roque Anibongan Jaliobong			Aneano/Alatraca Gerry
Limestone / Marbles		San Roque	2 tons/ month 100 sacks/ month 100 sacks/ month	Purok 2 Purok 3 Purok 3	Salvador, Junio Recardo, Agon Perolino, Ruben
Abaka		San Isidro Mahayahay Jaliobong Bangayan Sangay			IFAD/NRM

Group "FIRE" - Agri-Business Related Establishments

Resources / Facilities / Institution / Provider	# of units	Location	Capacity	Users (Indicate *Purok or Barangay)*	Ownership (GO / NGO) Indicate owner if any
Agri. Vet	4	Crossing – 1 Songkoy – 3		Entire Kitcharao and nearby municipalities	Private
Fire truck	1	Songkoy		Entire kitcharao and nearby municipalities	GO
ANECO Resident BOD	1	Crossing		Entire Kitcharao and nearby municipalities	Coop
Coco buyer	4	Bangayan – 1 Canaway – 1 Crossing b- 2		Rural barangays	Private
Rice traders	2	Crossing Songkoy		Entire kitcharao and nearby municipalities	Private
Seed Producers	1	Crossing		Farmers	Private
Trucking services	3	Crossing		Officials	GO
Warehouse	1	crossing		Entire kitcharao and nearby municipalities	Private
Vegetable dealer	5	Songkoy		Entire kitcharao and nearby municipalities	Private

Group "WIND" - Financing Institutions

Resources / Facilities / Institution / Provider	# of units	Location	Capacity	Users (Indicate *Purok or Barangay)*	Ownership (GO / NGO) Indicate owner if any
Green Bank	1	Poblacion		Farmers, Fisherfolkfs, Entrepreneurs	
Lending Inst.	6	Kitcharao		Farmers, Fisherfolkfs, Entrepreneurs	
Private Individuals	5	Kitcharao		Farmers, Fisherfolkfs, Entrepreneurs	
NGO: SCOPAR BAW	3	Kitcharao		Farmers, Fisherfolkfs, Entrepreneurs	
Pag-ibig		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	

Resources / Facilities / Institution / Provider	# of units	Location	Capacity	Users (Indicate *Purok or Barangay)*	Ownership (GO / NGO) Indicate owner if any
GSIS		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	
SSS		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	
Rural Bank of Placer		Placer, Surigao del Norte		Farmers, Fisherfolkfs, Entrepreneurs	
Cantilan Rural Bank		Tubod, Surigao del Norte		Farmers, Fisherfolkfs, Entrepreneurs	
CARD, Inc		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	
MILAMDIC Fdn		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	
Espaniola		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	
AlterDev		Butuan City		Farmers, Fisherfolkfs, Entrepreneurs	

Group "WATER" - Support / Service Providers

Assistance	GO / NGO	Recipient / Beneficiaries
Palay Check Technology Demo	DA / ATI	Barangay Poblacion, Jaliobong, Canaway, San Roque
Coco Beads Handicraft Training	DTI	Barangay Sangay, SAFORMA
Natural Farming Technology System	SAC – JP Butuan Alterdev	KIPSAFA Barangay Jaliobong (Purok 5 & 6)
Basic Orientation Seminar on Sustainable Agriculture	SAC – JP Butuan	KIPSAFA
PMES	DAR	ARB's Sangay, Mahayahay
Organic Fertilizer Making	PHILDRA	UMASSA

LAS NIEVES

Group I - Identified Financing Institution

Resource/ Facilities	# of Units	Location	Capacity	Users	Ownership
People's Bank of Caraga	1	Poblacion		All Barangays (esp. farmers)	
BCBMPC (Coop.)				All Barangays (esp. farmers	
MACAFA (FA)				Marcos Calo	
CAFA (FA)				Consortia	
IBAFA (FA)				Ibuan	
BARFA (FA)				Balungagan	
MEEDMO		Poblacion		LGU-Employees	
GLOBE HARDWARE				E.G. Montilla, Pinanaan, Tinucoran	

Group II - Agricultural Facilities

Resource/ Facilities	# of units	Location	Capacity	Users	Ownership
Corn mill	13	All Brgys.		All Brgys.	Private/Coop./ NGO
Rice Mill	24	San Roque, Malicato, Rosario, etc.			Private/Coop./ NGO
Irrigation System	2				Private/Coop./ NGO
"Tapahan"	1				Private/Coop./ NGO
Stripping machine	4				Private/Coop./ NGO
Rice Thresher	75				Private/Coop./ NGO
Solar Power Elect.	2				Private/Coop./ NGO
Solar Dryer	30				Private/Coop./ NGO
Mechanical Dryer	2				Coop.
Corn Sheller	17				GO/Private
Communication Facilities	3				
Power Sprayer					
Coffee Mill	3	Kasiklan/Durian, Lawan-lawan			

Group III - Agribusiness Establishments

Resource/ Facilities	# of units	Location	capacity	Users	Ownership
Agricultural Supplies	3	Poblacion		3 Brgys.	
Agricultural Equipment: • Flatbed • Solar Dryer	 2 20	20 Brgys.		20 Brgys.	
• Rice (Wholesaler)	6	4 Brgys.		21	
• Trucking services	20			12 rgys.	
• Mudboat	35	Ambacon, Pinanaan, Cambuayon, (15 Brgys.)		15 brgys.	
NFA Retailers (TNG)	25	17 Brgys.		21 Brgys	

Group IV - Service / Support Providers

Resource/ Facilities	# of units	Location	Capacity	Users	Ownership
Tech. Assistance, Infrastructure, Facilities, inputs	1	Poblacion		Municipal wide	
KALAMBUAN		Agusan Sur - base			NGO
RSP					
RICE Production					
DAR					
Farmers Trading		Rosario			
RARF					
FASCOBEC					

Identified Crops

Resource/ Facilities	# of units	Location	Capacity	Users	Ownership
Rice		All Brgys.			
Corn		All Brgys.			
Banana		All Brgys.			
Coconut		All Brgys.			
Root crops		All Brgys.			
Vegetables		All Brgys.			
Falcata		All Brgys.			
Fruit trees		All Brgys.			
Fish		All Brgys.			
Rubber		Pinanaan, Ambacon, Maningalao, Balunhagan			
Coffee		Ibuan, Durian, Kasiklan, Lawan-lawan			
Abaca		All Brgys.			

MAGALLANES

Group I "EARTH" - Identified Infrastructure Facilities

Resources / Facilities / Institution / Provider	# of units	Location	Users (Indicate *Purok or Barangay)*	Ownership (GO / NGO) Indicate owner if any
Built – Up	149.95	All Barangays	All Barangays	
Agriculture	3,210.72	Guiasan, Taod-oy, Caloc-an, Poblacion, Sto. Niño		Individual
- Crops	203	Guiasan, Taod-oy, Caloc-an, Buhang		Individual / NGO
- Fish Pond	1,350.72	Poblacion, Guiasan, Taod-oy, Caloc-an		Individual
- Mixed Crops	1,657	Guiasan, Taod-oy, Caloc-an, Buhang		
Forest	1,630.33	Guiasan, Taod-oy, Poblacion		
- Production	1,232.80			
- Protection	397.53			
Special Uses -Tourism	4			
- Coconut		Guiasan	Whole Municipality	
- Nipa		Taod-oy		
- Rehab Center		Sto. Nino	Agusan del Norte	NGO
- Mat Weaving		Sto. Nino	Whole	Individual
- Beaches	7	Caloc-an, Dahikan, Sto. Nino	Whole	Individual
- Methane Gas		Caloc-an, Dahikan, Sto. Nino		

Parking Space

- Women's health
- NGO's; Private companies
- Health center
- Tourism
  - > Beaches
  - >Phil. Centennial Tree
  - > Magellan Marker
  - > Lisagan festival
- Taclay, Celebes, Kekiang
- Methane / Natural gas

Group III "WATER" - Identified Financing Institutions

Money Lenders	Location	Capacity / Interest Charges	Types of Loans	Ownership
BAUG Coop	Marcos	20 – 50 T	Any loan	Cooperative
Guiason Coop	Poblacion	20 – 50 T	Any loan	Cooperative
Green Bank	Poblacion	20 – 50 T	Any loan	Bank
Uland	Sto. Rosario	30 – 50 T	Pensioner	Private
Municipal Employees Coop	Poblacion	10 – 20 T	Any loan	Coop
MEDMO – LGU Magallanes	Poblacion	1500 – 3000	Business financing	LGU
Bombay	Poblacion	1000 - 3000	Arawan	Individual

Group IV "FIRE" - Identified Service / Support Institutions

Service / Support Providers	GO / NGO	Nature Services	Beneficiaries	Implementing Agencies
DA	GO	Technology /trainings	Farmers and fisherfolk	DA
GMPC and BCBMPC		Seedlings and bangus fry	Fishpond operators	
Cooperative	NGO	Financial	Company workers / livestock	
Rural Bank	NGO	Financial	Farmers / fish pond operators	NGO
Tech. Vocational School	GO	Vocational		TESDA
HEPIR / Luntiaw	NGO	Technology	Farmers on livestock	HEPIR / Luntiaw
Companies		Employment	Residents	
Traders / wholesaler		Buy and sell	Farmers and fish pond operators	
MEEDMO	GO	Financial	Motorized tricycle drivers	MEEDMO
Women's CAPPM	NGO	Catering services	Magallanes constituents	NGO
Women's health	NGO	Livelihood consumer	Constituents barangay	

Group II "WIND" - Identified Agri-Business Related Establishments

Agri - business	Location	Users	Ownership
Fish pond	Poblacion, Guiasan, Taod-oy	Poblacion, Guiasan, Taod-oy	NGO
Nipa making	Buhang, Caloc-an, Sto. Nino	Buhang, Caloc-an, Sto. Nino	NGO
Handi – craft making	Sto. Nino	Sto. Nino	NGO
Fishing industry	Sto. Nino, Poblacion, Caloc-an	Sto. Nino, Poblacion, Caloc-an	NGO
Wholesaler and retailers (feeds)	Buhang	Buhang	NGO

NASIPIT

Group I - Identified Agricultural Facilities and Infrastructure / Agri-business Related Establishments Financing Institutions / Service / Support Providers and Crops

Resource/Facility	# of units	Location	Capacity	Users	Ownership
Ten Wheelers	3	Camagong		District-VI	Private
Pump boats	9	Camagong		District-VI	Private
"Habal-habal"	12	Camagong		District-VI,VIII,IX	Private individual
Tricycle	21	Camagong			Private individual
Submersible water Pumping station	1	Camagong		District-VI	Farmers Coop.
Water Dist. Property w/ reservoir	1	Camagong		Distict-III	Nasipit Water Dist.
Pump Oil Deposits	1	Camagong		District-I	Private Firm
CAWCOCO	2	Camagong		District-II	
SURRAEDEF	1	Camagong		District-IX	Propegemus
Alterdev Project	2	Camagong/Amontay			Alterdev
Stripping Machine	8	Camagong/Mimbahandi		Camagong	DA-LDR-PAR
Solar Power Tech.	2	Camagong		Dist.8& 9	DAR
Fish Cage	101	Camagong/aclan		District -IV	Private owner
Corn Sheller	1	Camagong		District-IX	Farmers Coop.
Turtle Power Tiller	3	Camagong		District-IX	Farmers Coop
Fish Pond	7 Has.	Camagong		District I & VI	Cap.Bersabal, Tambiga,
CROPS					
Wild Abaca		Camagong		District 8 & 9	
Banana		Camagong		District 1-10	Private
Coconut		Camagong			
Corn		Camagong			
Rice		Camagong			
Mango		Camagong			
Vegetables		Camagong			
Knapsack Sprayer		Camagong		Different District / Farmers	Farmers

Group II - Identified Agricultural Facilities and Infrastructure, Agri-Business Related Establishments, Financing Institutions and Service / Support Providers

Resource/Facility	# of units	Location	Capacity	Users	Ownership
Agri,Supplies	1	Barangay 6			Private
	1	Kinabjangan			Private
	4	Barangay 4			Private
Power Sprayer	1	Barangay 4		Mango Producers	Private
	1	MAO		Mango Producers	Govt.
	1	Talisay		Mango Producers	Private
Mud Boat/Kuliglig	2	Igpalas		Rice farmers	Private
	1	Amontay		Rice farmers	Private
	3	Kamagong		Rice farmers	Private
	2	MAO		Rice farmers	MAO
Rice Thresher	2	Camagong		Rice farmers	Private
	2	Igpalas		Rice farmers	Private
	1	Amontay		Rice farmers	Private
	3	MAO		Rice farmers	MAO
AGRICULTURAL FACILITIES					
Corn Mill	2	Barangay 6	Areas served	Agricultural brgy.	Private
Rice Mill	1	Aclan		Agricultural brgy	Private
	2	Barangay 6			
Irrigation Sys.	1	Aclan & Amontay	60	Rice Producers	Government
	1	Igapalas	28	Rice Producers	Government
Small Water Impounding	1	Kinabjangan	5	Rice Producers	Government
Communal Irrigation Project	1	Cubi-cubi	15	Rice Producers	Government
Stripping machine	18	Mimbahandi	7	IP's	Government
Twister	6	Salaysayon		IP's	Government
Twiner	6	Hinandayan		IP's	Government
Blower	6	Hinandayan		IP's	Government
Solar Power	1	Mimbahandi		IP's	Government
	1	Hinundayan		IP's	Government
Multipurpose Building	1	Culit	20 sq.m	farmers	Government
Drying pavement	1	Amontay	20 sq.m	Farmers	Government
	1	Culit		Farmers	Government
Corn Sheller	1	Jaguimitan		Corn Farmers	Government

Resource/Facility	# of units	Location	Capacity	Users	Ownership
	1	Camagong		Corn Farmers	Govt.
Weighing Scale	1	Hinandayan		Corn Farmers	Govt.-PO's
	1	Mimbahandi		IP's	Govt.-PO's
Organic Fert.(Vermiculture)		MAO		Farmers	Govt.
Wholesalers -Banana -Copra	-Astillo -Celebes				
Traders	-Agsa Trading, JR Marketing				
CROPS					
Jaguimitan			400 has.		
Culit			100 has.		
Camagong			100 has.		
COOMUNICATION FACILITY					
Globe / Smart Tower		Amontay			
		Kinabjangan			
		Igpalas / Culit			
		Barangay 6			
HAULER / TRUCKING					
Jay Amameo					Private
Perlo Astello					
Mario Corvera					
Melecio Sagisag					
Roel Pepito					
Mr. Noh					
Benjamen Wong					
Alex Tampan					
Jhon Dy					
Rolando Lomarda					
Ben Dy					
Elias Honculada					
COOPERATIVES					
NAGEMCO					
FICCO					

Resource/Facility	# of units	Location	Capacity	Users	Ownership
NPCC					
Knights of Columbus (K of C 6516) COOP.					
ABSMULCO					
Culit Consumers Coop.					
KIAMPCO					
Nasipit Farmers Product MP Coop.					
CFMPC					
CAWCOCO					
HFC					
TAGFACO					
JAGFRACO					
ARFAMPCO					
Kooperatiba sa Ginagmay'ng Mag-uuma sa Lubi					
AWAMPCO					
Oceanic Multipurpose Coop.					
Santa Ana Seaside MP Coop.					
Ata-atahon Farmers Coop.					
NNVS-TEMPCO					
Jaguimitan Farmers Multi-purpose Coop.					

R.T. ROMUALDEZ

Group I - Support Institutions

Resources/Facility Institution/provider	Number of units	Location	Capacity	users	Ownership(GO/ NGO
PHILRICE	1	Basilisa	Mun.of RTR	8 brgys.	GO
DAR/ARSP	1	RTR-Pob.1	Mun.of RTR	8 brgys.	LGU
DA	1	RTR-Pob.1	Mun.of RTR	8 brgys.	LGU
Act for Peace	1	San Antonio	San Antonio	1 Brgy.	NGO
CBRMP	1	RTR	San Antonio	1 Brgy.	NGO

PHILRICE - provider (whole RTR)
DAR - Project implementer
Act for Peace - working for improvement only in San Antonio
- Provides buildings, equipments, budget and training center

Group II - Agribusiness Related Establishments

Resources/Facility Institution/provider	Number of units	Location	Capacity	users	Ownership(GO/NGO
Agrivet Store					
Tagbongabong Organic Cooperative	1	Tagbongabong		Tagbongabong	Rolando Gambet
	1	San Antonio		San Antonio	
Seed Producer	3	Basilisa			Paul Borja
		Basilisa			Roberto Napuli
		Basilisa			George Asera
Buy and Sell		P-2 Poblacion			Joy Tinoy
(Palay)		P-6 Basilisa			Raul Ybanez
		P-2 Basilisa			Fe Javier
Buyer (tibook copra)	7				

Group III - Financing Institutions

Resources/Facility Institution/provider	Number of units	Location	Capacity	users	Ownership(GO/NGO)
Green Bank		Poblacion 1		8 Barangays	NGO
OTOP-LGU		Poblacion 1		8 Barangays	LGU
Tan (Financer)		Poblacion 2		7 Barangays	NGO
GOODLUCK				7 Barangays	NGO
Intino (Financier)				7 Barangays	NGO

Green Bank - Field Office (Poblacion)
OTOP - LGU (handled by DA)
Bank of Placer - Microfinance (main office is in CBR)
Private Lenders - (Individual/no office)

- Anita Tan
- Inteno
- Langanlangan
- Goodluck
- Recklens

Group IV - Agricultural Facilities / Basic Infrastructure

Resources/Facility Institution/Provider	Number of units	Location	Capacity	Users	Ownership (GO/NGO)
Rice Mill	**1**	**Basilisa**	**60 sacks/day**		**NGO**
	3	**Poblacion 2**	**200 sacks**		**NGO**
	2	**Tagbongabong**	**120 sacks**		**NGO**
	1	**Panaytayon**	**60 sacks**	**All Barangays**	**NGO**
Solar Dryer	**1**	**Poblacion 1**	**60 sacks**		**GO**
Mechanical Dryer	**1**	**Poblacion 1**	**100 sacks/day**		**GO**
	2	**Poblacion 2**	**100 sacks/day**		**GO**
	1	**Humilog**	**100 sacks/day**		**GO**
	2	**Basilisa**	**100 sacks/day**		**GO**
	1	**Panaytayon**	**100 sacks/day**		**GO**
	1	**Tagbongabong**	**100 sacks/day**		**GO**
Warehouses	**2**	**Basilisa**	**5 tons**		**Go**
	1	**Tagbongabong**	**5 tons**		**NGO**
	1	**Poblacion 2**	**10 tons**		**NGO**
Training Center	**1**	**Poblacion 1**	**20 participants**		**Go**
Organic Fertilizer Production center	**1**	**Poblacion 1**	**3,000 sacks**		**Go**

SANTIAGO

Group-I Identified Financing Institution/ Agricultural Facilities/Natural Resources

Resource/Facility	# of units	Location	Capacity	Users	Ownership
Rural Bank		Pob.I			Private
SIUFMULCO		San Isidro			
EMIFD-MPC		E. Morgado			
BAOG					Private
TIBOD					Private
ANTRECO					Private
Green Bank					Private
Siargao Bank					Private
People's Bank					Private
Enterprise					Private
Coop. Bank					Private
VILMARK					Private
Private Lenders -Tatang (10%) -Boy Domingo (5%) -Cherlito Acierto (20%) -Bebet Lim (10%) -Nelma Cosinas (10%) -Rochelle Alcantara (10%) -Naneth Saubon (10%) -johnny Galbo (10%) Vicky Batchenicha (15%) -Edelisa Monado (15%)					
AGRICULTURAL FACILITIES					
Irrigation Sys.	1	Tagbuyacan			CIDP
Tapahan		Tagbuyacan,San Isidro,Pob.2,Pob.1, Curva,Jagupit			
Stripping Machine	3	San Isidro			SIUFMULCO
		Pob.2			Cadahondahonan Agrarian Reform Ass.
		Pob.1			Pangaycan Sulay Homes Ass.
		Matingue			Upland Small Farmers Asso.
Rice Thresher	1	Tagbuyacan			Private
	1	E. Morgado			Private

Resource/Facility	# of units	Location	Capacity	Users	Ownership
Solar power Elect.		Pangaylan (PASYA),Cadahondahonan (CARSA),Kasagayan (TIKUFA),Matigue (MUSFA)			DAR
Dryer	7	All Brgys. Except Pob.2			
Mudboat/Turtle	1	Tagbuyacan			
	1	E. Morgado			Private
NATURAL RESOURCES					
Watershed		Sinawsawan(Pob.1), Mabuhayo (San Isidro),Anislagan, E.Morgado,Mapaso			
River		Aciga,Kailinawan, Ginuyuran, Kamandagan			
Lakes/Falls		Bikakang/ Mapaso Hot & cold Spring			
Fish Sanctuary		Tagbuyacan			
Gold And Copper		Almost all Brgys			

Group-II Identified Agribusiness Related Establishments/ Service/Support Providers/ Crops

Resource/Facility	# of units	Location	Capacity	Users	Ownership
Retailer Stores					
-Goncaler	1	Pob.2		Farmers	Private
-Pobaw	1	Pob.2		Farmers	Pobow Asso.
-Diala	1	Pob.2		Farmers	Private
-Mosenote	1	Pob.2		Farmers	Private
-Cecilio	1	Pob.1		Farmers	Private
-monteclaro	1	Pob.1		Farmers	Private
-Magbario	1	Pob.1		Farmers	Private
-Panchito	1	Jagupit		Farmers	Private
-Garillo	1	Curva		Farmers	Private
-SIUFMULCO	1	San Isidro		Farmers	Private
Copra Buyer					
-SIUFMULCO		San Isidro			
-Bartobabac		San Isidro			Private

Resource/Facility	# of units	Location	Capacity	Users	Ownership
-Carmen dela pina		Jagupit			Private
-Antonio Halera		Jagupit			Private
-Harry Luz		Jagupit			Private
-Monteclaro		Jagupit			Private
-Cupilan		Curva			Private
-Monte		Curva			Private
-Kim Boune Kong					Private
-Luis Cosinas		Pob.1			Private
-Morada		Pob.1			Private
-Puyo		Pob.2			Private
-Monta		La Paz			Private
-Gonzaga		Tagbuyacan			Private
HAULER / TRUCKING					
-Gonzaga	3	Tagbuyacan			Private
-Pablo	1	Pob.2			Private
-Gonzala	1	Pob.2			Private
-Dida	1	Pob.2			Private
-Cosinas	1	Pob.2			Private
-Luz	1	Pob.1			Private
-Monte	1	Curva			Private
-SIUFMULCO	1	Curva			
-Mila	1	San Isidro			Private
IDENTIFIED CROPS					
Vegetable					
Rice		Tagbuyaca,Pob.2 Lapaz,E.Morgado			
Corn		All Brgys			
Coconut		All brgys			
Banana		All Brgys			
Rootcrops		All brgys			
Falcata		All Brgys			
Fish		All Brgys except pob.2			
Fruit Trees		All Brgys. Except San Isidro & Jagupit			
Abaca		All Brgys. Except Lapaz			

Resource/Facility	# of units	Location	Capacity	Users	Ownership
SUPPORT PROVIDERS					
Trainings					CBRMP
NGO Project		Pob.2	Pobow		IFAD
ACAPEACE		Pob.1	Tribal Pangaylan		

TUBAY

Identified Crops

Coconut	all barangay	
Banana	all barangay	
Corn	all barangay	
Root crops	all barangay	
Falcata	Lawigan	
Rice "rain fed"	Sta. Ana	
Fruit trees	Cabayawa	Poblacion I
	Tinigbasan	Poblacion II
	Binuangan	La Fraternidad
	Tagpangahoy	Lawigan
Fish pond	La Fraternidad	
	Poblacion II	
	Cabayawa	

Identified Financing Institution

BAUG Cooperative	Rural Bank
People's Bank	Green Bank
King Cooperative	Cantillan Bank
LGU (Livelihood Assistance)	Rural Bank of Placer

Identified Agricultural Facilities

Tapahan	all barangay	
Solar power	Binuangan	Tagpangahoy
	Tinigbasan	Telesfora
Solar dryer	Lawigan	Cabayawa
	Tinigbasan	Abukay
	Tagpangahoy	

Business Establishments

Cabadbaran
Retailers
Agri-business (Poblacion I and II)

Identified Service/Support Services

LGU
DA
Women's

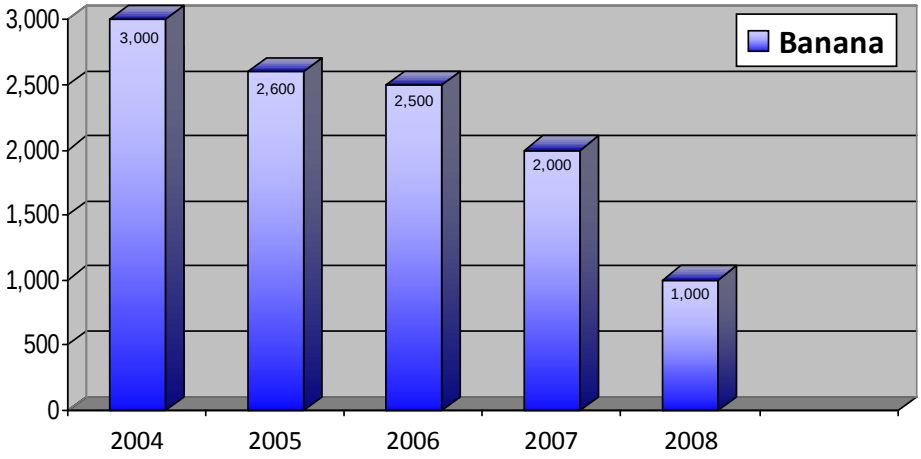
Natural Resources

Watershed – Telesfora and La Fraternidad

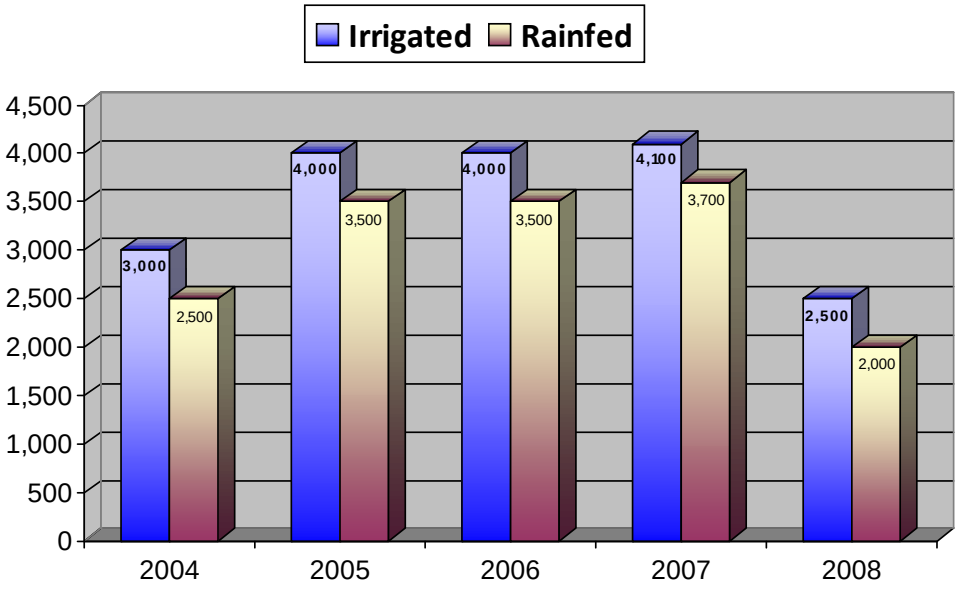
Trend Diagrams

BUENAVISTA

Trend Diagram of Banana

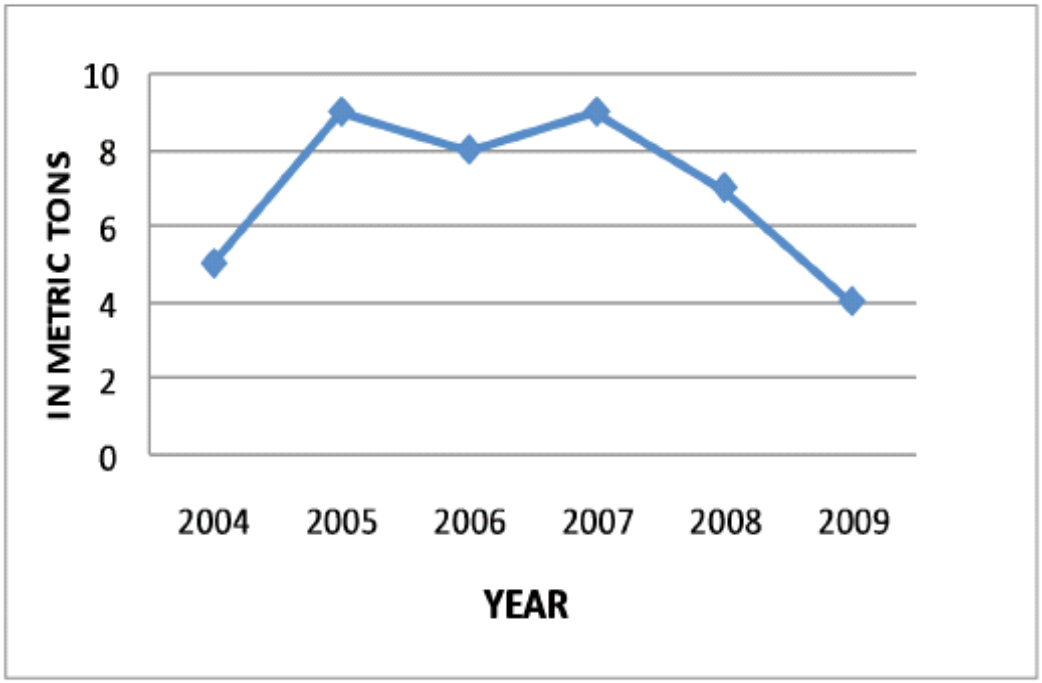


Trend Diagram of Rice:

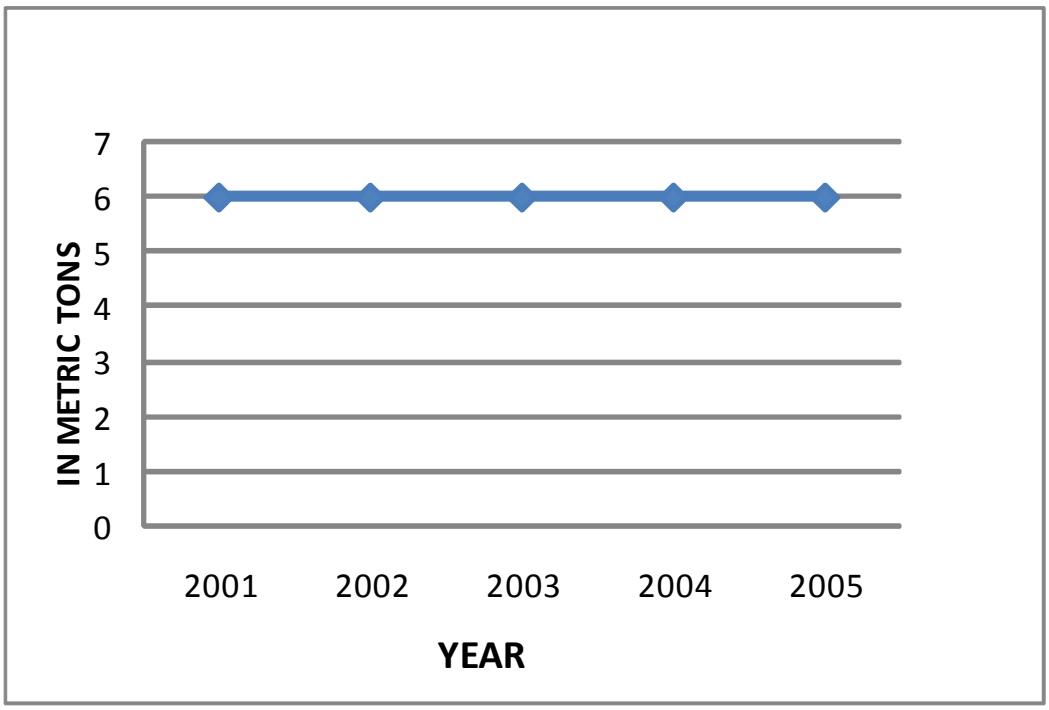


CABADBARAN

Trend Diagram of Rice

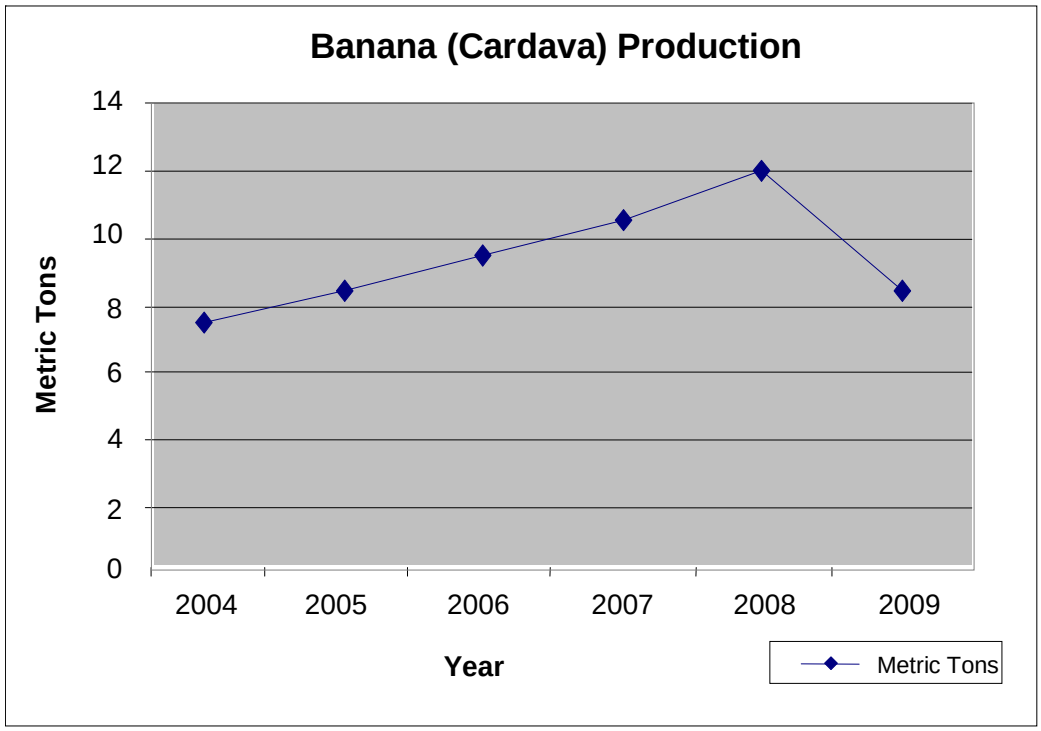


Trend Diagram of Copra / Coconut

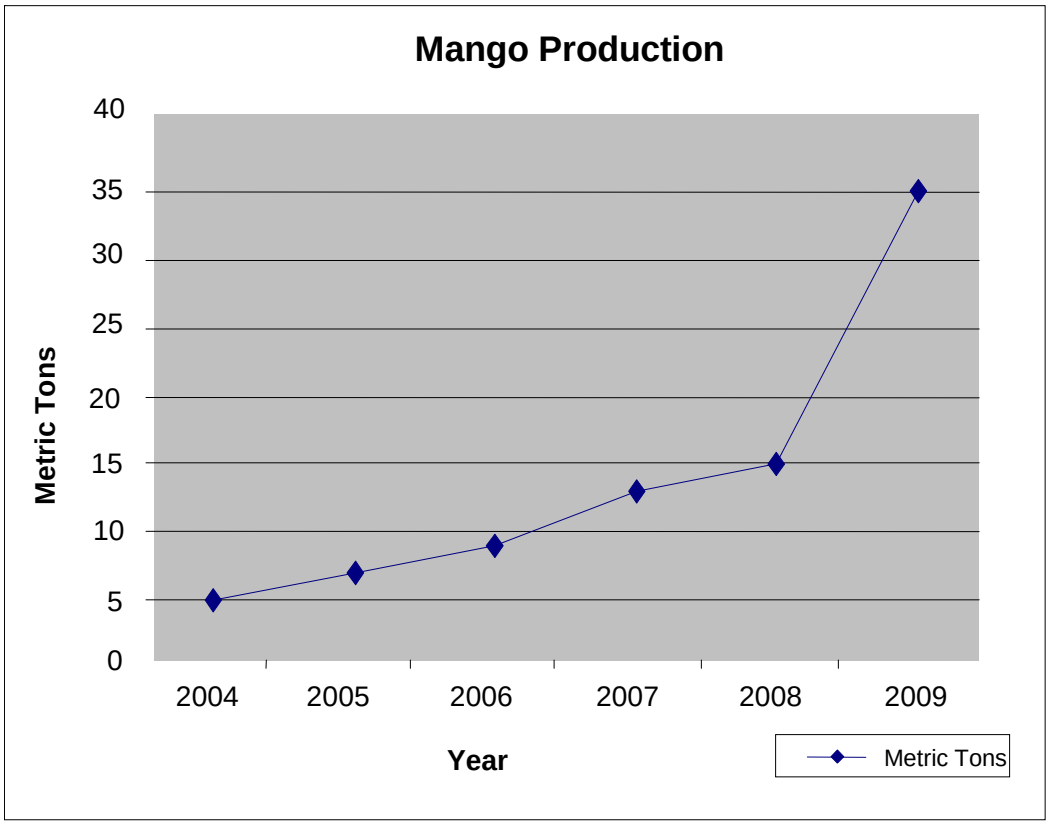


CARMEN

Trend Diagram of Banana (Cardava)

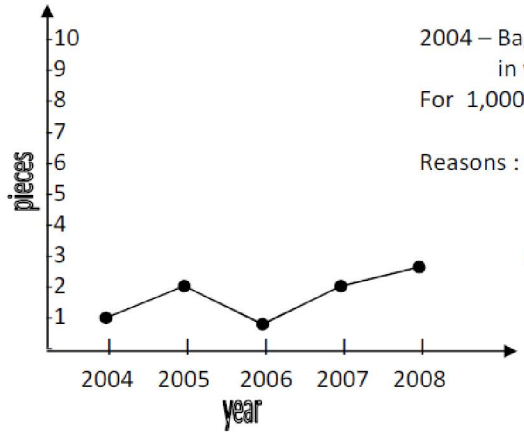


Trend Diagram of Mango



JABONGA

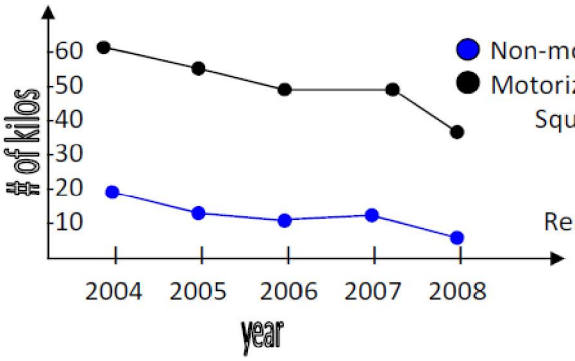
Trend Diagram for Coconut (Average Production/hectare)



2004 – Bagyong Hitang, started the decrease in yield
For 1,000 pcs of coco – 280-300 kls.

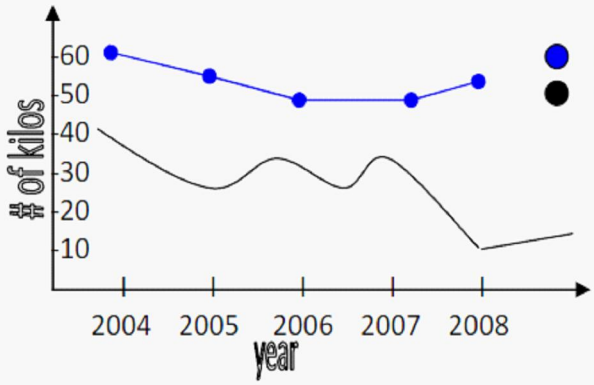
Reasons : Rise – increase in # of matured coconuts
naidaghan ang nagtanum
good climatic conditions
Fall – affected by calamity

Trend Diagram for Fishing (Motorized versus Non-Motorized)



Squid – 40-60 kls (peak season) (motorized)
15-20 kls (non-motorized)

Reasons: Rise – good climatic conditions
fishing season "peak"
Fall - calamity
Overfishing
Competition of commercial fishers



2004 – DA Dispersed fingerlings twice
After 3-4 months, fishers were benefited

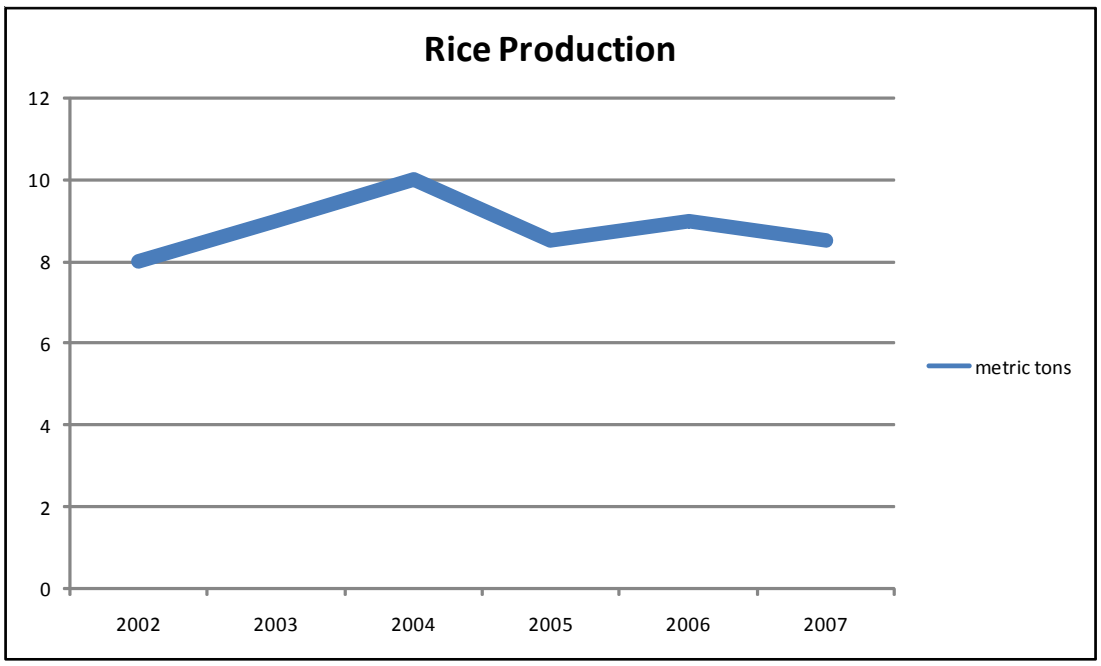
Reasons: Pijanga – Rise: Pag-undang sa baling
More matured fishes
Fall: Pagpanguha ug saguyon
Pagdaghan sa baling

Carpa/Tilapia – Rise: DA fingerlings dispersal
Fall: Illegal Fishing
Guba ang fish sanctuary
Pagputol sa kahoy nga sinker

Casili – Rise:
Fall: Daghan ng bungsod
Pagbanlas sa kahoy nga nagsilbing puluy-anan

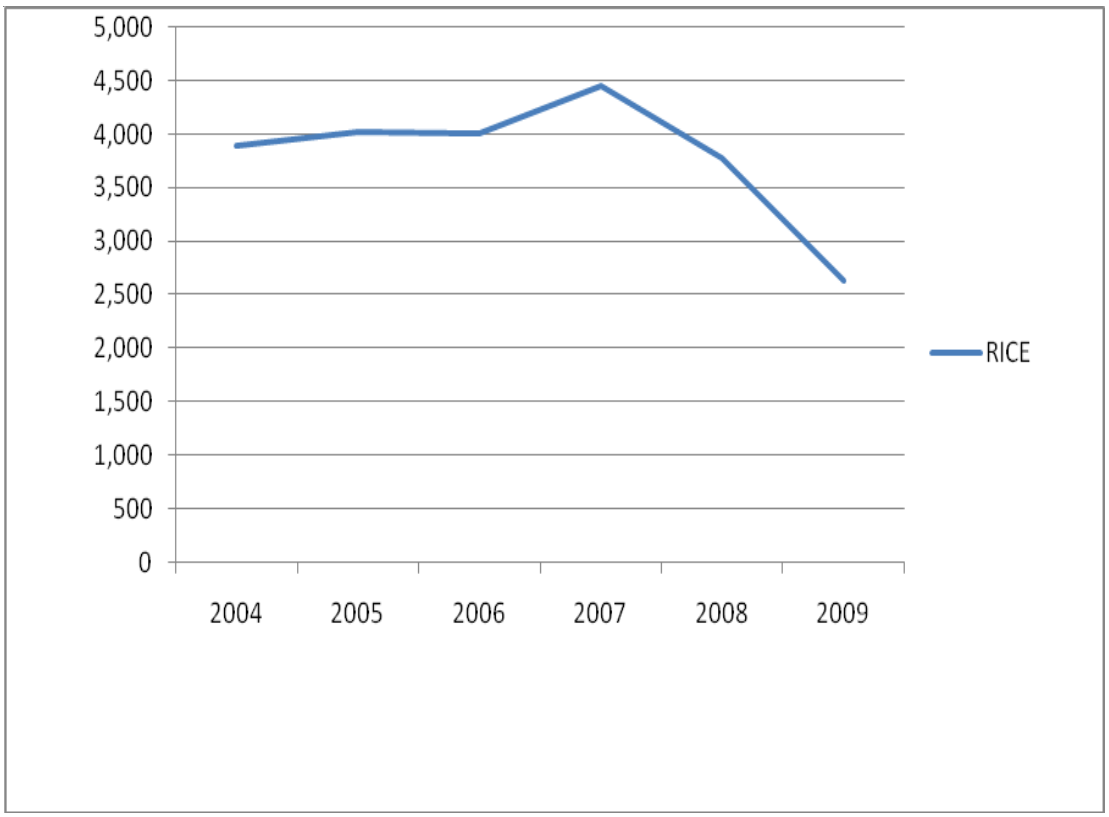
KITCHARAO

A. Trend Diagram of Rice:



LAS NIEVES

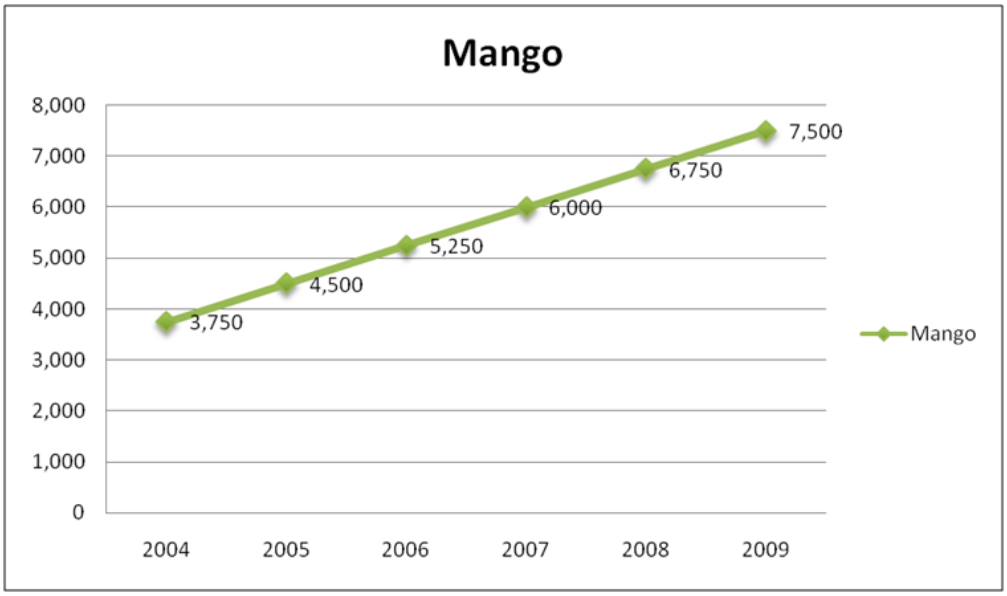
Trend Diagram of Rice



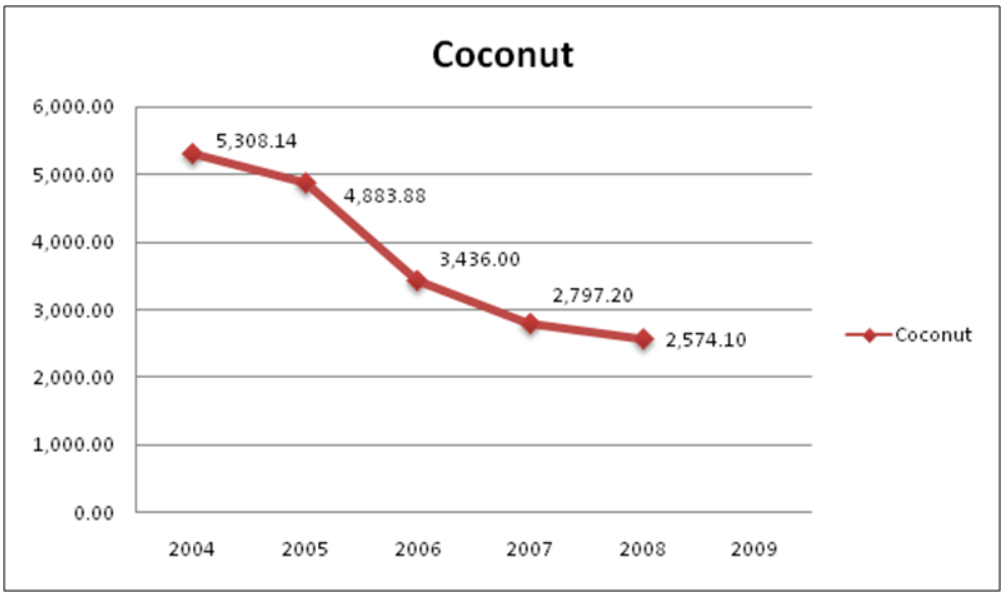
NASIPIT

Trend Diagram of Mango

- 14-15 years old mangoes
- 518 has.
- 100 trees
- 80 fruit-bearing tress
- income depends on infestation incidents

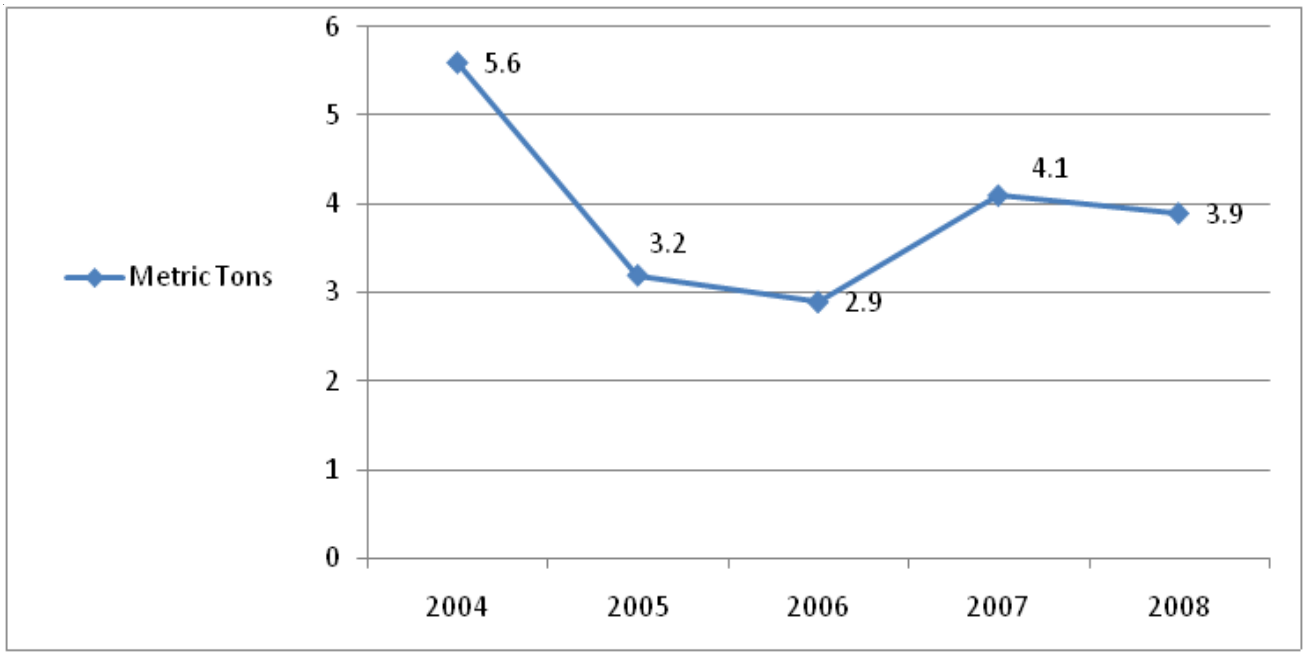


Trend Diagram of Coconut

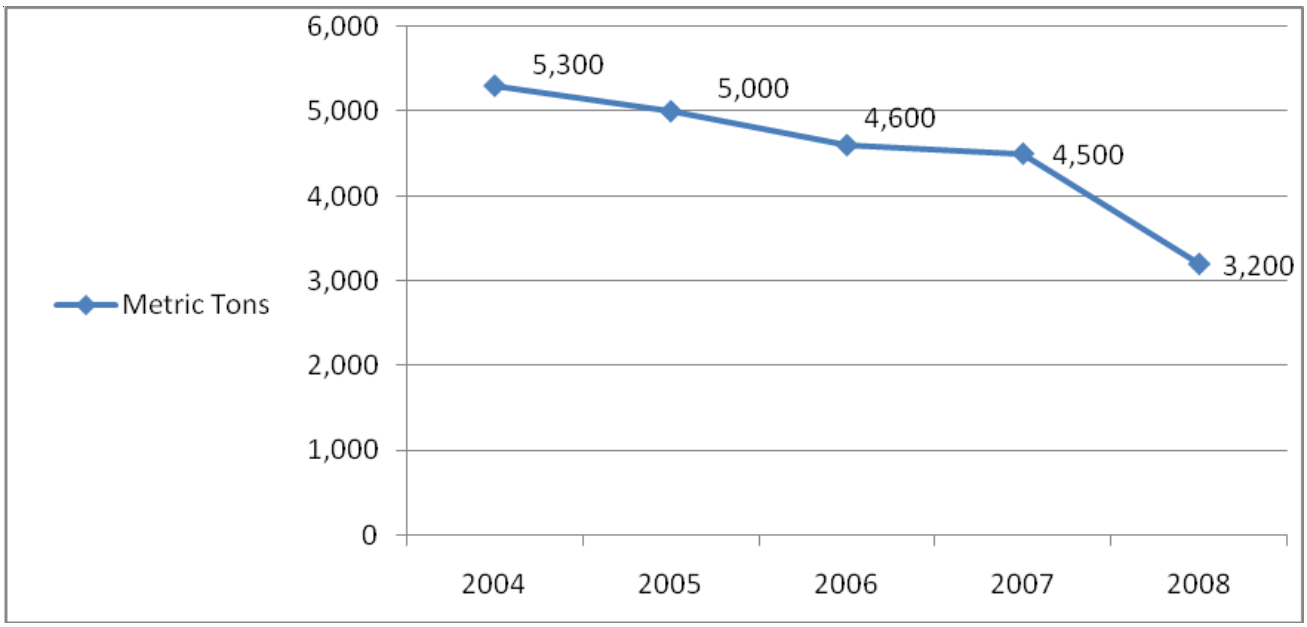


R.T. ROMUALDEZ

Trend Diagram of Rice

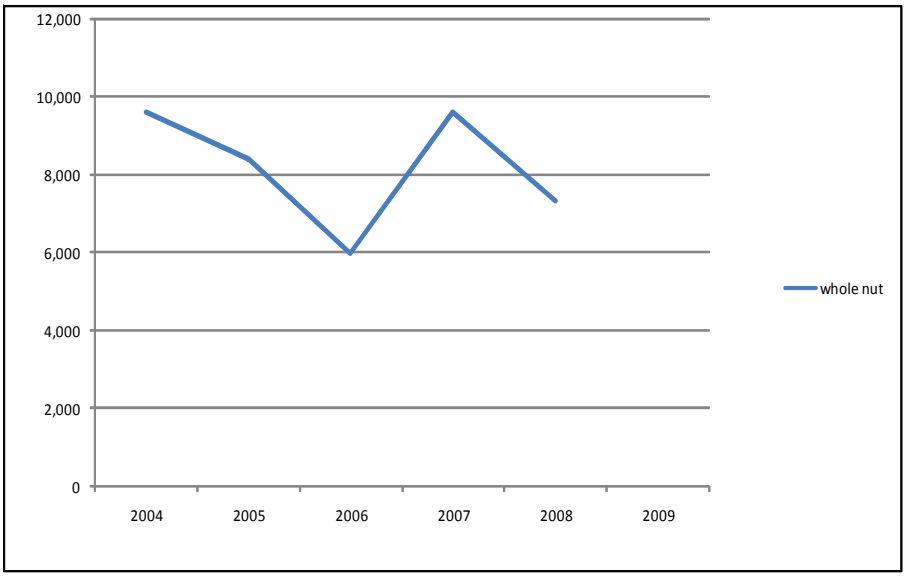


Trend Diagram of Coconut



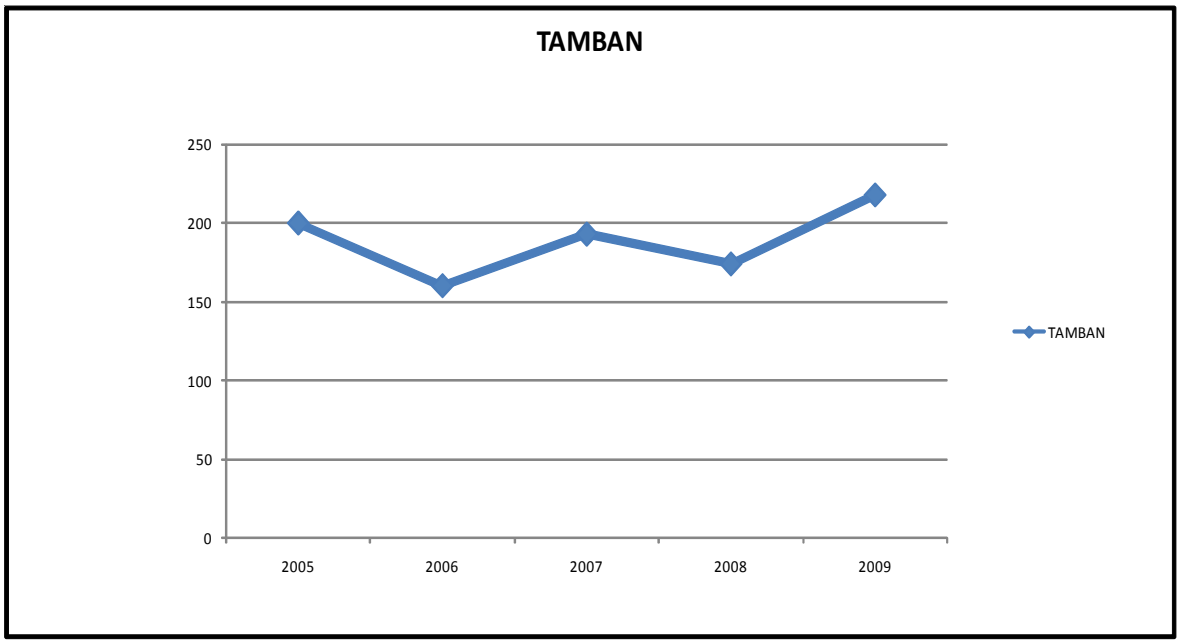
SANTIAGO

Trend Diagram of Coconut

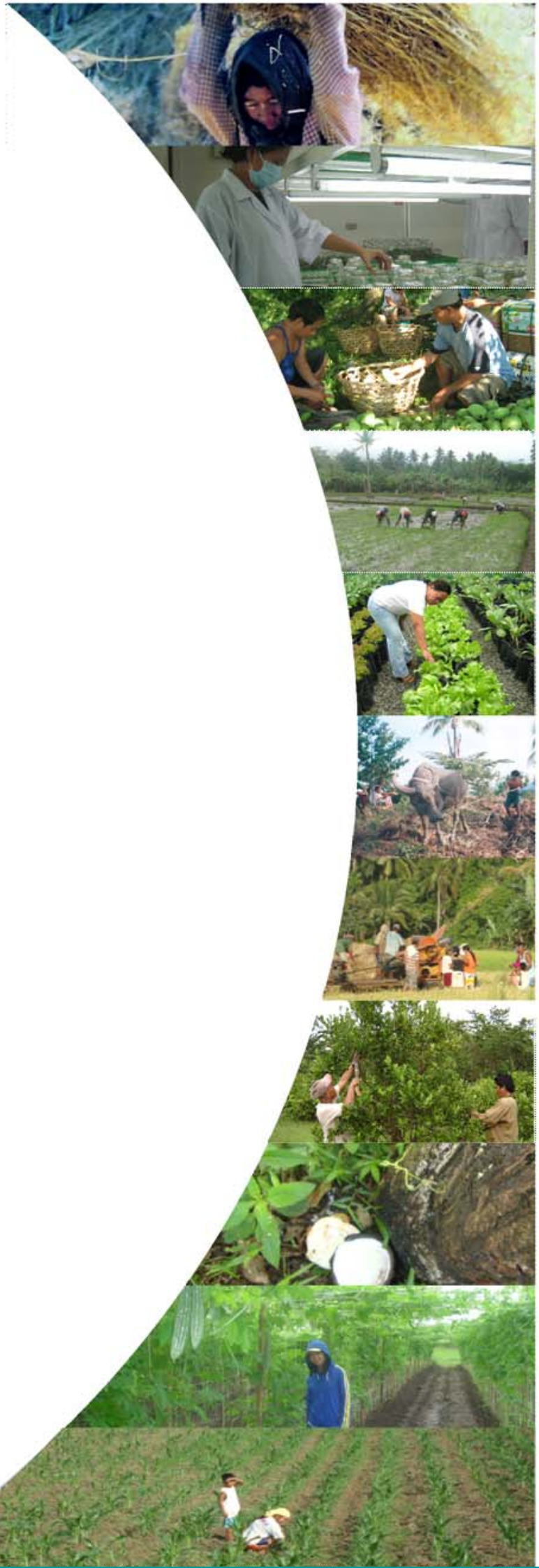


TUBAY

Trend Diagram of Tamban



Production Calendars



BUENAVISTA

A. Production Cycle Calendar for Rice

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Indicate training needed
Land Preparation													M	Y	Rice Production Training
Seedbed Preparation/soaking													M	N	
Transplanting													M/F	N	
Weeding/Irrigation													M/F	N	
Fertilizing													M	N	
Harvesting													M	N	

Legend : Blue -1st cycle Red -2nd cycle

B. Production Cycle Calendar for Banana

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Indicate training needed
Site Preparation *Cleaning/sticking/hole digging*													M/F	N	
Procurement of seedlings/ tissue culture													F	N	
Basal fertilizer Application / planting													M/F	Y	Integrated Pest Management
Care & maintenance (Strip Brushing/mulching every 3 months)													M	N	
Fertilizer Application (quincanx method)													M/F	N	
Leaf Pruning / bracking every culture													M/F	N	
Insect repellant Application													M/F	N	
Debudding													M/F	N	
Harvesting													M	N	
Marketing													M/F	N	

CABADBARAN

A. Production Cycle Calendar for Coconut (Whole)

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Training Needed
Land preparation /seedling													M		-Processing (coco sugar, coco nectar, coco honey, and virgin coconut oil) -Husk matting
- brushing/ lampas													M		
- plowing													M		
- staking													M/F		
- digging													M/F		
- basal application(fertilizer)													M/F		
- planting													M/F		
Maintenance													M/F		
- weeding													M/F		
- fertilizer application													M/F		
Harvesting after 5 years															
Copra															
- picking													M		
- gathering													M/F		
- de husking													M/F		
- splitting													M/F		
- drying (3 stages)													M/F		
- scooping													M/F		
- hauling													M		
- marketing													M		
Tibook															
- picking													M		
- gathering													M/F		
- de husking													M/F		
- hauling													M		
- marketing													M/F		

B. Production Cycle Calendar for Rice

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Training Needed
Land preparation															Palay check/ farmers field school
-repair of dike and canal													M/F		
-prepare of seed bed &seeding													M/F		
-plowing and harrowing													M		
-leveling													M		
Planting													M/F		
-water management													M/F		
-spray of weedicide													M		
-application of fertilizer													M/F		
-weeding													M/F		
-spraying of pesticide													M		
Harvesting													M/F		
Gathering													M/F		
Threshing													M		
Sacking													M/F		
Hauling													M		
Dying													M/F		
Marketing													M/F		

Legend: First cycle
Second cycle

CARMEN

A. Production Cycle Calendar for Banana

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T**	Trainings Needed
Land preparation															
• Weeding													M	Yes	Correct distancing
• Sticking/distancing													M/W	Yes	Correct diameter/ depthness
• Hole digging													M		
• Sucker hauling / hole distribution													M		
Planting of suckers															
• Apply 250 g Ammonium sulfate below hole													M/W	Yes	Quantity of fertilizer/ plant
• Planting per hole													M		
Sanitation															
• Debracking every 2 wks													M	Yes	Correct debracking
• Deleafing every 2 wks													M/W	Yes	Knowledge of exact functional leaves/plant
• Bud removal / stem bagging to prevent "bugtok"													M	Yes	Knowledge for "bugtok" control
• Ribbon marking													M/W	Yes	Determination of exact date of harvesting as stem is bagged
• Population control													M	Yes	Knowledge of exacxt height of follower & exact distribution/MAT
Fertilization (every 45 days interval)															
• Ammonium sulfate – 250 g													M	Yes	Knowledge of soil analysis and additionasl element needed by the soil.
• Potassium – 150 g													M		
(after 1.5 yrs) Harvesting (13-15 wks after bud removal)															Total quality management to maximize appearance for customer satisfaction
• Hauling to loading area													M	Yes	To avoid bruising of the fruit; proper handling
Marketing / weighing of stems													M/W	Yes	Best buyer for profit

B. Production Cycle Calendar for Mango

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T**	Trainings Needed
Pruning													M		
Fertilization													M/W		
Application of Growth Hormone													M	Yes	Proper use of chemicals and insecticides
Flower Induction													M	Yes	Mixing
Flower management													M	Yes	Precautionary measures
Monitoring													M/W		
Bogging (fruit)													M		
Monitoring													M/W		
Harvesting													M		

JABONGA

A. Production Cycle Calendar for Squash (Calabasa)

Crop: Kalabasa	J	F	M	A	M	J	J	A	S	O	N	D
Activities:												
Land Prep (M)												
Planting (F/M)												
Abono (F/M)												
1. Daro Sorko (F/M)												
2. Daro (F/M)												
3. Daro (F/M)												
1st Harvest (F/M)												
2nd Harvest (F/M)												
3rd Harvest (F/M)												

For kalabasa (Squash)

- kung mahal ang kalabasa, gamay ra ang abot/harvest
- kung naa lay traktor, makacropping utro sa august. Kibali, kaduha makatanum sa august

Suggestion – kailangan nay farmol para makautro ug tanum

For coconut

- sa time nga walay gibuhat sa kalubihan, managat ug magtanum ug saging ug uban pang lagutmon
- nagkadugay nagkamahal ang bayad sa pagpasaka tungod sa pagtaas sa presyo sa mga palitunon sama sa bugas
- usod ang pagtabok
- mga mamalitay kusog mangtarha.

B. Production Cycle Calendar for Coconut

Crop: Coconut	J	F	M	A	M	J	J	A	S	O	N	D
Activities:												
Land Prep (M)												
Sticking (M)												
Planting (M)												
Maintenance (M)												
Lampas (M)												
Abono (M)												
Hinlo sa Punu-an (M)												
1-7 years												
Maintenance (M)												
Saka (M)												
Tapok (F/M)												
Bonot (M)												
Batak (F/M)												
Kamada (F/M)												
Dang2x (F/M)												
Lugit (F/M)												
Dang2x (F/M)												
Saking (F/M)												
Hauling (F/M)												

C. Production Cycle Calendar for Rice (Humay)

Crop: Humay	J	F	M	A	M	J	J	A	S	O	N	D
Activities:												
Semilya (M)												
Land Prep (M)												
Hanet (F/M)												
Tanom (M)												
Spray Sagbot (F/M)												
Kamot (F/M)												
Spray Foliar/Insecticide (F/M)												
Harvest (M)												
Threshing (M)												
Hauling												
*Drying												
*Milling												
Marketing												

For humay

- 1 tanum/year
- Rainfed
- Wala kayo participation ang women tungod sa kalapok ug lawom ang yuta ug dili kaya magpas-an sa semilya nga itanom ug ang i-harvest.
- Price – PhP 13.20/kilo pinaktaas
  PhP 12.00/kilo pinakaubos
- Kada 5 sakcs, minusan sa mga buyer ug tag-isa ka-kilo.

KITCHARAO

A. Production Cycle Calendar for Rice

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P (M/F)	Trainings attended	Trainings needed
Seedbed preparation													M	FFS	Financial Manage-ment
Land preparation													M	SOA	FET
Planting													M/F	BOSA	NFTS
1st Fertilizer Application													M	SFMT	
Weeding													M/F	DFST	
2nd Fertilizer Application													M	OFPT	
Maintenance															
Water Management													M		
Paddy													M		
Spray													M		
Harvesting													M/F		
Post Harvest Activities													M/F		
Hauling													M/F		
Selling													M/F		

Legend: 1st Cropping 2nd Cropping From 1st to 2nd Cropping

B. Production Cycle Calendar for Coconut

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P (M/F)	Trainings attended	Trainings needed
Seedling preparations													M/F	PCA	Seed Pro-pagation
Land preparations													M	PCA	Fertilizer applica-tion
Planting													M/F	PCA	Soil analysis
Weeding(1st)													M/F	DA	Virgin Coconut Oil
Weeding(2nd)													M/F		
Weeding(3rd)													M/F		
Harvesting															
Making of tapahan													M		
Dayag / pasaka															
Hauling													M		
Bunot													M		
Batak													M		
Tapa													M/F		
Lugit													M/F		
Tadtad													M/F		
Sacking													M/F		
Hauling to market													M		
Timbang													M/F		

* *Patungsan or seedling preparation: January to March*

LAS NIEVES

A. Production Cycle Calendar for Corn

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Indicate training needed
Fund Sourcing													W		
Plowing													M		
Harrowing													M		
2nd Plowing													M		
2nd Harrowing													M		
Purchase seeds													M/F		
"tudling"													M		
planting													M/F	Y	New Farm Technology
Fertilizing													M/F	Y	Fertilizer Preparation
Spraying (Herbicide)													M		
Fertilizing (side dike)													M/F		
Monitoring													M/F		
Harvesting													M/F		
Shelling & Drying													M		
Marketing													M/F	Y	Marketing Research

NOTE: Price: White Corn - 12.00 Php
Yellow - 7 to 8.00 Php.

60% - Laborers/ no land

Identified Owners:
- Torralba
- Rosales
- Dagondol
- Quintana

NASIPIT

A. Production Cycle Calendar for Rice

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Indicate Training
Land prep.													M	N	
-repair of dikes ,													M	N	
-water mngt./plowing/1st harrowing													M/F	N	
Seedbed prep/soaking seeds w/ insecticide/2ND Harrowing/pulling of seedlings													M/F	N	
Planting													M/F	Y	Distance in planting, season-long training, Palay check
-Spraying of fertilizer (fungicide. insecticide) -watching of maya													M/F	Y	Pest & disease control organic & inorganic production
Harvesting													M	N	
Threshing													M	N	
Hauling													M	N	
Drying													M	N	
Marketing/milling													M/F	N	

NOTE: * Repeating cycle PhilRICE = "Palayamanan"

B. Production Cycle Calendar for Coconut

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Indicate training
Nut selection													M/F	Y	Seed Selection
Nursery establishment													M/F	Y	Nursery establishment & management
Propagation													M/F	N	
Land Prep. -Brushing/clearing													M	N	
-Plowing													M	N	
-Sticking													M	N	
-Hole digging													M	N	
-hauling													M	N	
-planting													M	Y	Pest & disease management
Maintenance -weeding													M/F	N	
-watering													M/F	N	
-fertilizing (basal every 6 mos.)													M/F	N	
Harvesting (1st harvest) (every quarter)													M/F	N	
Marketing													M/F	N	

R.T. ROMUALDEZ

A. Production Cycle Calendar for Rice

	Month of the Year/Period of Production												P*	T*	Indicate Training Needed if T is Yes
Production Activities	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**			
Land Preparation													M	N	
Seedbed prep													M/F	N	
Pulling													M/F	N	
Planting													M/F	N	
Spraying(Herbicide)													M	N	
Fertilizing(1st)													M	N	
Weeding													M/F	N	
Spraying (foliar)													M	N	
Fertilizing (2nd													M	N	
Harvesting													M/F	N	
Threshing													M	N	
Hauling													M	N	
Marketing													M/F	N	

B. Production Cycle Calendar for Coconut

	Month of the Year/Period of Production												P*	T**	Indicate Training Needed if T is Yes
Production Activities	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**			
Land Preparation													M	N	
-"Lampas"													M	N	
-Digging													M	Y	Technique on proper dosage(fertilizer)
-Basal															
Planting													M	N	
Weeding													M	N	
Fertilizing(maintain w/in 3 mos.)5 yrs. after harvest														Y	Proper application of fertilizer(organic)
Intercropping															
-Pineapple													M/F	N	
-cassava													M/F	N	
-Squash													M/F	N	

SANTIAGO

Production Cycle Calendar for Coconut

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P*	T*	Needed Trainings
Seedling Preparation															-Technology development on coconut industry -Coconut Processing
Land Preparation / Brushing / Sunog															
Staking / Digging / Planting															
Maintenance (after 8-10 yrs.)															
Harvesting (every quarter)															
-Saka															
-Tapok															
-Balsa															
-Bunot															
-Counting															
Marketing															

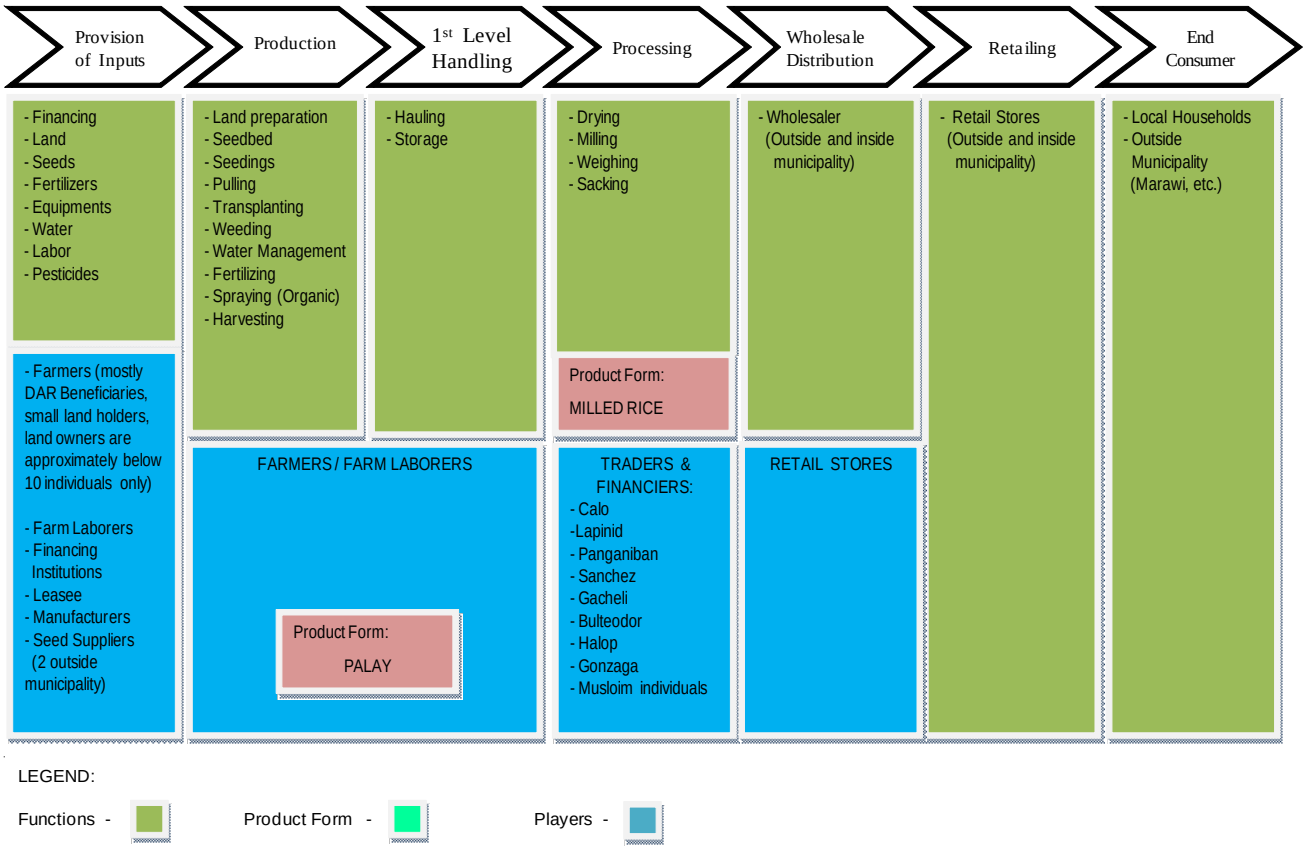
TUBAY

Production Cycle Calendar for Fishing

Activities	J	F	M	A	M	J	J	A	S	O	N	D	P (M/F)	T	Trainings needed
Pump boat making													M	N	
Palit ug makina													M	N	
Palit/himo pukot (pamo)													M/F	N	
Hire kauban (pangisda)													M	N	
Prepare gasoline, ice, muron, ice box, foam and floater													M/F	N	
Fishing													M	N	
Selling													M/F	N	

Value Chain Maps

BUENAVISTA



PRICING:

Planting expenses : 15,000 Php/ Cropping

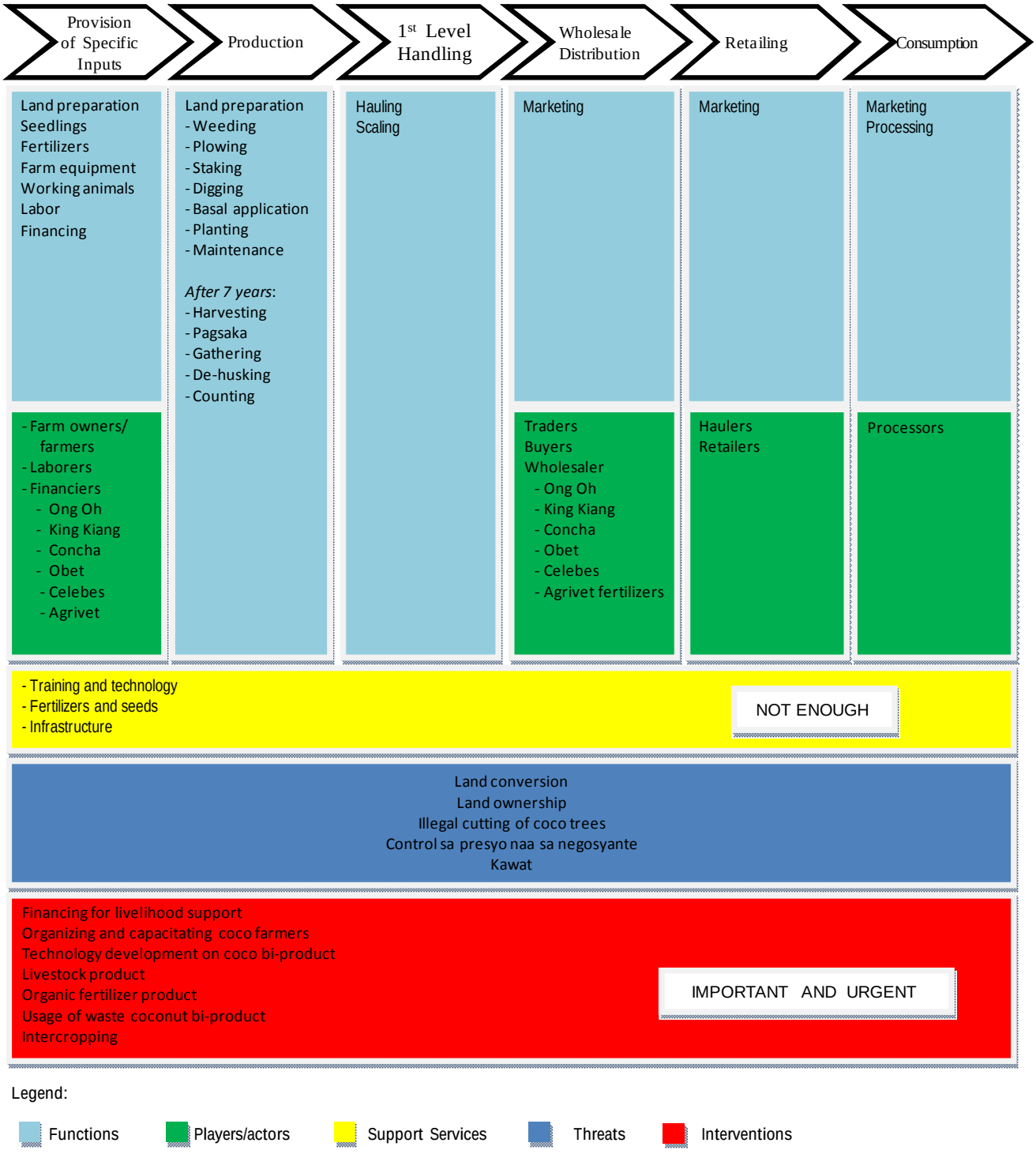
Additional Expenses : - Threshing
- Transportation
- Hauling
- Sharing
- Labor

Palay price : 12.00 Php/kg.
(Farm Gate Price)

Market price : 37.00 Php/kg.

CABADBARAN

Coconut (Whole)



Parking space
No marketing intervention
Buyer depend sa dollar value

Computation
Land preparation

✓ Lampas	
P200/1 person x 10	P 2,000.00
✓ Daro	P 3,000.00
✓ Staking	
P200 x 2 person	P 400.00
✓ Digging	
P200 x 5 person	P 1,000.00
✓ Tungsan seedling	
P30 x 300	P 3,000.00
✓ Tanum	
P200 x 2 person	P 400.00
✓ Hauling	
P200 x 2 person	P 400.00
✓ Maintenance (round weeding quarterly)	
(P200 x 10 person = 2000) 4 x 7 x 2000	P56,000.00
Total	**P66,200.00**

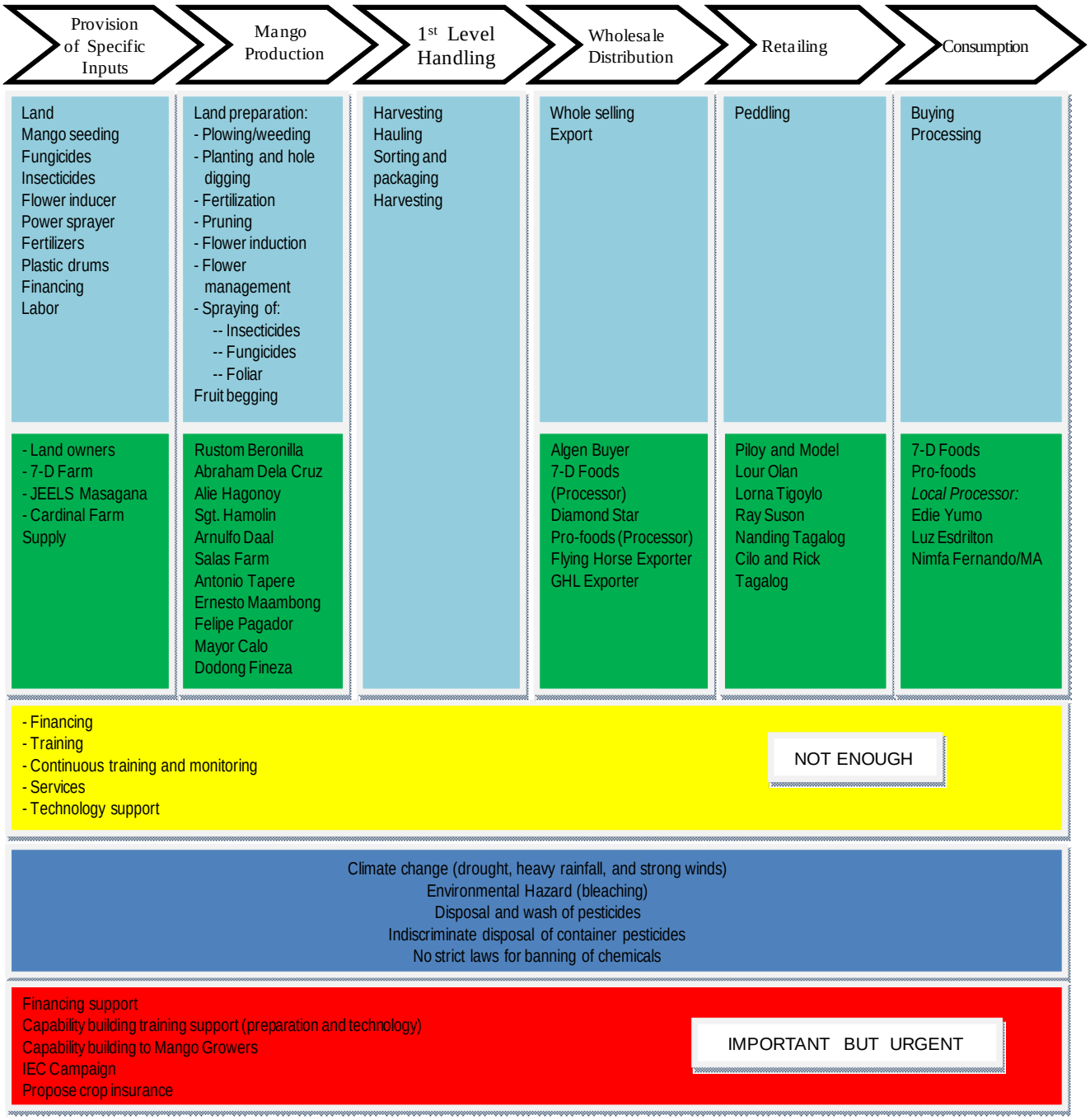
After 7 years

✓ Pagsaka	
P100 x 5	P 500.00
✓ Tapok	
P200 x 2 person	P 400.00
✓ Balsa	P 300.00
✓ Bunot	P 200.00
✓ Labor	P 250.00
Total	**P 1,650.00**

1 coconut = 1kl
Gross income

1000kl x P3.30	P 3,300.00
Total expenses	P 1,650.00
Net income for one harvest	**P 1,650.00**

CARMEN



Legend:

Functions | Players/actors | Support services | Threats | Interventions

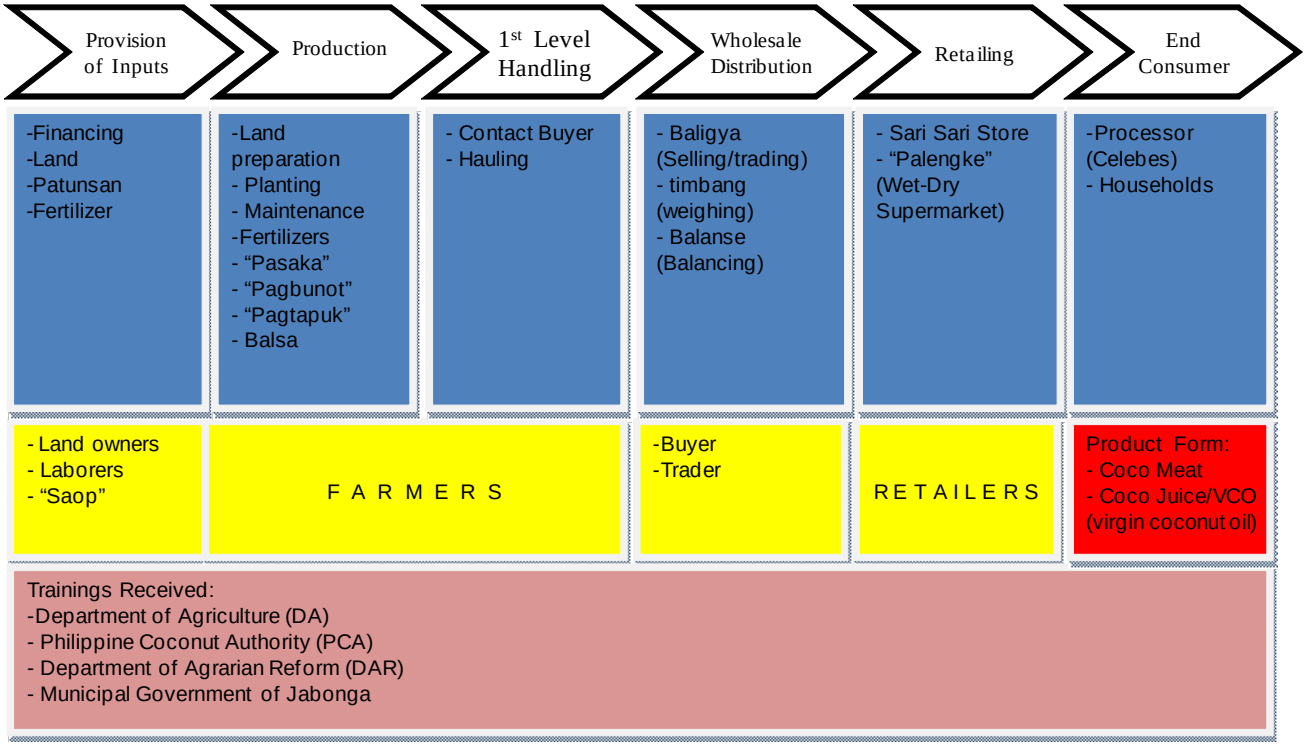
Computation:

1 hectare is 100 seedlings	
Seed (P25 x 100)	P 2,500.00
Clearing 1 (pakyaw)	3,500.00
Plowing (200/carabao x 10)	2,000.00
Clearing 2	2,000.00
Sticking	500.00
Digging	2,000.00
After 5 years	
Weeding (quarterly) P3,500.00 x 20	70,000.00
Plowing	2,000.00
Flower inducer	10,500.00
Labor	400.00
Total	**P 95,400.00**
Spray pesticides, insecticides and fungicides	40,000.00
Bagging (600/bundle x 3)	1,800.00
Stapler	240.00
Staple wire	200.00
Putos (P200 x P600)	
(5 tons x P30/kl)	150,000.00
Total	**P287,640.00**

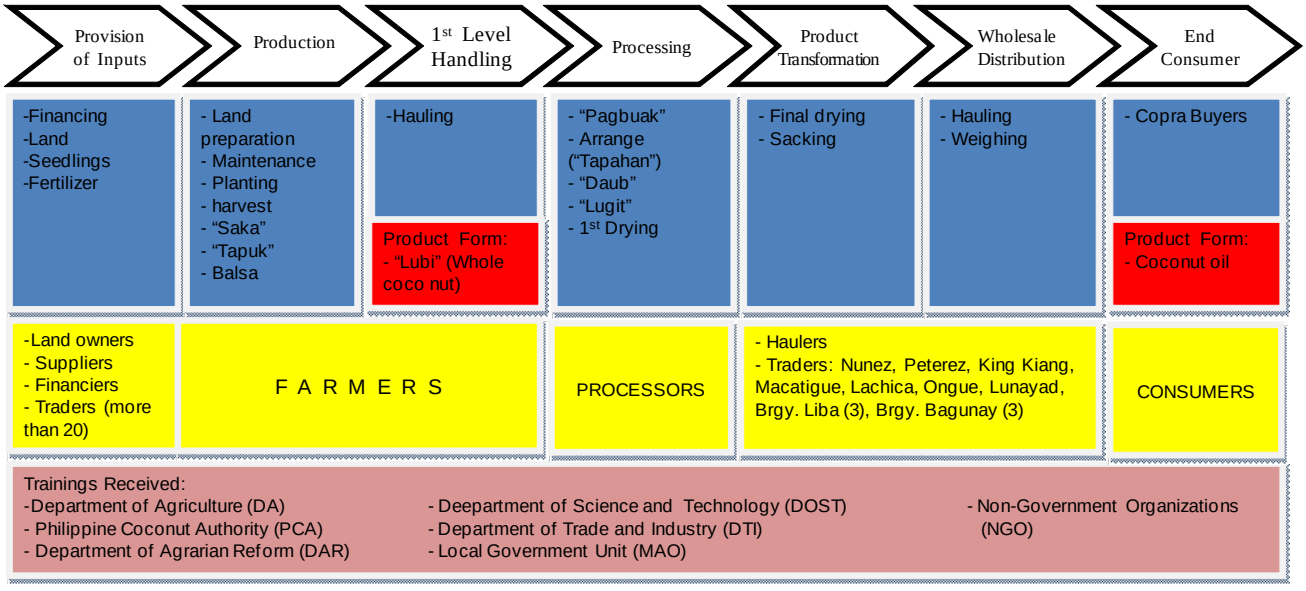
JABONGA

Chosen product: Copra and Coconut ("Tibuok" / Whole Coconut)

Output A: Coconut ("Tibuok" or whole coconut)



Output B: Copra



LEGEND:

Functions - Product Form -

Players - Trainings -

PRICING

Criteria: 1 hectare
100 Trees
Plain land

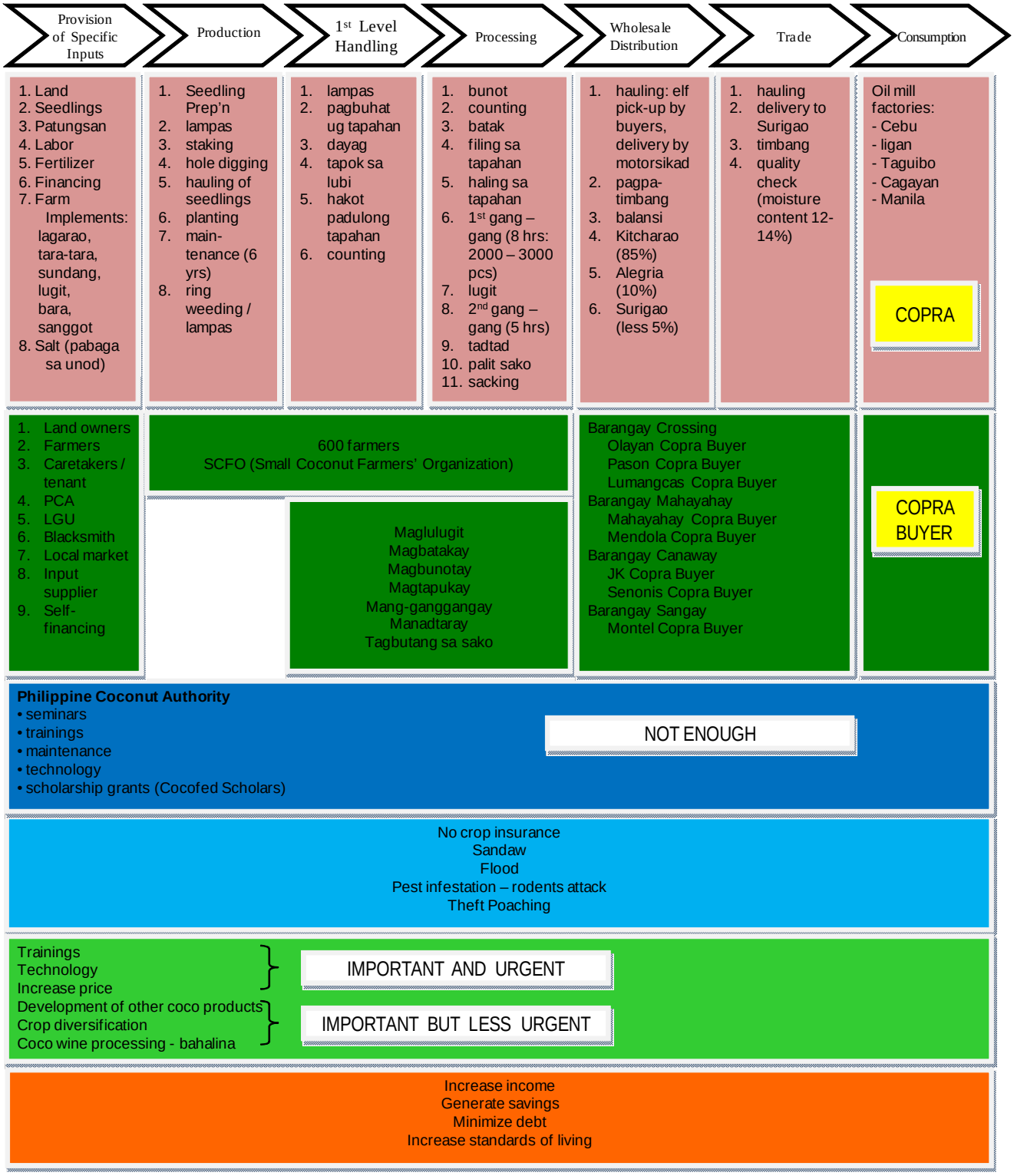
Land Preparation

Brushing (20 persons @ Php 200/person)	- Php 4,000.00
Kabot	
Planting (4 persons)	- 1,500.00
Seedling (15.00)	- 1,500.00
Hauling (carabao)	- 80.00
Pagbuak	- 50.00
Pagluto (48 hrs.)	- 500.00
Resikada	- 17% (standard)
Saka (4.00/tree)	- 200.00
Bunot (20¢ /coconut)¢	- 500.00

Copra Price - 17.50 Php/ Kg. (Surigao)

Gross Income: 87.15 x 17.50 = Php 1,525.00
Less: Additional expenses 1,280.00
Net Income/cropping **245.00** * Note: Excluding Land Preparation:

KITCHARAO



Issues

1. Low / fluctuating price of copra
2. Lack support from LGU
3. High interest from financiers
4. Rampant theft poaching
5. Not enough products
6. Development of coco products

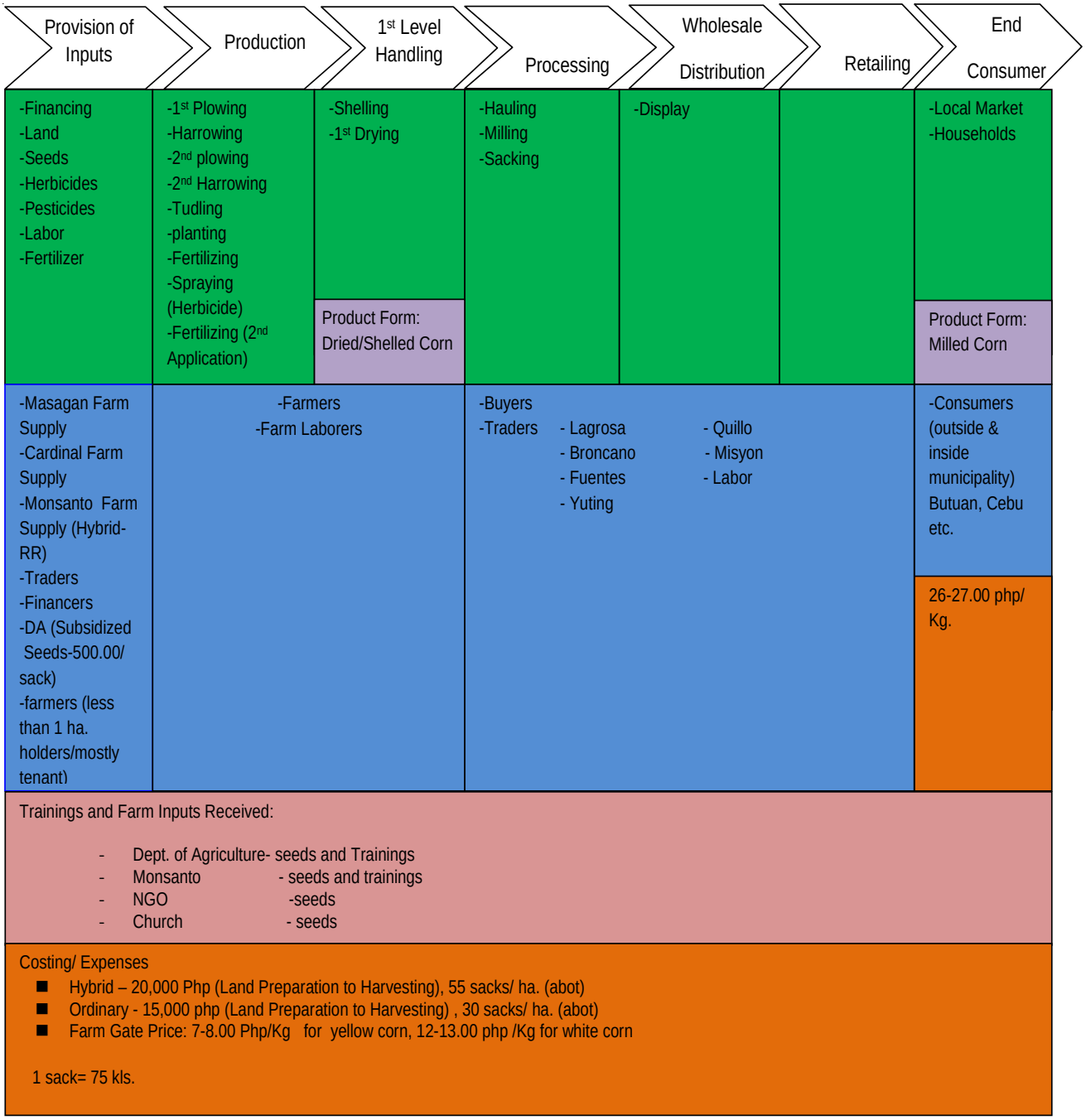
Concerns

Increase price of copra/coconut

Computation:

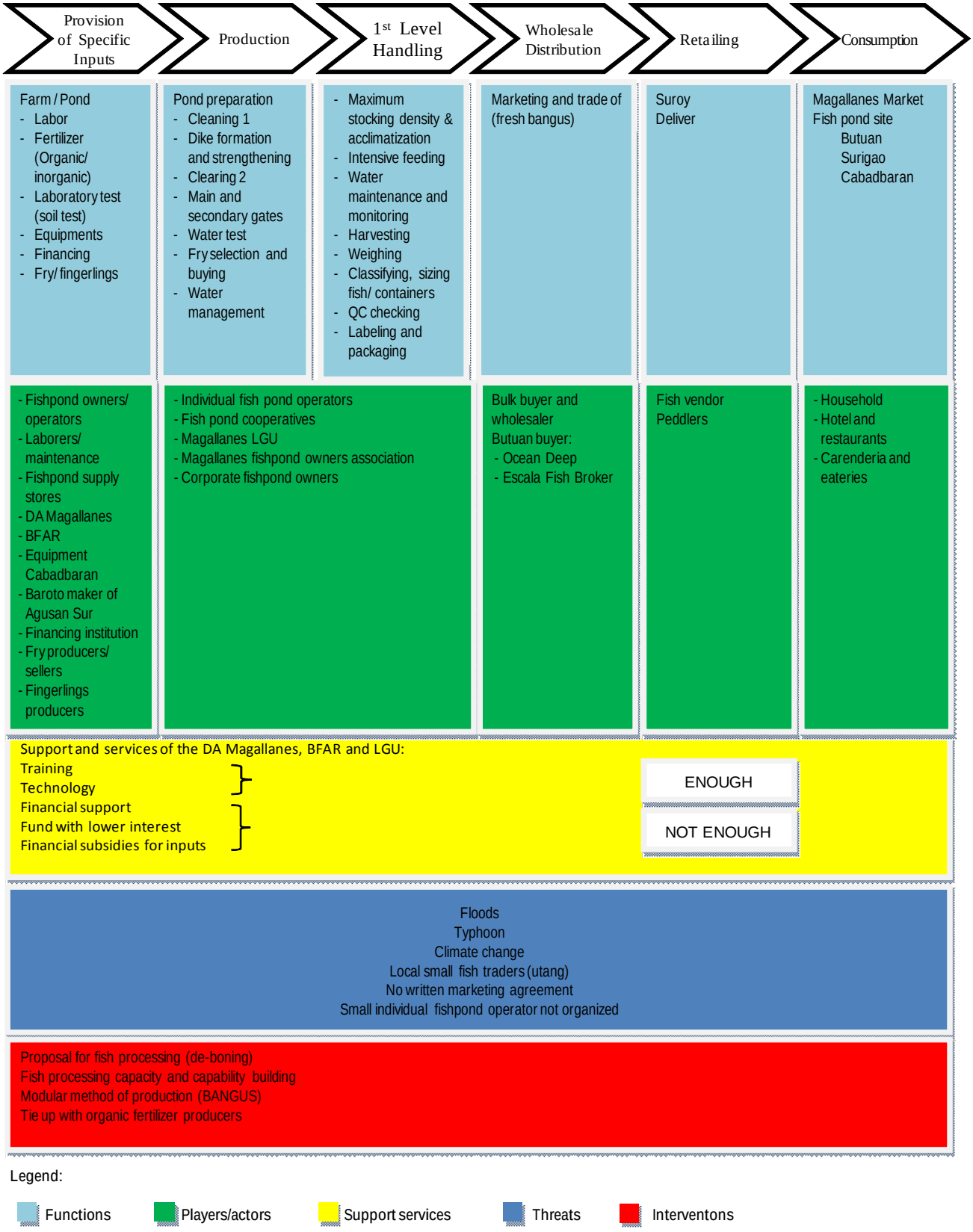
Farmers' Level			Area: 2, 707.74 has
	Production (1 hectare)	-	1, 500 – 1, 600 whole nuts
		-	400 kilos (copra gross)
		-	400 kls * 16% (resikada) = 336 kilos
		-	336 kls * Php 15.00/kl = **Php 5, 040.00**
	Cost of Production		
	Dayag	-	Php 400.00
	Tapok (2 tao)	-	Php 200.00 * 2 = Php 400.00
	Pagbalsa (1 Carabao/1 tao)	-	Php 400.00
	Batak (1 tao)	-	Php 200.00
	Lugit	-	Php 300.00 (pakyaw)
	Food	-	Php 1, 000.00
	Pagtapa	-	Php 200.00/day * 2 days = Php 400.00
	2nd Hauling (tapahan - House)	-	Php 30.00/sack * 8 sacks = Php 240.00
	Fare	-	Php 10.00/sack * 8 sacks = Php 80.00
	Total Cost of production	-	**Php 3, 830.00**
	Net income	-	Production – Cost of Production
		-	Php 5, 040.00 – Php 3, 830.00
		-	**Php 1, 210.00 / hectare / 3 months**
	Employment	-	for every harvesting period, **10 individuals** are hired
Buyer's Level	Palit	-	Php 15.00/kl * 336 kilos = Php 5, 040.00
	Drying (1 tao)	-	Php 100.00/day
	Hauling/Trucking	-	¢ 0.50/kl * 336 kilos = Php 168.00
	Labor (Surigao)	-	Php 22.00
	Ticket	-	¢ 0.50/sack * 9 sacks = Php 4.50
	Other costs	-	Php 50.00
	Total Costs	-	**Php 5, 384.00**
	Income	-	Php 16.00/kl * 336 kilos = **Php 5, 376.00**
	Net income	-	Php 5, 376.00 – Php 5, 384.00 (Negative)
By Volume	5 tons copra (5, 000 kls) @ Php 15.00/kl = Php 75, 000.00		
	Sales: 5, 000 kls * Php 16.00/kl = Php 80, 000.00		
	Expenses: Trucking	-	Php 2, 500.00
	Ticket	-	Php 5.00
	Labor	-	Php 300.00
	Drying Labor	-	Php 300.00
	Traveling	-	Php 300.00
	Total Expenses	-	**Php 3, 405.00**
	Net Income	-	Php 1, 595.00 * 6x/month
-			**Php 9, 570.00/month**

LAS NIEVES


Provision of Inputs
Production
1st Level Handling
Processing
Wholesale Distribution
Retailing
End Consumer
-Financing
-Land
-Seeds
-Herbicides
-Pesticides
-Labor
-Fertilizer
-1st Plowing
-Harrowing
-2nd plowing
-2nd Harrowing
-Tudling
-planting
-Fertilizing
-Spraying (Herbicide)
-Fertilizing (2nd Application)
-Shelling
-1st Drying
Product Form: Dried/Shelled Corn
-Hauling
-Milling
-Sacking
-Display
-Local Market
-Households
Product Form: Milled Corn
-Masagan Farm Supply
-Cardinal Farm Supply
-Monsanto Farm Supply (Hybrid-RR)
-Traders
-Financers
-DA (Subsidized Seeds-500.00/ sack)
-farmers (less than 1 ha. holders/mostly tenant)
-Farmers
-Farm Laborers
-Buyers
-Traders
- Lagrosa
- Broncano
- Fuentes
- Yuting
- Quillo
- Misyon
- Labor
-Consumers (outside & inside municipality) Butuan, Cebu etc.
26-27.00 php/ Kg.
Trainings and Farm Inputs Received:
- Dept. of Agriculture- seeds and Trainings
- Monsanto - seeds and trainings
- NGO -seeds
- Church - seeds
Costing/ Expenses
Hybrid – 20,000 Php (Land Preparation to Harvesting), 55 sacks/ ha. (abot)
Ordinary - 15,000 php (Land Preparation to Harvesting) , 30 sacks/ ha. (abot)
Farm Gate Price: 7-8.00 Php/Kg for yellow corn, 12-13.00 php /Kg for white corn
1 sack= 75 kls.

MAGALLANES

Value Chain Map of Magallanes Bangus



Issues:

Input issues

- Lack of capital
- High cost of production inorganic fertilizer usage
- Fishpond technician expert

Production

- Virus attack due to climate change and pollution

Marketing

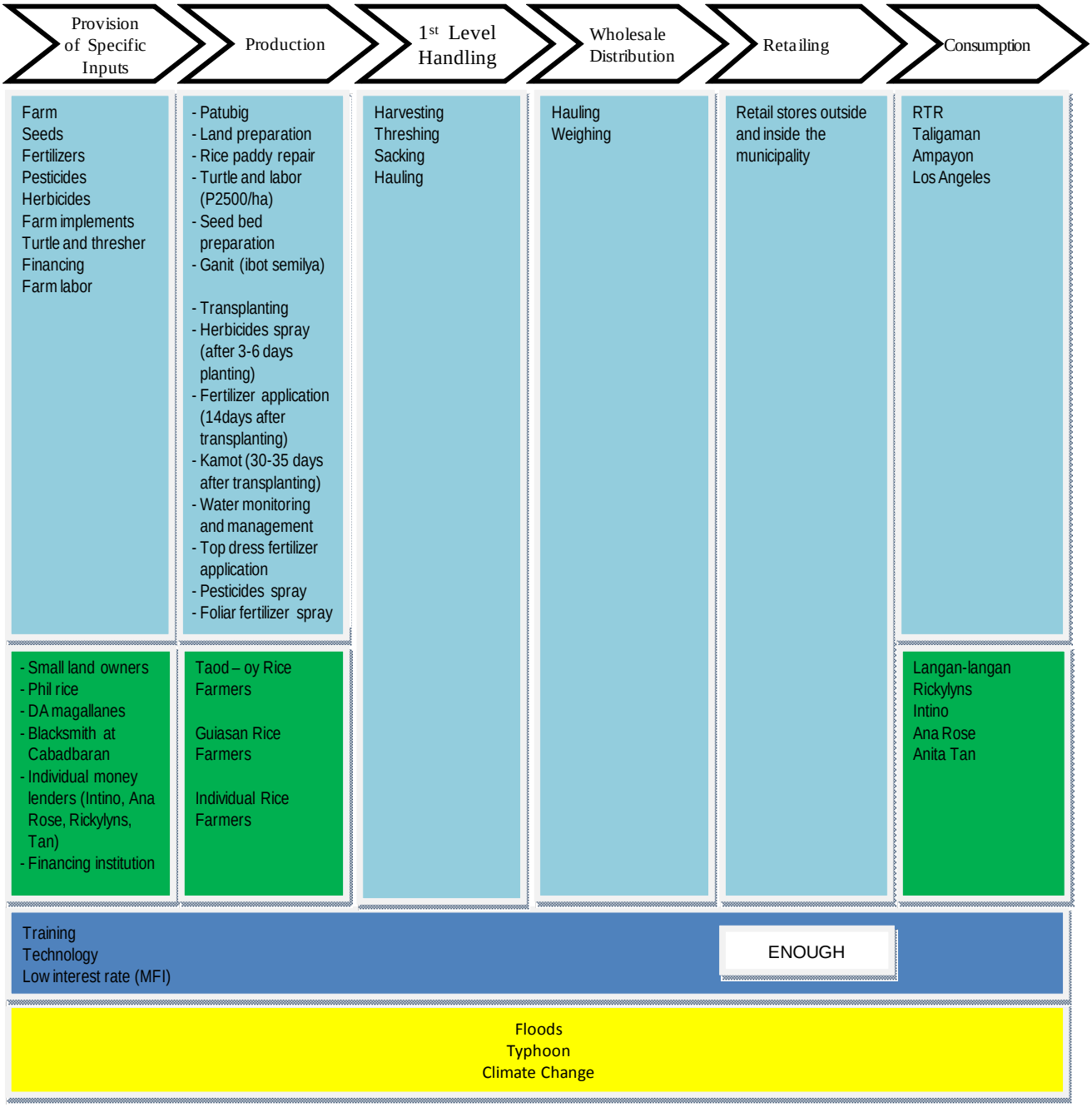
- No ice cold storage facility
- Harvest done mostly at the same time
- Over supply of produce bangus with lower price

COMPUTATION:

Gross sales: harvest	
666kls x 70/kl =	P46,666.20/hectare
Cost	
2000 fingerlings @ 1.70 =	P 3,400.00
Labor cost	
✓ Clearing 1 (120/day)	
2 persons x 5 days =	P 1,200.00
✓ Dike formation and strengthening	
120 x 2 persons x 3 days	P 720.00
✓ Main and secondary gates	P 1,200.00
✓ Clearing 2	
120 x 2 persons x 4 days	P 960.00
✓ Fertilization	
1 sack of urea	P 1,200.00
✓ Detoxifying	
Tea seed powder 1 sack	p 1,100.00
✓ Feeds	
Floater 3 sacks @ 950/sacks	P 2,850.00
✓ Maintenance	
10% of gross	P 4,666.62
	P17,296.62
Total sales	P46,666.62
Total expenses	P17,296.62
Net sales	P29,369.58 / 4months
Monthly income	P7,342.39
Daily income	

Buyer (Magallanes Women's Association)	
100kls @ P90.00/kl	P 9,000.00
Less expense	
✓ Operating capital	P 7,000.00
✓ Fare	
2 person motorized tricycle (pakyaw)	P 200.00
✓ Labor	P 50.00
✓ Ice	P 50.00
✓ Cellophane	P 20.00
✓ Meals	P 100.00
✓ Arkabala	P 50.00
Total cost	P 7,470.00
Net profit	P 1,530.00
Monthly income	P18,360.00
Daily income	P 4,590.00

Value Chain Map of Rice



Legend:

Functions | Players/actors | Support services | Threats

Issues:

- Lack of production capital
- Palay price is controlled by financiers/ traders
- Turtle and threshing provided by the DA no longer operational
- High cost of production
- Defective irrigation system

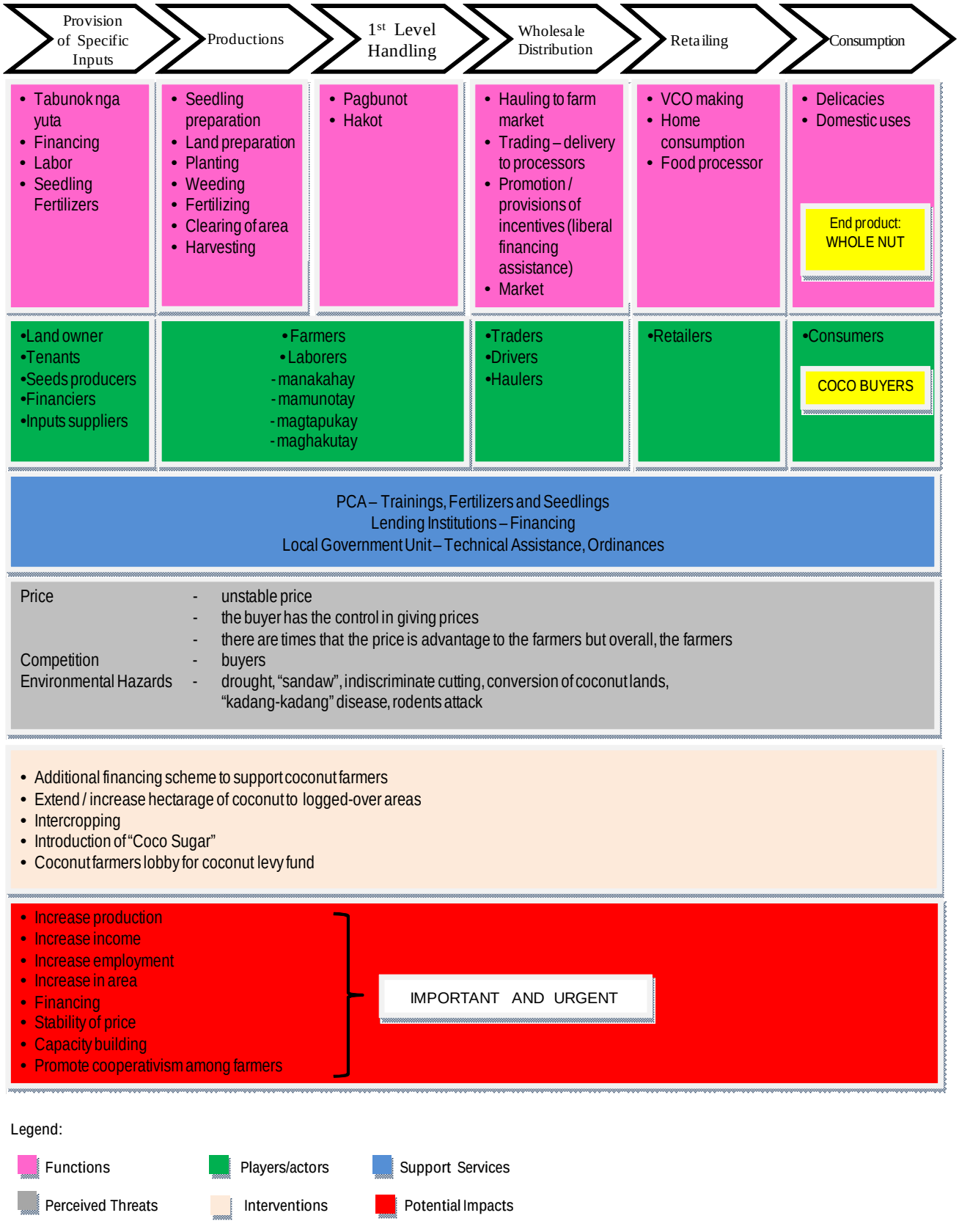
COMPUTATION

Gross harvest

84 sacks @ 50kg/sack @ P13.00/kl	P 54,600.00
Cost of production / interest on loan	P 20,000.00
Total	P 34,000.00 / 6 months
Monthly income	P5,766.66
Daily income	P192.00

NASIPIT

Value Chain Map for Coconut:



Legend:

Functions | Players/actors | Support Services | Perceived Threats | Interventions | Potential Impacts

Computations:
Assumptions - Land Owner

For Land Preparations:

Ready to Plant	-	Php 6, 000.00
Cost/Seedling	-	Php 25.00 (naay turok)
		Php 10.00 (wala pay turok)
# of seedling/hectare	-	100 pcs.
Tanum/day (Labor)	-	Php 150.00 * 8 persons
Pagbangag ug pagtanum	-	Php 30.00 * 10 persons = Php 3, 000.00
Lampas (4x/year) * 7 years	-	28 Lampas
Lampas (labor)	-	[Php 150.00 * 10 persons] * 28 = Php 42, 000.00

Harvesting Expenses:

Pagpasaka (per tree)	-	Php 5.00 * 100 seedlings = Php 500.00
Pagpatapok	-	Php 150.00 * 5 persons = Php 750.00
Pagpabunot (per 100)	-	Php 15.00/100 * 1000 = Php 150.00
Hauling with Food	-	Php 200.00 + [Php 100.00*10 persons] = Php 1, 200.00

Total Harvest Expenses - Php 2, 600.00

Income/Harvest per Hectare
1000 kls/hectare * Php 3.50/kl = Php 3, 500.00

Net Income = Income/Harvest per Hectare – Harvest Expenses
= Php 3, 500.00 – Php 2, 600.00
Net Income = Php 900.00

Note: Only the Harvest Expenses and Farmer's Income per hectare was used in the computation.
Mr. Nene: "Mostly, ang magsaka, mao ra ang magtapok ug magbunot (package)."

For Buyers (Negosyante):
Php 3.50 ang palit sa coconut, Php 0.10/kl ang patong
- Php 3.50 + 0.10 = Php 3.60
- Php 3.60 * 1000 kls = **Php 3, 600.00**

Php 3, 600.00 – Php 3, 500.00 (pagpalit) = **Php 100.00 (net)**

Mark-up price - Php 3.00 tp Php 5.00

Issues:

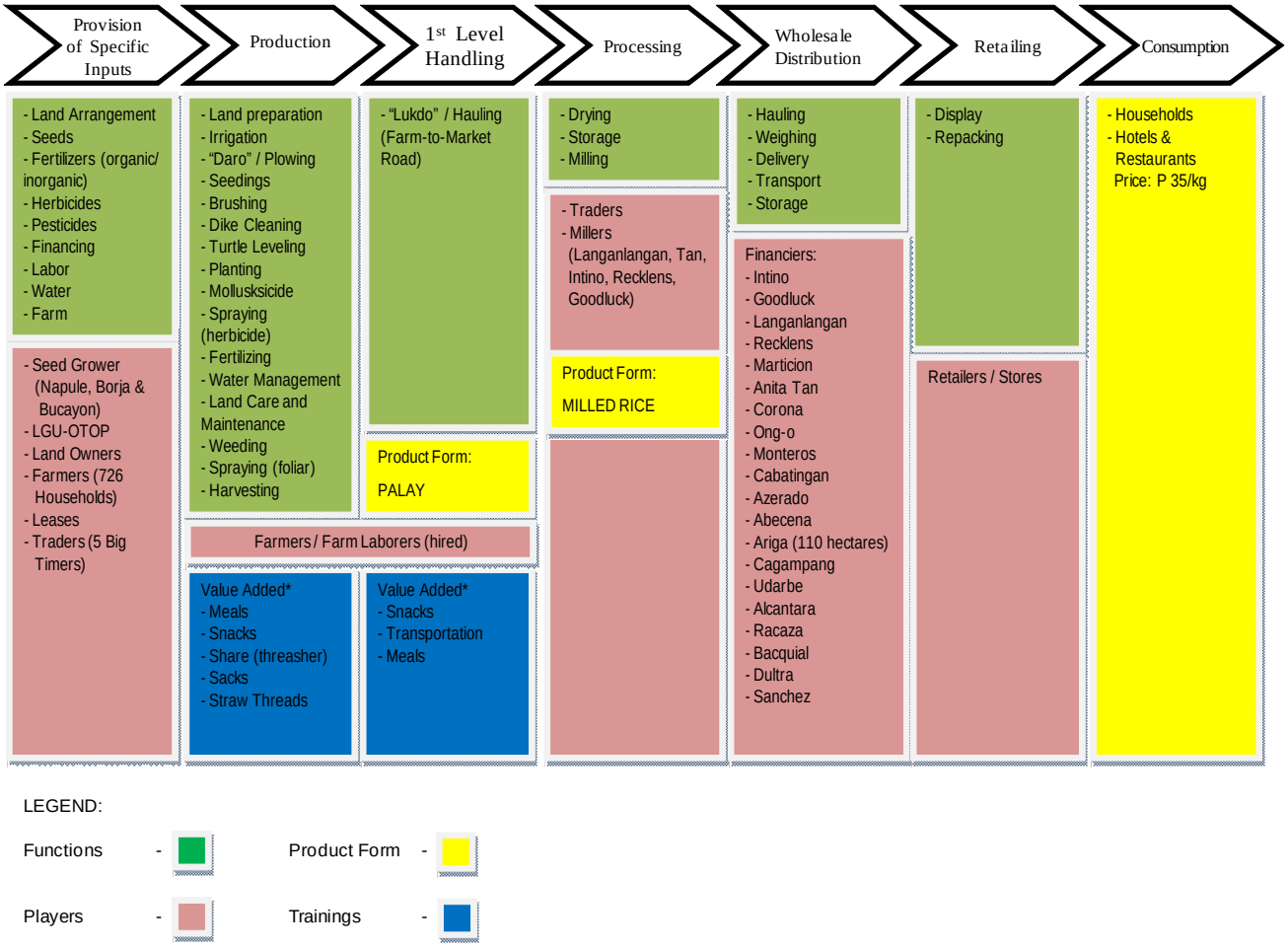
1. Theft Poaching
2. Uncontrollable cutting of coconut trees
3. Cutting of young leaves for wrapping "puso"
4. Farmers are tied up in debt to traders
5. Inra – Farm to Market Road (repair and maintenance)
6. weak enforcement of ordinances / policies

For the whole Nasipit,
1000 kls * Php 3.00 = Php 3, 000.00
Php 3, 000.00 * 3, 252.68 hectares of coconut = **Php 9, 758, 040.00**

Php 9, 758, 040.00 will be divided according to the number of buyers in Nasipit. Three were identified: JR, AGSA, CELEBES.

Php 9, 758, 040.00 / 3 buyers = **P 3, 252, 600.00 each**

R.T. ROMUALDEZ



Suppliers:

- Agrivet
- Placer
- Farm Maintenance (farmers-10% arrangement (gross income))

PRICING:

- Seeds	- Php	1,200.00 / ha. (40 kg/sack)
- Organic Fertilizers (10 sacks)	-	1,500.00
- Ammonium Sulfate (inorganic)	-	700.00
- Labor for "Daro" / Plowing	-	1,600.00
* If Turtle	-	4,300.00 (3 passings)
- "Ganit"	-	1,000.00
- Planting ("Pakyaw")	-	2,500.00
- "Sapil"	-	500.00
- Labor maintenance (water & weeding)	-	10% of their gross income
- Rental (15 bags/ha.)	-	9,750.00
- Price of Palay (as of November 2009)	-	13.00/kg.
- NIA (rental)	-	1,800.00/Ha.

Technology & Trainings received:

- PHILRICE
- ATI
- LGU

Financial Assistance:

- LGU
- DTI – (Promotion of Products-OTOP)
- NEDA

Rules & Regulations:

- Organic Agriculture Implementation
- Burning of rice straw is strictly prohibited

QUESTIONS FOR VALUE CHAIN MAPPING

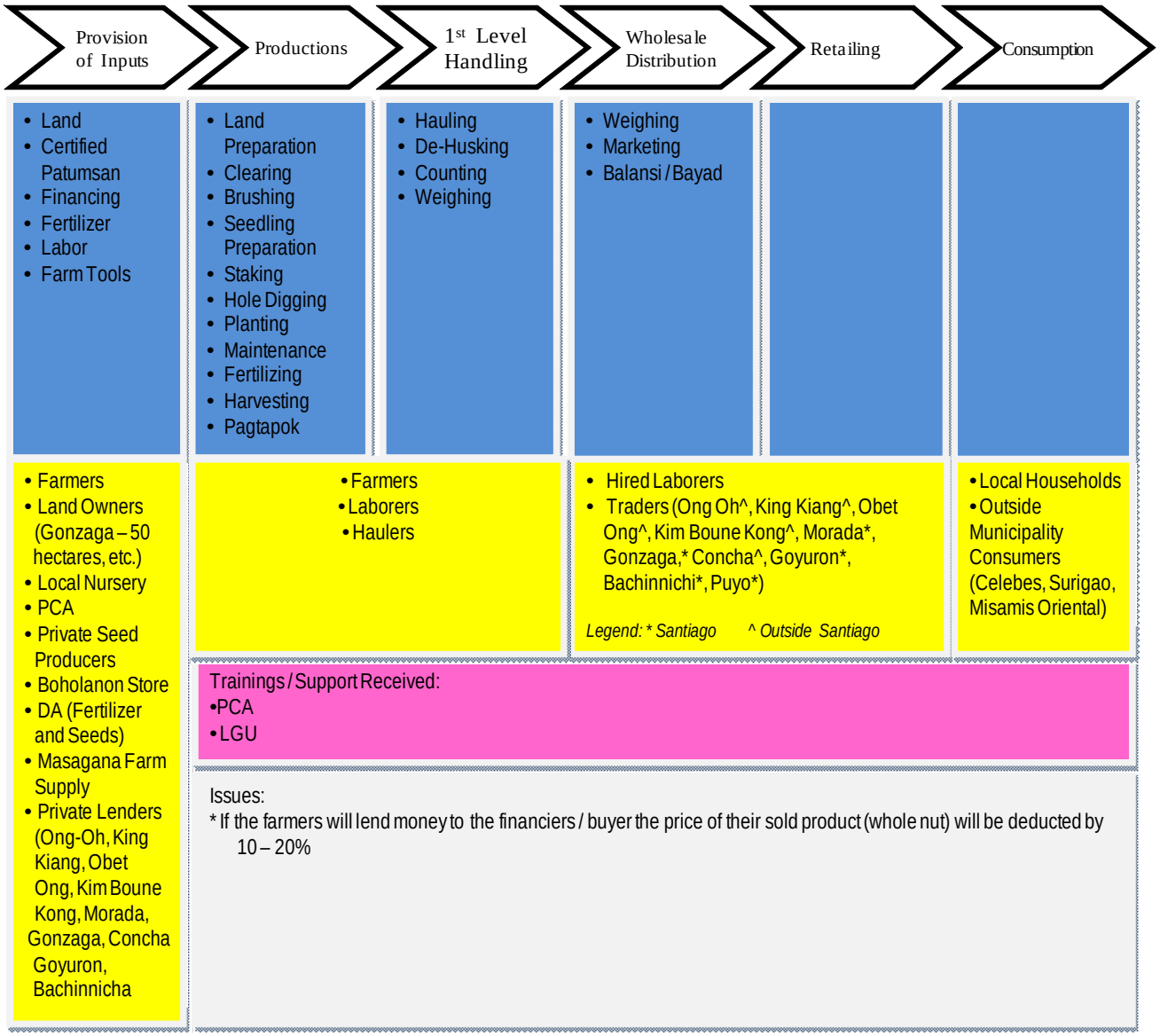
1. Assess the different support services in terms. Are they enough? Not enough?
   Answer: Not enough.
   - In terms of financing ?
   - In terms of water supply ?

2. What are the perceived threats and/or risks? Example: technology, competition, environmental hazards.
   - Less chance to recover / recoup losses
   - Difficulty to improve their income/livelihood (farmers)
   - Walay paglantaw sa kalikasan (Without regard for the environment)
   - Ma-prenda ang basakan (Land are made as loan collateral)

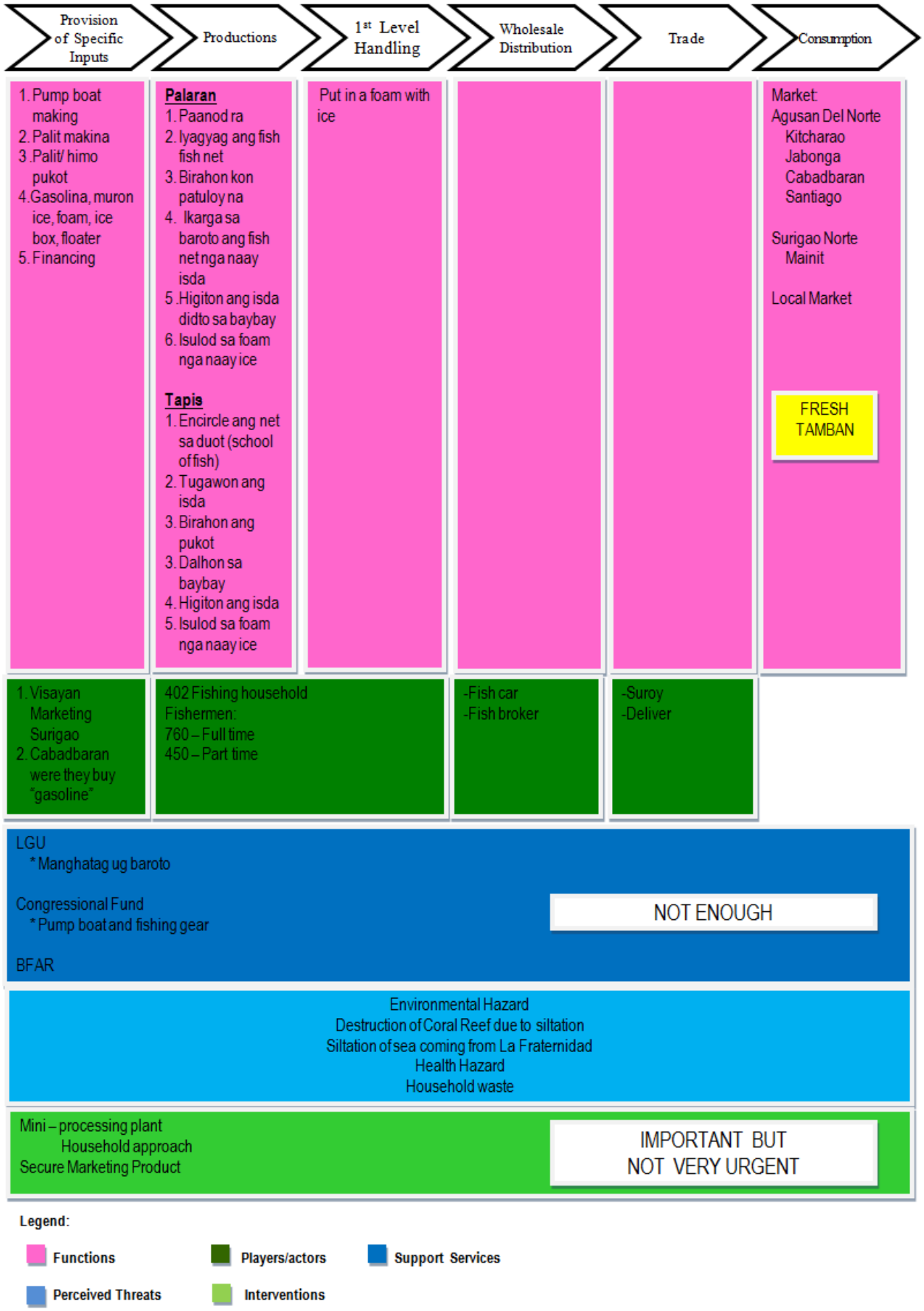
3. What are the areas for intervention? or desired support services for the gaps and the risks? What are the potential impacts of these interventions if given. Classify them either as important and urgent, important but less urgent.
   - Farmers have to manage/ be the processors of their own products
   - Provision of rice mills and capital
   - Ready financing for every cropping period (economy scale)
   - Provision of storage facility

   Impact: Important and urgent

SANTIAGO


Provision of Inputs
Productions
1st Level Handling
Wholesale Distribution
Retailing
Consumption
• Land
• Certified Patumsan
• Financing
• Fertilizer
• Labor
• Farm Tools
• Land Preparation
• Clearing
• Brushing
• Seedling Preparation
• Staking
• Hole Digging
• Planting
• Maintenance
• Fertilizing
• Harvesting
• Pagtapok
• Hauling
• De-Husking
• Counting
• Weighing
• Weighing
• Marketing
• Balansi / Bayad
• Farmers
• Land Owners (Gonzaga – 50 hectares, etc.)
• Local Nursery
• PCA
• Private Seed Producers
• Boholanon Store
• DA (Fertilizer and Seeds)
• Masagana Farm Supply
• Private Lenders (Ong-Oh, King Kiang, Obet Ong, Kim Boune Kong, Morada, Gonzaga, Concha Goyuron, Bachinnicha
• Farmers
• Laborers
• Haulers
• Hired Laborers
• Traders (Ong Oh^, King Kiang^, Obet Ong^, Kim Boune Kong^, Morada*, Gonzaga,* Concha^, Goyuron*, Bachinnichi*, Puyo*)
Legend: * Santiago ^ Outside Santiago
• Local Households
• Outside Municipality Consumers (Celebes, Surigao, Misamis Oriental)
Trainings / Support Received:
•PCA
•LGU
Issues:
* If the farmers will lend money to the financiers / buyer the price of their sold product (whole nut) will be deducted by 10 – 20%

TUBAY


Provision of Specific Inputs
Productions
1st Level Handling
Wholesale Distribution
Trade
Consumption
1. Pump boat making
2. Palit makina
3. Palit/ himo pukot
4. Gasolina, muron ice, foam, ice box, floater
5. Financing
Palaran
1. Paanod ra
2. Iyagyag ang fish fish net
3. Birahon kon patuloy na
4. Ikarga sa baroto ang fish net nga naay isda
5. Higiton ang isda didto sa baybay
6. Isulod sa foam nga naay ice
Tapis
1. Encircle ang net sa duot (school of fish)
2. Tugawon ang isda
3. Birahon ang pukot
3. Dalhon sa baybay
4. Higiton ang isda
5. Isulod sa foam nga naay ice
Put in a foam with ice
Market:
Agusan Del Norte
Kitcharao
Jabonga
Cabadbaran
Santiago
Surigao Norte
Mainit
Local Market
FRESH TAMBAN
1. Visayan Marketing Surigao
2. Cabadbaran were they buy "gasoline"
402 Fishing household
Fishermen:
760 – Full time
450 – Part time
-Fish car
-Fish broker
-Suroy
-Deliver
LGU
* Manghatag ug baroto
Congressional Fund
* Pump boat and fishing gear
BFAR
NOT ENOUGH
Environmental Hazard
Destruction of Coral Reef due to siltation
Siltation of sea coming from La Fraternidad
Health Hazard
Household waste
Mini – processing plant
Household approach
Secure Marketing Product
IMPORTANT BUT NOT VERY URGENT
Legend:
Functions
Players/actors
Support Services
Perceived Threats
Interventions

Issues:

Incursion of fish sanctuary using compressor from other Municipality
Mabarato ang presyo if dabos ang isda
Big problem in marketing in terms of tamban

Policies:

RA 8550 – Philippine Fisheries Code
Establishment of Fish Sanctuary
Banning of fish compressor
Regulating net fishing
Prohibiting fishing in Calinawan River at the month of February
Municipal Fisheries Law Enforcement monitoring Team
Registration of fisherfolk
Regulating Establishment of Fish Cage
Municipal Comprehensive Fisheries Ordinance (3rd reading)

Computation

Gross – expense = net
Net : P1,100.00 (divide by fishermen and owner)

Fishermen:

2 share for master fishermen and 1 for the assistant

Method in fishing:

Palaran

80 – 100kls/ P20.00 = P1,600.00

Tapis

500kls/ P7.00 = P3,500.00

Price of Tamban in market:

Agusan Del Norte	
Kitcharao Jabonga Cabadbaran Santiago	P15 – 20/kl
Surigao Norte	P25 – 30/kl
Local Market	P15 – 20/kl

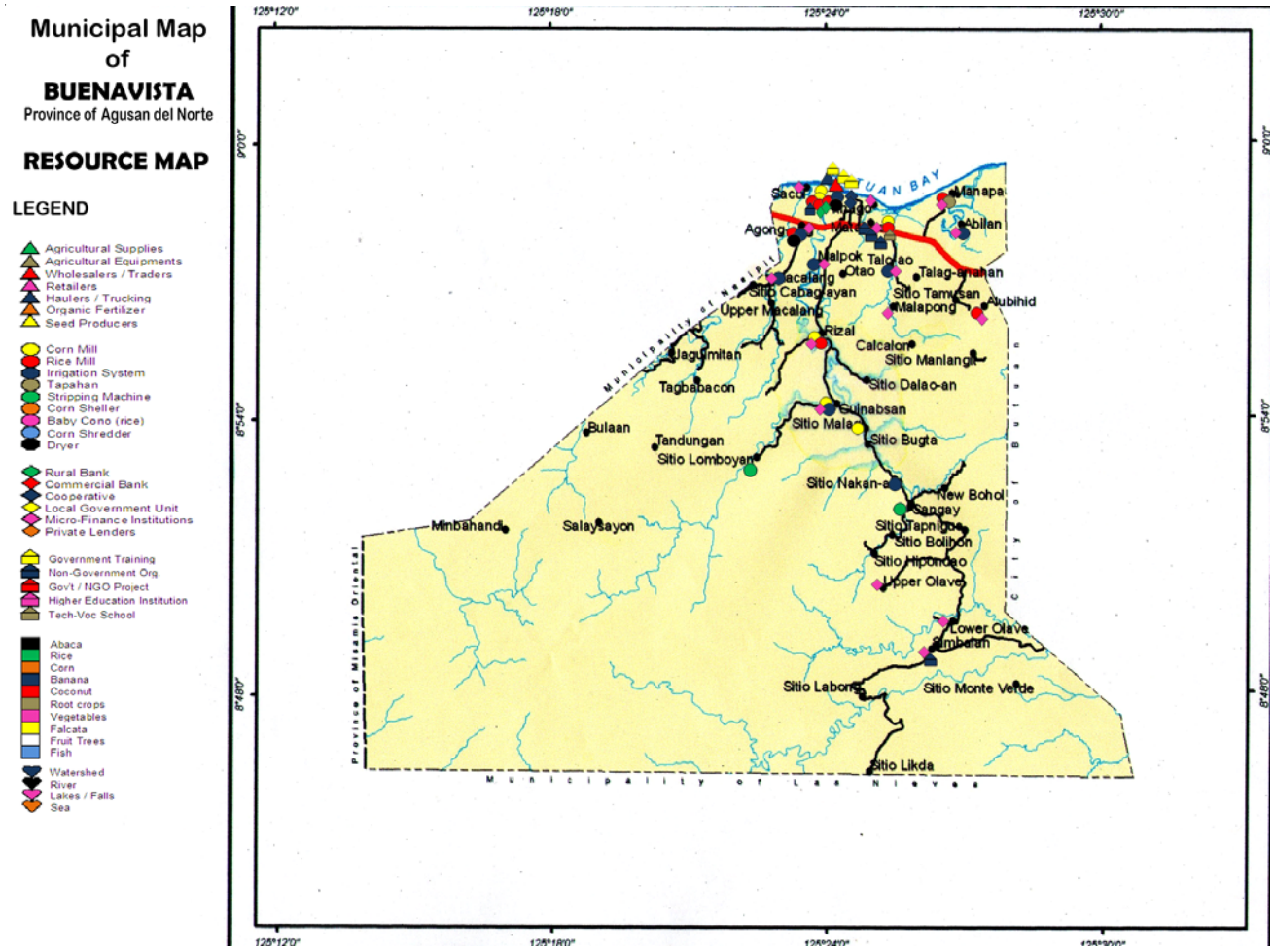
Consolidated List of Permittees

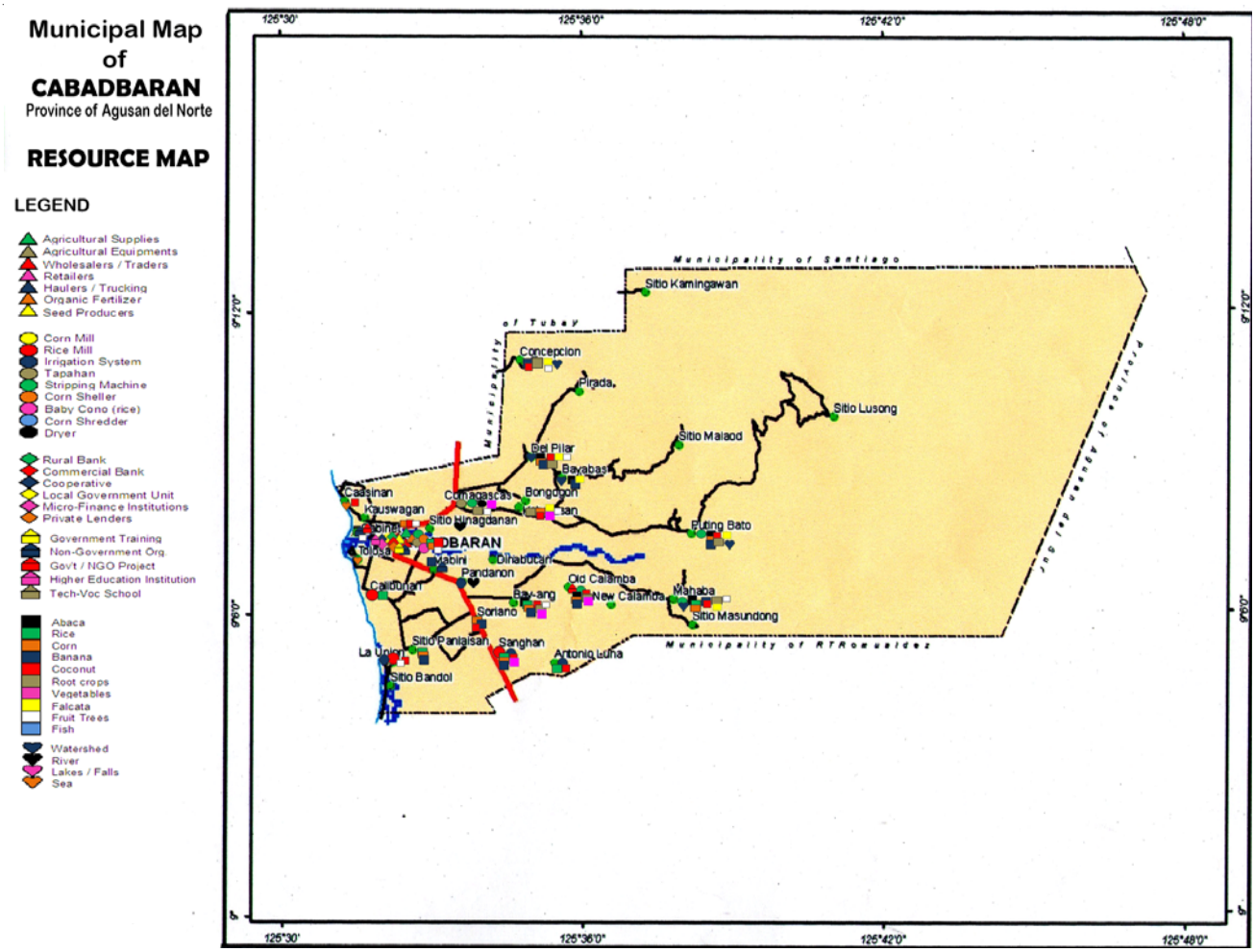
Municipality	Business Permitee	Nature of Business	Status	
			New	Renew
Buenavista	Calo Trading	Copra		✓
	Broadway Enterprise /Conception Jalop	Whole Nut		✓
	William R. Lim / Whole Nut Trader	Whole Nut		✓
	Leonor S. Gasang	2 Chainsaw		✓
	Rodrigo G. Apos	Chainsaw		✓
	Roberto P. Bolongdro	2 Chainsaw	✓	
Cabadbaran	INT Marketing / Ivan Jasper Ngo Ty	Whole Nut		✓
	Ranulfo C. Gella	Whole Nut		✓
	MCC Enterprise / Marina C. Kong	Whole Nut		✓
	CELEBES Coconut Corporation	Coco fiber		✓
	CELEBES Coconut Corporation / Buying Station	Whole Nut		✓
	Mila G. Carlos	2 Chainsaw		✓
	K&N Coconut Buyer / Dinah N. Kasperski	Whole Nut		✓
	Mindanao New Hope	Band saw		✓
	Mindanao New Hope	Coco Lumber		✓
	Ronilo M. Muca	Chainsaw		✓
	Noel S. Kuizon	Chainsaw	✓	
	Leonora Beter	2 Chainsaw		✓
	Balinos Whole Nut Buyer / Arvin Balinos	Whole Nut		✓
	Whole Nut Buyer / Enocencio S. Dagohoy	Whole Nut	✓	
	Rodrigo Dy	Copra Buyer	✓	
	Raykito Kittilstvedt	Copra Buyer	✓	
	Gayoma Charcoal Buyer / Petronilo Gayoma Jr.	Charcoal Buyer		✓
Carmen	Alan Jumao-as	Whole Nut		✓
	Genevive Jumao-as	Whole Nut		✓
	Isabelo Macas	Whole Nut		✓
	Rosita Coñado	Whole Nut		✓
	Luciana Acaso	Copra		✓
	Gemma Pucong	Whole Nut	✓	
	Ismaela Hermosada	Whole Nut		✓
	Gina Grace Copra Trader	Whole Nut / Copra		✓
	Herminia Utlang	Whole Nut		✓
	Copra Trader / Luis Sumaylo	Copra		✓
	Roegelio Ledesma	Copra		✓
	Felipe Tiu	Copra		✓
	AGSA Trading	Copra		✓
Jabonga	Adrialyn Almora	Copra & Raw Coco Buyer		✓
	Nida Angub	Copra Buyer		✓
	Emelia Apiag	Copra Buyer		✓
	Reziel Artjo	Copra Buyer		✓
	Coop Coco Trader / Noli Beltran	Whole Nut		✓
	Paterez Copra Buyer	Copra	✓	
	Mario Beluan	Raw Coco Buyer		✓
	Liezle Bermudez	Storage/Warehouse/ Fish & Shrimp Buyer		✓
	Sebastian Bermudez Sr.	Sand and Gravel		✓
	San Vicente Marketing Center	Cooperative		✓
	Alfredo del Rosario	Rice Mill		✓
	Jake Lapad	Copra Buyer		✓
	Jessie Lumayag Jr.	Raw Coco Buying Station		✓

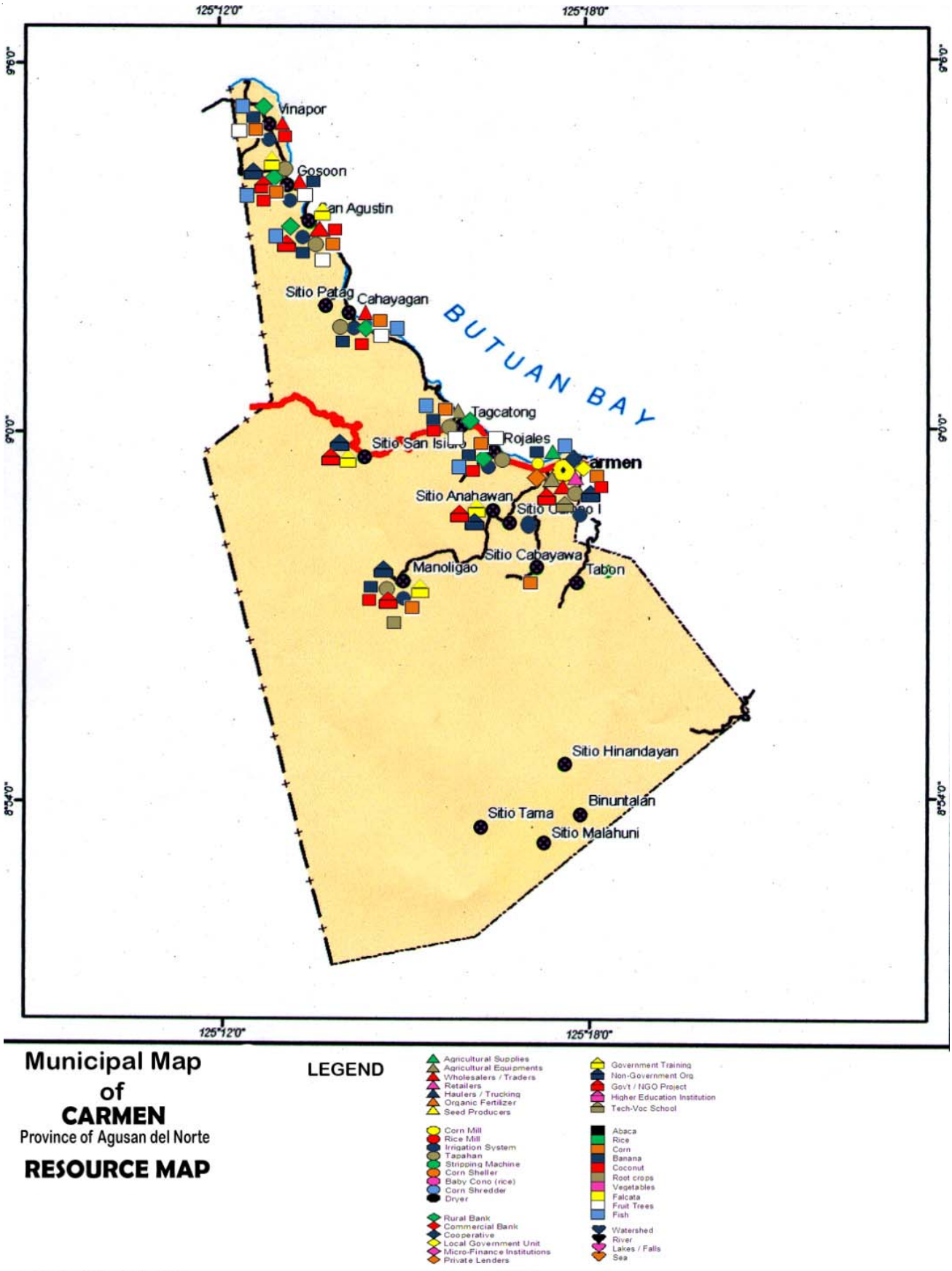
Municipality	Business Permitee	Nature of Business	Status	
			New	Renew
	Jeana Macalolot	Raw Coco Buyer		✓
	Anna Muca	Copra Buyer		✓
	Apolinario Orilla	Rice Mill		✓
	Medardo Paterez	Copra & Charcoal Buyer		✓
	Bernardo Payot	Corn & Rice Mill		✓
	Nora Senones	Copra Buyer		✓
Kitcharao	Sevilla Rice Mill	Rice Mill		✓
	R & L Rice Mill / Ricardo Rulie	Rice Mill		✓
	Noel Ladao	Rice Dealer		✓
	Beltran Copra Buyer / Petronilo Beltran	Copra & Palay Buyer		✓
	Jo & Day Copra Buyer / Jerry Lumangcas	Copra Buyer		✓
	Chiong Palay Buyer / Mepumocino Chiong	Palay Buyer		✓
	New J & N Copra Buyer / Nora Senonis	Copra Buyer		✓
	2J & K Copra Buyer / Loreta Montil	Copra Buyer		✓
	Sugse Copra Buyer / Danilo Sugse	Copra Buyer		✓
	Ravelo Rice Mill / William Ravelo	Rice Mill		✓
	Polla's Vegetable Corner / Linda Polla	Vegetable Dealer		✓
	Esther Vegetable / Esther Abujon	Vegetable Dealer		✓
	Ugay Store / Roberto Ugay	Rice Dealer		✓
	Reformina Vege Station / Gemma Reformina	Vegetable Dealer		✓
Las Nieves	LGU Ladies Circle Cooperative	Cooperative		✓
	Tinucoran MPC	Multi-purpose Coop		✓
	Rosario SN MPC	Multi-purpose Coop		✓
	Cansulan Farmers MPC	Multi-purpose Coop		✓
	Rosario Agrarian Reform Coop	Agricultural Coop		✓
	Teachers, Retirees, Employees for Economic Sufficiency MPC	Multi-purpose Coop		✓
Magallanes	Sherwin & Richard / Richard Bajao	Pump boat Operator		✓
	Euduardo Balane	Pump boat Operator		✓
	Dioscoro Basnig	Pump boat Operator		✓
	Baug CARP Beneficiaries MPC	Fishpond Operator/Prawn Producer		✓
	Florinda Dispo	Fishpond Operator/Prawn Producer		✓
	Leonardo Dobouzet	Fishpond Operator/Prawn Producer		✓
	Elizabeth Durana	Fishpond Operator/Prawn Producer		✓
	Jilna Hiponia	Prawn Buyer		✓
	Ferdinand Ponce	Fishpond Operator/Prawn Producer		✓
	Henry Teng	Fishpond Operator/Prawn Producer		✓
	Juanito Tiu	Fishpond Operator/Prawn Producer		✓
Nasipit	JRE Marketing / Elias Honculada	Whole Nut / Copra		✓
	Marites Perez	Coco Lumber	✓	
	Melanie Bernaldez	Whole Nut		✓
	Culit Multi-Purpose Cooperative	Whole Nut		✓
	FIL – AN Coco Lumber	Coco Lumber		✓
	FIL – AN Coco Lumber	Chainsaw		✓
	CELEBES Coconut Corporation Buying Station	Whole Nut	✓	
	Carmelita Felias	Chainsaw		✓

Municipality	Business Permitee	Nature of Business	Status	
			New	Renew
	AGSA Trading / Alejandro Agbalog	Whole Nut / Copra		✓
R.T.Romualdez	Coruna's Rice Mill / Erlinda Coruna	Rice Mill		✓
	D&G General Merchandise / Grace de Vera	Coconut Buyer		✓
	FIT Marketing / Florencio Taclay Jr.	Coconut Buyer		✓
	Cusap Vegetable Vendor / Artimia Cusap	Vegetable Vendor		✓
	Christopher Tinoy	Palay / Grain Retailer		✓
	Juanico's Rice Mill / Beny Juanico	Rice Mill		✓
	TFIMPC / Roland Gambet	Rice Mill		✓
Santiago	Mary Ann Mamintas	Coconut Buyer		✓
	Kimboun Cong	Coconut Buyer		✓
	Roel Morada	Coconut Buyer		✓
	Lilia Puyo	Coconut Buyer		✓
	Lito Monte	Coconut Buyer		✓
	Carmen Dela Pina	Coconut Buyer		✓
	Antonio Hallera	Coconut Buyer		✓
	Gary Monteclaro	Coconut Buyer		✓
	Nora Dacer	Coconut Buyer		✓
	M&L Whole Nut Buyer / Belen Animo	Copra	✓	
	Luis Cosinas Jr.	Whole Nut		✓
Tubay	Sta. Ana Lending Association	Multi-purpose		✓
	Rizalian Association of Mercy	Multi-purpose		✓
	Tubay Fisherfolk and Farmers MPC	Multi-purpose		✓

Municipal Resource Maps


Municipal Map
of
BUENAVISTA
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
Irrigation System
Tapahan
Stripping Machine
Corn Sheller
Baby Cono (rice)
Corn Shredder
Dryer
Rural Bank
Commercial Bank
Cooperative
Local Government Unit
Micro-Finance Institutions
Private Lenders
Government Training
Non-Government Org.
Gov't / NGO Project
Higher Education Institution
Tech-Voc School
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
125°12'0"
125°18'0"
125°24'0"
125°30'0"
9°0'0"
8°54'0"
8°48'0"
TUAN BAY
Sacol
Manapa
Agong
Abilan
Malpok
Talo-ao
Otao
Talag-anahan
Sitio Cabagayan
Sitio Tamugan
Malapong
Upper Macaland
Rizal
Calcalon
Sitio Manlangit
Tagbabacon
Sitio Dalao-an
Sulnabsan
Sitio Mala
Bulaan
Tandungan
Sitio Bugta
Sitio Lomboyan
Sitio Nakan-a
New Bohol
Sangay
Minbahand
Salay-sayon
Sitio Tapnigon
Sitio Bolibon
Sitio Hipondao
Upper Olave
Lower Olave
Sitio Monte Verde
Sitio Likda
Municipality of Las Nieves
Province of Misamis Oriental
City of Butuan


Municipal Map
of
CABADBARAN
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
Irrigation System
Tapahan
Stripping Machine
Corn Sheller
Baby Corn (rice)
Corn Shredder
Dryer
Rural Bank
Commercial Bank
Cooperative
Local Government Unit
Micro-Finance Institutions
Private Lenders
Government Training
Non-Government Org
Govt / NGO Project
Higher Education Institution
Tech-Voc School
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
125°30'
125°36'0"
125°42'0"
125°48'0"
9°12'0"
9°6'0"
9°
Municipality of Santiago
Municipality of Tubay
Municipality of RTRomualdez
Province of Agusan del Norte
Sitio Kamingawan
Concepcion
Pirada
Sitio Lusong
Sitio Malaod
Bel Pilar
Bayabas
Cassinan
Kauswagan
Comagascas
Bongoson
Sitio Hinagdanan
Buting Bato
CABADBARAN
Tolosa
Mabini
Dihabucan
Pandanon
Old Calamba
New Calamba
Mahaba
Caridonan
Bay-ang
Soriano
Sitio Masundong
Sitio Panlaisan
Sanghan
La Union
Antonio Luna
Sitio Bandol


125°12'0"
125°18'0"
9°6'0"
9°0'0"
8°54'0"
Vinapor
Gosoon
San Agustin
Sitio Patag
Cahayagan
BUTUAN BAY
Tagcatong
Sitio San Isidro
Rojales
Carmen
Sitio Anahawan
Sitio Cabayawa
Manoligao
Tabon
Sitio Hinandayan
Binuntalan
Sitio Tama
Sitio Malahuni
Municipal Map
of
CARMEN
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
Irrigation System
Tapahan
Stripping Machine
Corn Sheller
Baby Cono (rice)
Corn Shredder
Dryer
Rural Bank
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Local Government Unit
Micro-Finance Institutions
Private Lenders
Government Training
Non-Government Org
Gov't / NGO Project
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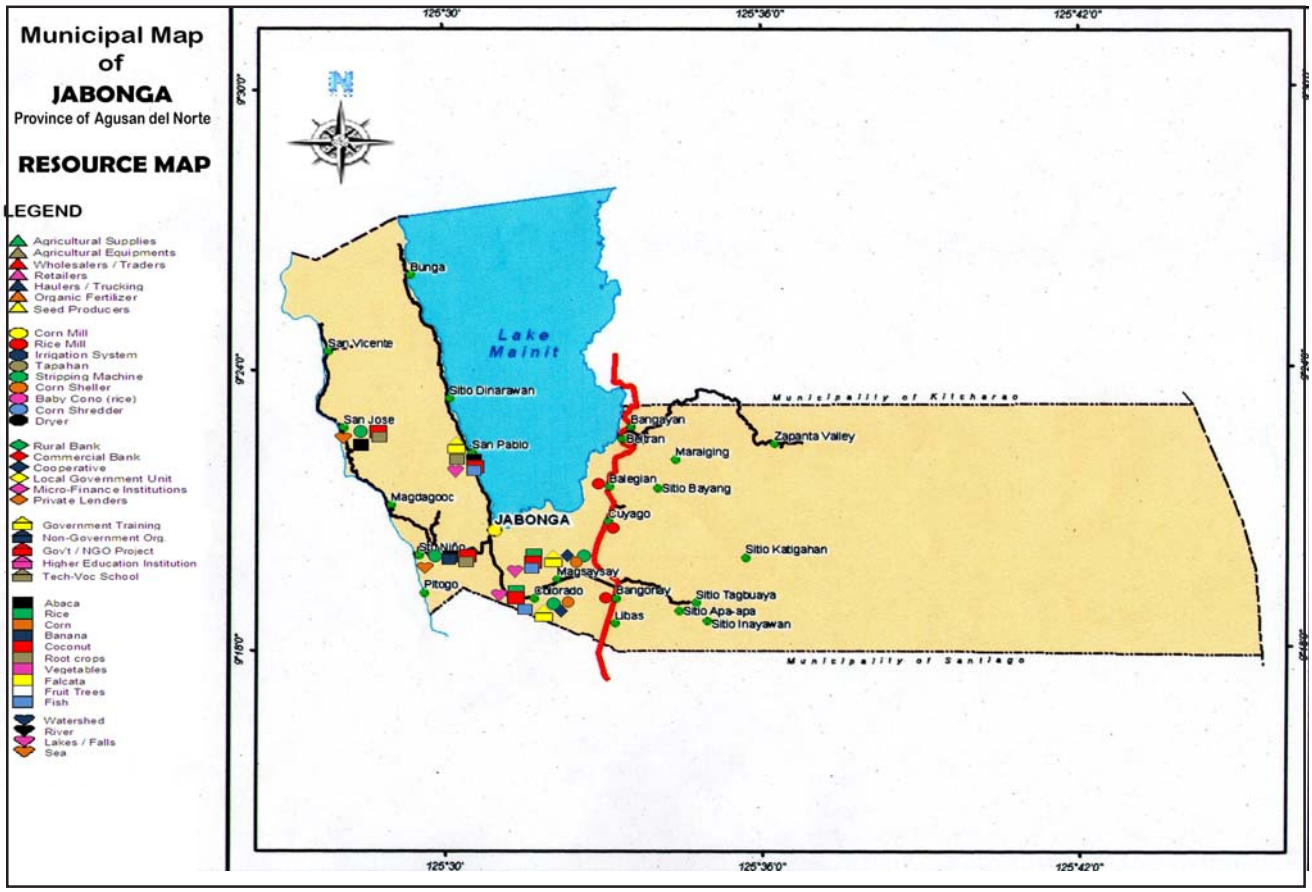
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea


Municipal Map
of
JABONGA
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
Irrigation System
Tapahan
Stripping Machine
Corn Sheller
Baby Cono (rice)
Corn Shredder
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Rural Bank
Commercial Bank
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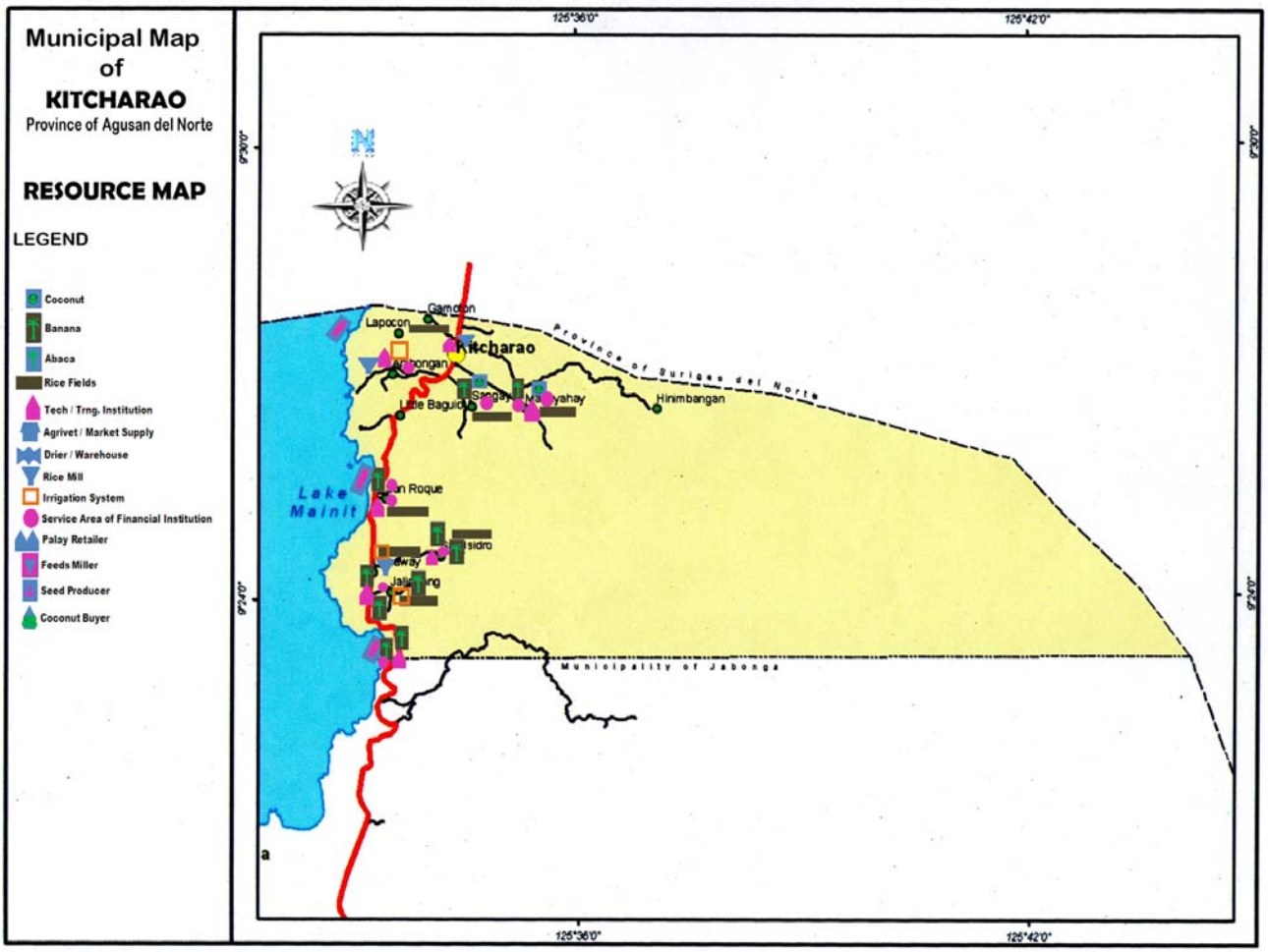
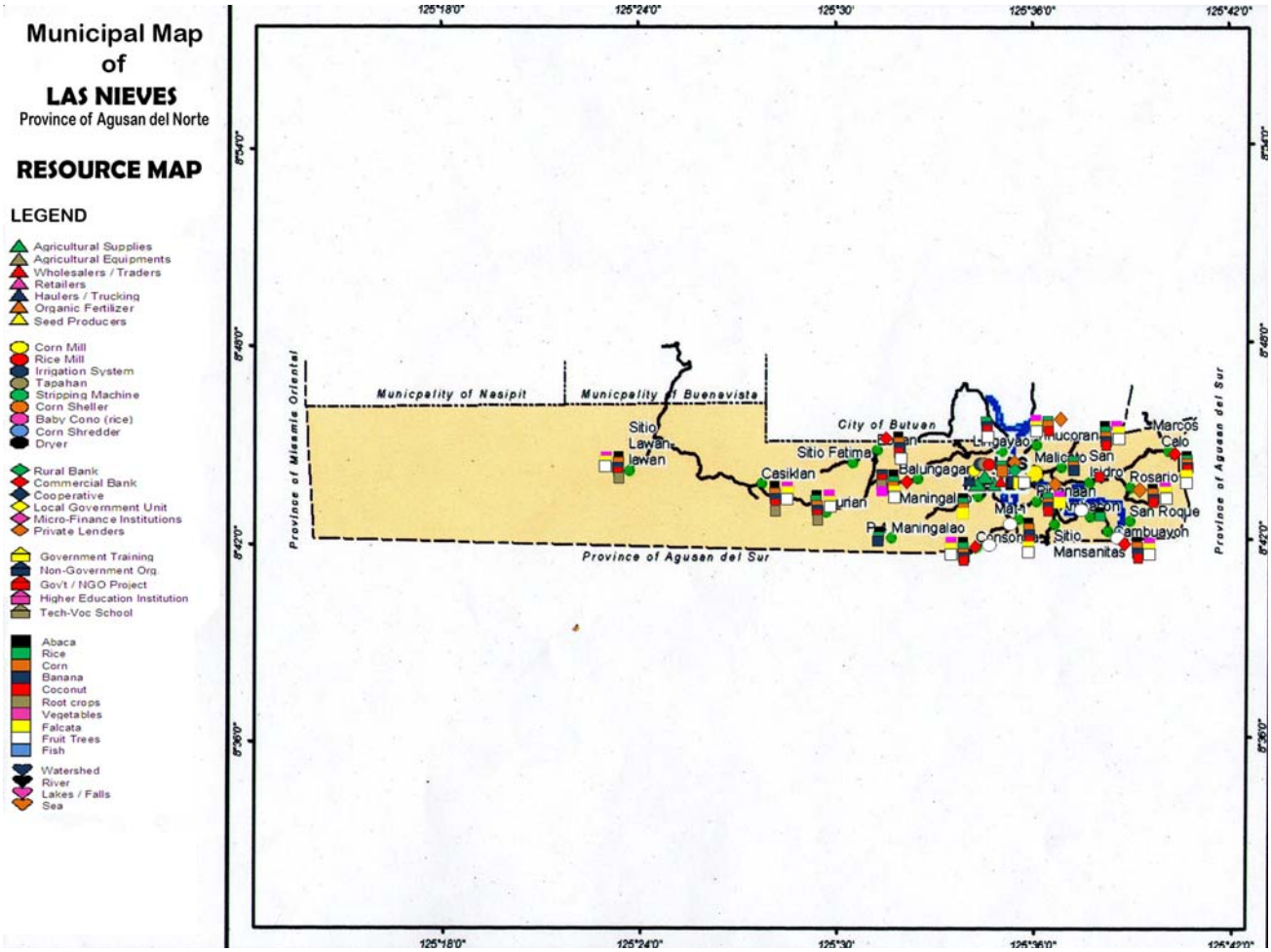
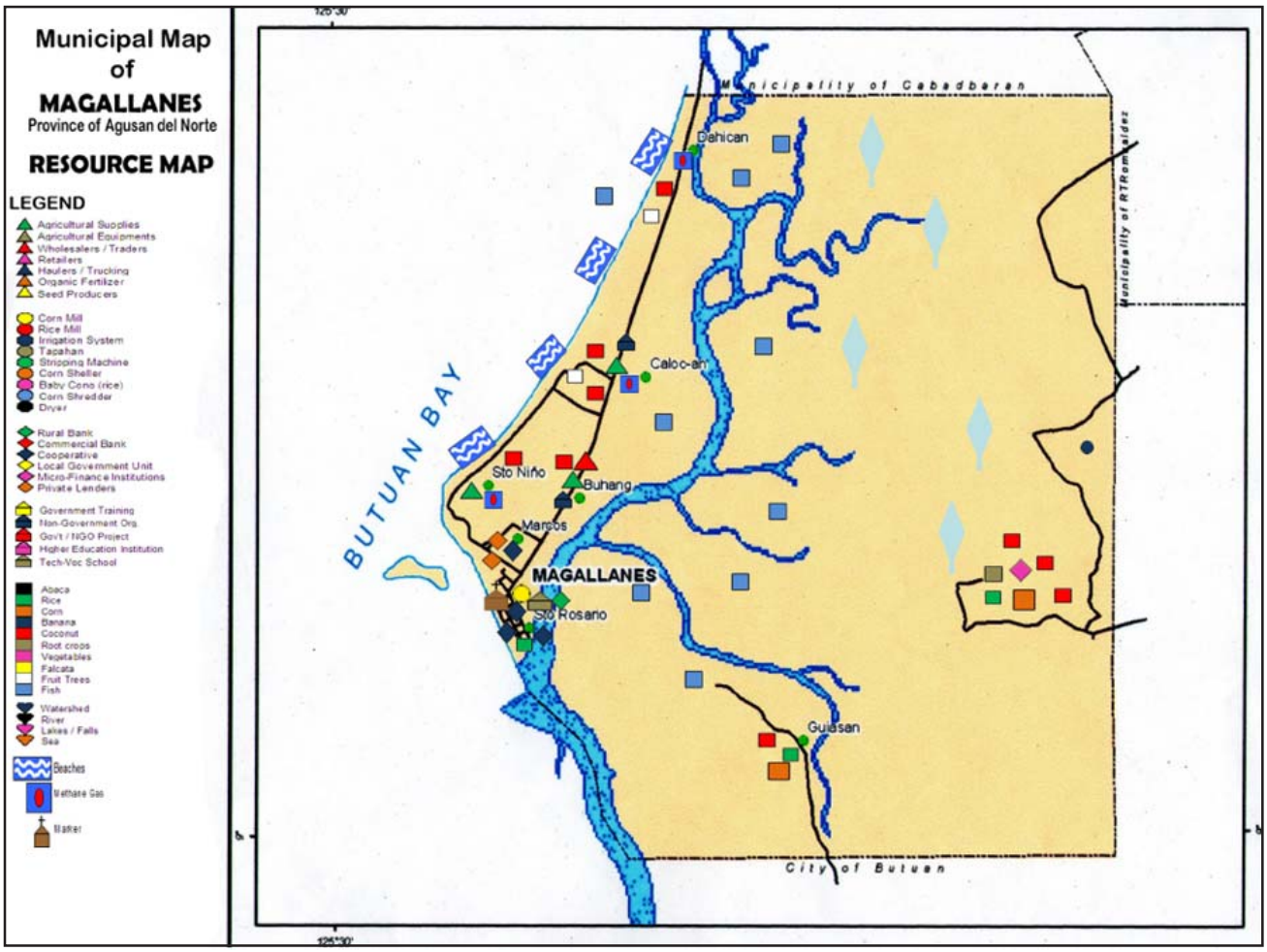
Local Government Unit
Micro-Finance Institutions
Private Lenders
Government Training
Non-Government Org
Govt / NGO Project
Higher Education Institution
Tech-Voc School
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
N
125°30'
125°36'0"
125°42'0"
9°30'0"
9°24'0"
9°18'0"
Lake Mainit
Bunga
San Vicente
Sitio Dinarawan
San Jose
San Pablo
Magdagooc
JABONGA
San Nilo
Pitogo
El Dorado
Magsaysay
Bangonay
Libas
Bangayan
Batran
Maraiging
Zapanta Valley
Balegian
Sitio Bayang
Cuyago
Sitio Katigahan
Sitio Tagbuaya
Sitio Apa-apa
Sitio Inayawan
Municipality of Kitcharao
Municipality of Santiago


Municipal Map
of
KITCHARAO
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Coconut
Banana
Abaca
Rice Fields
Tech / Trng. Institution
Agrivet / Market Supply
Drier / Warehouse
Rice Mill
Irrigation System
Service Area of Financial Institution
Palay Retailer
Feeds Miller
Seed Producer
Coconut Buyer
125°36'0"
125°42'0"
9°30'0"
9°24'0"
Gamogon
Lapocon
Kitcharao
Province of Surigao del Norte
Hinimbangan
Lake
Mainit
Municipality of Jabonga


Municipal Map
of
LAS NIEVES
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
Irrigation System
Tapahan
Stripping Machine
Corn Sheller
Baby Cono (rice)
Corn Shredder
Dryer
Rural Bank
Commercial Bank
Cooperative
Local Government Unit
Micro-Finance Institutions
Private Lenders
Government Training
Non-Government Org
Gov't / NGO Project
Higher Education Institution
Tech-Voc School
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
125°18'0"
125°24'0"
125°30'
125°36'0"
125°42'0"
8°54'0"
8°48'0"
8°42'0"
8°36'0"
Municpality of Nasipit
Municpality of Buenavista
City of Butuan
Province of Misamis Oriental
Province of Agusan del Sur
Province of Agusan del Sur
Sitio Lawan
lawan
Sitio Fatima
Casiklan
Maningalao
Pnd Maningalao
Sitio Mansanitas
Marcos
Celo
Malichio San
Isidro
Rosario
San Roque
Sambuayon


Municipal Map
of
MAGALLANES
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
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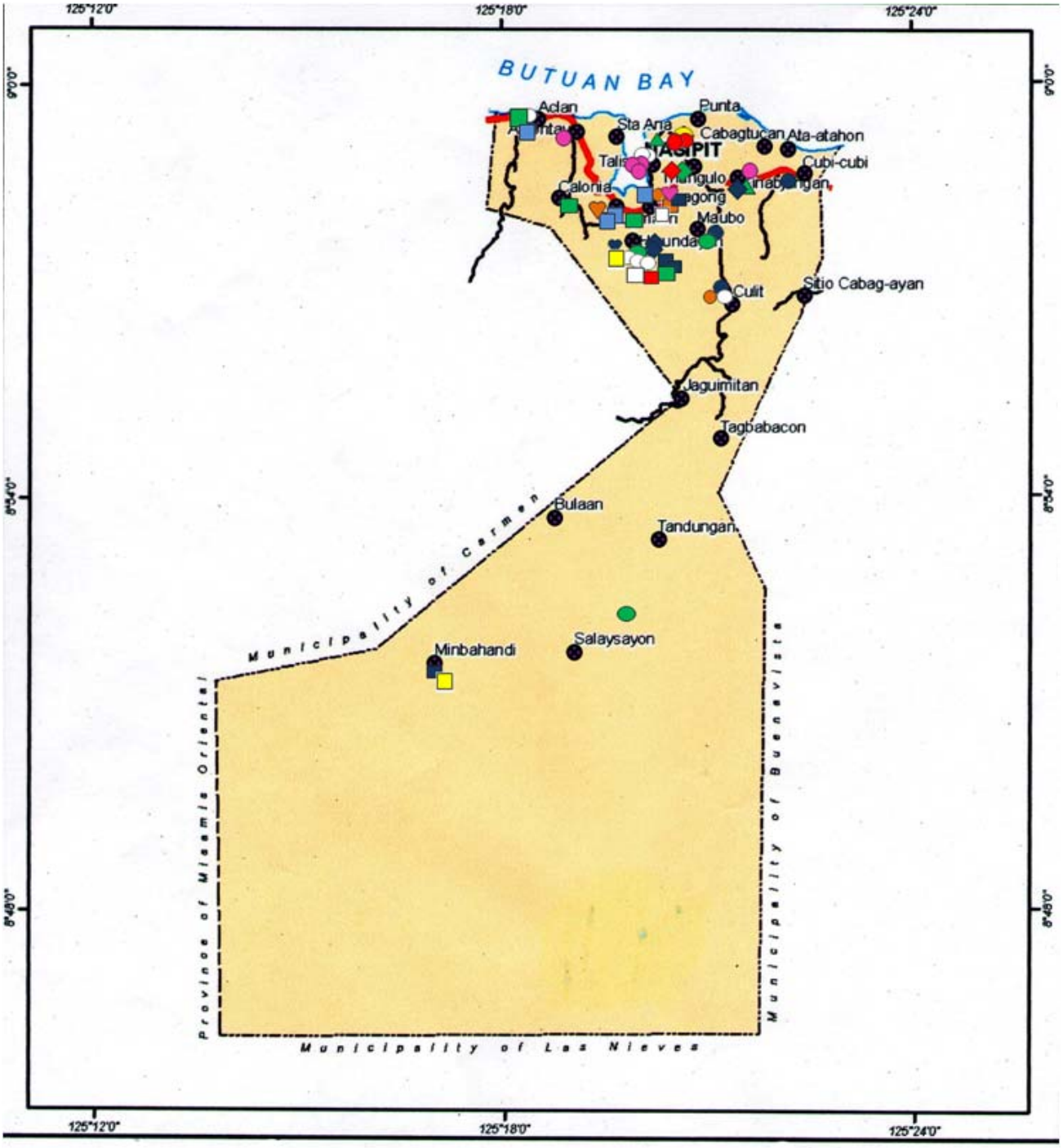
Tech-Voc School
Abaca
Rice
Corn
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
Beaches
Methane Gas
Marker
Municipality of Cabadbaran
Municipality of RTRomualdez
Dahican
Caloc-an
Sto Niño
Buhang
Marcos
MAGALLANES
Sto Rosario
Guiasan
City of Butuan
BUTUAN BAY



Municipal Map of NASIPIT
Province of Agusan del Norte

RESOURCE MAP

LEGEND

- Agricultural Supplies
- Agricultural Equipments
- Wholesalers / Traders
- Retailers
- Haulers / Trucking
- Organic Fertilizer
- Seed Producers
- Corn Mill
- Rice Mill
- Irrigation System
- Tapahan
- Stripping Machine
- Corn Sheller
- Baby Cono (rice)
- Corn Shredder
- Dryer
- Rural Bank
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- Cooperative
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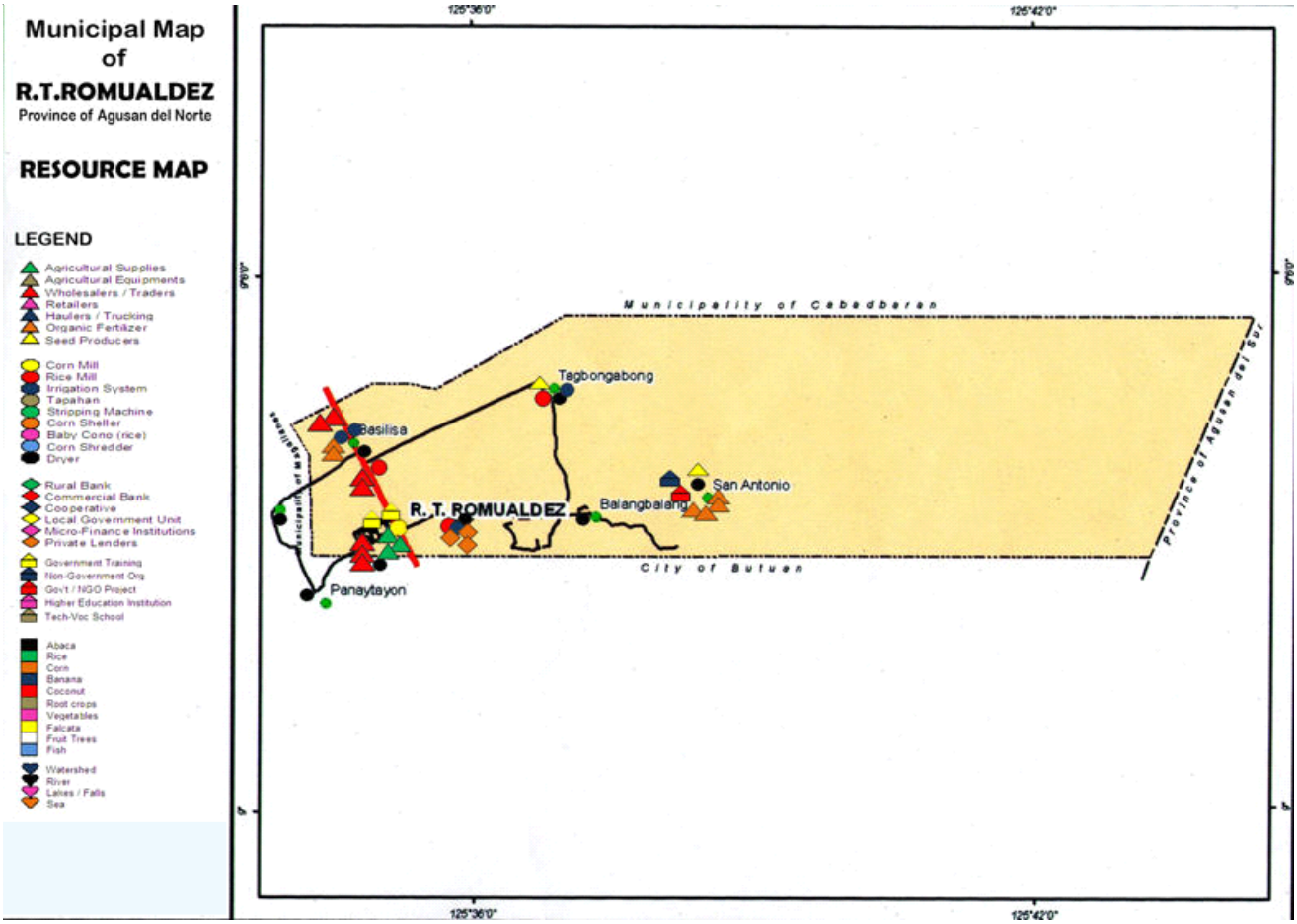
- Government Training
- Non-Government Org
- Gov't / NGO Project
- Higher Education Institution
- Tech-Voc School
- Abaca
- Rice
- Corn
- Banana
- Coconut
- Root crops
- Vegetables
- Falcata
- Fruit Trees
- Fish
- Watershed
- River
- Lakes / Falls
- Sea


Municipal Map
of
R.T.ROMUALDEZ
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
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Stripping Machine
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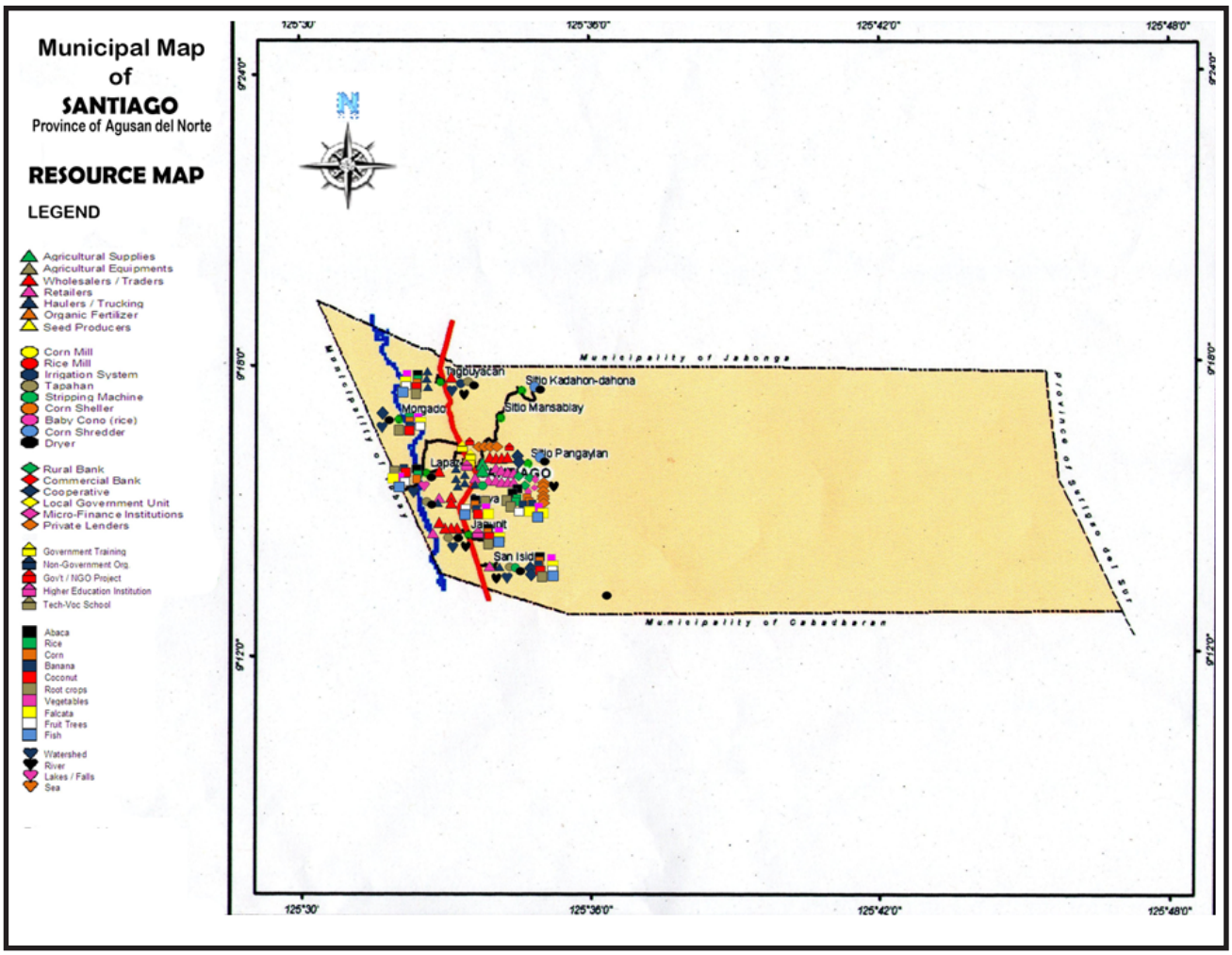
Banana
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
125°36'0"
125°42'0"
Municipality of Cabadbaran
Tagbongabong
Basilisa
San Antonio
R. T. ROMUALDEZ
Balangbalang
City of Butuan
Province of Agusan del Sur
Panaytayon


Municipal Map
of
SANTIAGO
Province of Agusan del Norte
RESOURCE MAP
LEGEND
Agricultural Supplies
Agricultural Equipments
Wholesalers / Traders
Retailers
Haulers / Trucking
Organic Fertilizer
Seed Producers
Corn Mill
Rice Mill
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Higher Education Institution
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Rice
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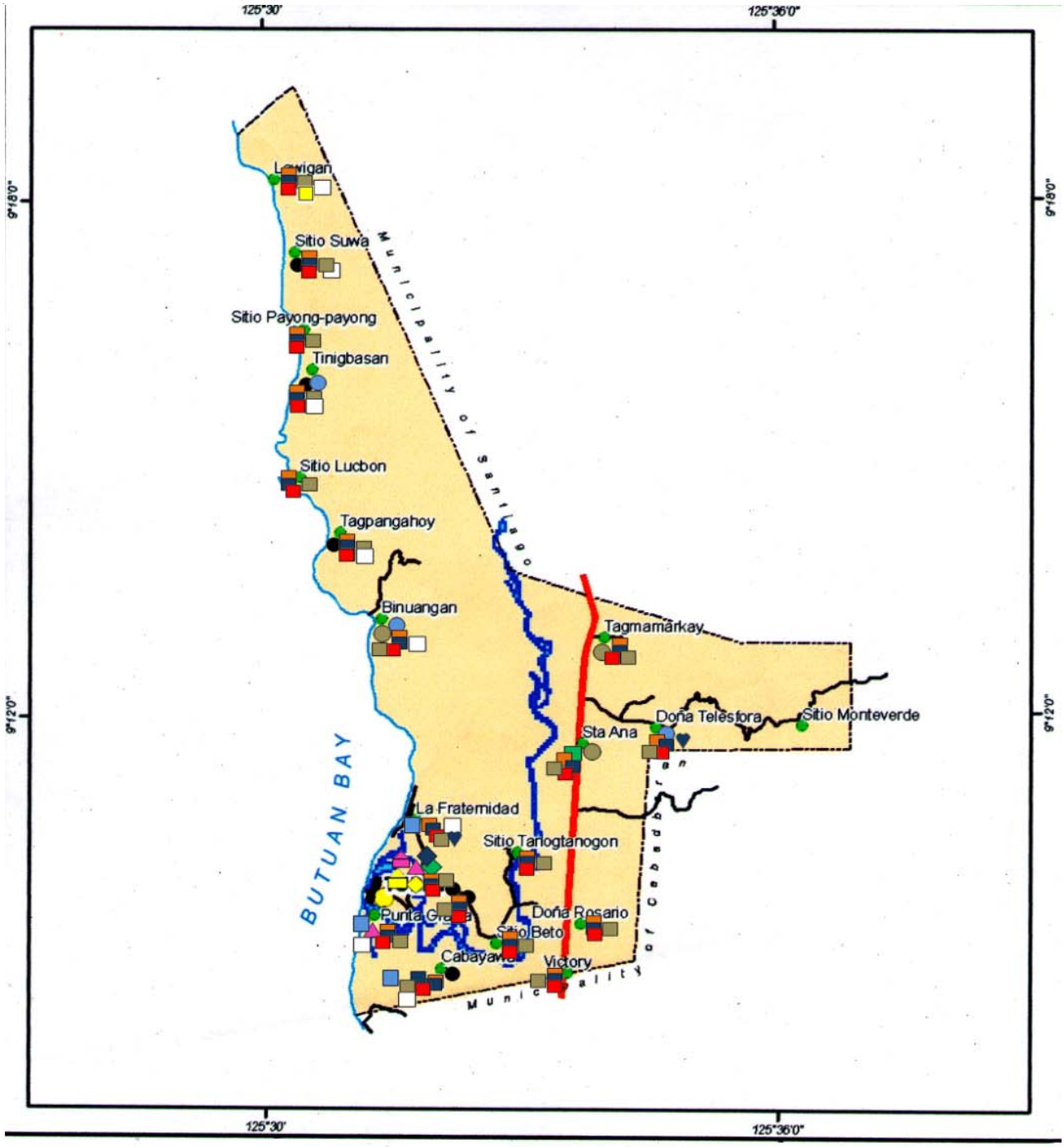
Coconut
Root crops
Vegetables
Falcata
Fruit Trees
Fish
Watershed
River
Lakes / Falls
Sea
125°30'
125°36'0"
125°42'0"
125°48'0"
9°24'0"
9°18'0"
9°12'0"
Municipality of Jabonga
Province of Surigao del Sur
Municipality of Cabadbaran
Tagbuyacan
Sitio Kadahon-dahona
Morgado
Sitio Mansablay
Sitio Pangaylan
Lapaz
AGO
Jasaan
San Isidro



Municipal Map of TUBAY

Province of Agusan del Norte

RESOURCE MAP

LEGEND

- Agricultural Supplies
- Agricultural Equipments
- Wholesalers / Traders
- Retailers
- Haulers / Trucking
- Organic Fertilizer
- Seed Producers
- Corn Mill
- Rice Mill
- Irrigation System
- Tapahan
- Stripping Machine
- Corn Sheller
- Baby Cono (rice)
- Corn Shredder
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- Private Lenders
- Government Training
- Non-Government Org
- Gov't / NGO Project
- Higher Education Institution
- Tech-Voc School
- Abaca
- Rice
- Corn
- Banana
- Coconut
- Root crops
- Vegetables
- Falcata
- Fruit Trees
- Fish
- Watershed
- River
- Lakes / Falls
- Sea

Recommendations

The criteria for the selection of the priority municipalities was one of the subjects tackled by the stakeholders during the Provincial Validation conducted last December 3, 2009 by the ILO management, the TWG and the baseline study group. Results of the discussions with the participants were consolidated and 9 criteria were identified as the basis for selection of the priority municipalities.

The following were considered in the formulation of the selection criteria:

	CRITERIA	WEIGHT
1	Agricultural production- Significance of contribution to provincial production in terms of production area, number of families dependent on farming as main source of income; average production	15%
2	General environmental condition and climatic risk exposure based on incidence of extreme events (past 2-5 years) and proportion of farming families affected by extreme events (calamities)	15%
3	Availability and access to support institutions pertaining to training., markets and technology	10
4	Availability and access to financing institutions including informal financing schemes	10
5	Availability and access to insurance schemes and other risk transfer mechanisms	10
6	Level of pertinent knowledge and skills for agri-business, environment and resource management, climate/disaster risk reduction	10
7	Existence of GO, LGU, NGO/PO and/or collaborative initiatives relating to agri-business and climate risk reduction	10
8	Poverty incidence based on socio-economic data [provincial]	10
9	Peace and order issues and concerns	10
	TOTAL	100%

Note: The Project will seek expressed commitment from concerned LGU before final inclusion of the prioritized vulnerable community in the project.

The Project Advisory Committee (PAC), the highest policy- and decision-making body of the project at the local level, deliberated earlier baseline study results and came-up with the following rankings:

		City and Municipalities										
No.	CRITERIA & INDICATORS	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
1	**Agricultural Production**-Significance of contribution to provincial production according to [agricultural production area (highest - lowest); number of families dependent on farming/fishing as a main source of income((highest-lowest);total agricultural production (lowest-highest);potential area for development(highest-lowest)	11	16	27	20	27	20	33	19	34	34	21
	Final Rank	1	2	6	4	6	4	7	3	8	8	5
	Weighted Final Rank Weight= 15%	0.15	0.3	0.9	0.6	0.9	0.6	1.05	0.45	1.2	1.2	0.75
2	**General environmental condition and climatic risk exposure based on**; incidence of calamities(most-highest); number of familiesaffected by calamities (most-least); magnitude of area affected(most-least); presence of environmentally critical areas/bodies/watersheds (most-least)	16	15	33	18	24	16	23	26	13	21	25
	Final Rank	3	2	10	4	7	3	6	9	1	5	8
	Weighted Final Rank Weight= 15%	0.45	0.30	1.50	0.60	1.05	0.45	0.90	1.35	0.15	0.75	1.20
3	**Availability and access to support institutions pertaining**; presence of production input providers(least-most); presence of mills & agri-facilities(least-most); presence of training institutions(least-most); presence of markets, retailers & wholesalers(least-most)	18	19	8	25	29	25	11	9	28	15	10
	Final Rank	6	7	1	8	10	8	4	2	9	5	3
	Weighted Final Rank Weight =10%	0.6	0.7	0.1	0.8	1	0.8	0.4	0.2	0.9	0.5	0.3
4	**Availability and access to insurance schemes and other risk transfer mechanisms;** no crop/no personal insurance (1); w/ personal insurance but no crop insurance or w/ crop insurance but no personal insurance(2); with both personal and crop insurance (3)	3	3	2	2	2	2	2	2	3	3	2
	Final Rank	2	2	1	1	1	1	1	1	2	2	1
	Weighted Final Rank Weight =10%	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.10

		City and Municipalities										
No.	CRITERIA & INDICATORS	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
5	**Availability /access to financing instituions including**; existing NGOs;informal financing schemes [Rural Banks, Commercial Banks, Coops, LGUs, MFIs, Private Lenders*](least-most) and attitude towards loan availment(highest-lowest)	16	17	14	11	14	10	14	21	7	4	4
	Final Rank	6	7	5	4	5	3	5	8	2	1	1
	Weighted Final Rank Weight =10%	0.60	0.70	0.50	0.40	0.50	0.30	0.50	0.80	0.20	0.10	0.10
6	**Level of pertinent knowledge and skills for agri-business, environment and resource management, climate/disaster risk reduction (incl. *Range of Coping Strategies*)** Trainings availed (least-most); trainings requested(most-least); range of coping strategies combination with shift in technologies/income base and loans; combination with shift in technologies/income base no loans; combination with loans but no shift in income(highest-lowest)	15	19	16	12	12	14	9	18	12	17	13
	Final Rank	5	9	6	2	2	4	1	8	2	7	3
	Weighted Final Rank Weight =10%	0.5	0.9	0.6	0.2	0.2	0.4	0.1	0.8	0.2	0.7	0.3
7	**Existence of GO, LGU, NGO/PO and/or collaborative initiatives relating to agri-business and climate risk reduction (Sustainability)**; community organizations in the area (most-least); memberships in these organizations (most-least); LGU/NGA supported initiatives (most-least)	13	14	21	16	6	12	14	23	13	19	23
	Final Rank	3	4	7	5	1	2	4	8	3	6	8
	Weighted Final Rank Weight =10%	0.30	0.40	0.70	0.50	0.10	0.20	0.40	0.80	0.30	0.60	0.80
8	**Poverty incidence** based on socio-economic data [provincial]LGU income classification9lowest-highest); Number of householdsw/ income below poverty threshold(most-least); poverty incidence(most-least)	15	16	15	7	12	13	20	17	14	15	16
	Final Rank	5	6	5	1	2	3	8	7	4	5	6
	Weighted Final Rank Weight =10%	0.50	0.60	0.50	0.10	0.20	0.30	0.80	0.70	0.40	0.50	0.60
9	**Peace and order issues and concerns** based on number. of Barangays w/ reported insurgency (least-most)	4	4	4	3	4	5	1	3	2	3	2
	Final Rank	4	4	4	3	4	5	1	3	2	3	2
	Weighted Final Rank Weight =10%	0.40	0.40	0.40	0.30	0.40	0.50	0.10	0.30	0.20	0.30	0.20

	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
Overall Weighted Final Rank	3.70	4.50	5.30	3.60	4.45	3.65	4.35	5.50	3.75	4.85	4.35
Final Ranking (from Lowest to Highest)	3	7	9	1	6	2	5	10	4	8	5

Detailed Ranking: Criteria No. 1: Agricultural Production

Indicators	City/Municipalities of Agusan del Norte											
1.1 Agricultural production area (highest - lowest)*												
Major Crops	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
1. Rice	1,182.00	944.00	-	410.00	565.00	1,159.00	90.00	242.00	1,742.00	80.00	20.00	6,434.00
2. Corn	340.00	450.00	190.00	232.00	86.00	1,106.00	30.00	258.00	28.00	175.00	200.00	3,095.00
3. Coconut*	5,257.12	6,908.86	3,485.40	6,764.43	2,707.74	670.70	642.41	3,252.68	1,806.26	2,241.80	3,677.55	37,414.95
4. Banana	895.00	938.00	398.00	1,127.00	52.00	200.00	42.67	234.00	1,404.13	1,513.20	158.00	6,962.00
5. Mango	265.00	35.25	1,387.00	62.00	24.00	5.00	6.00	534.00	20.00	4.00	12.00	2,354.25
Total	7,939.12	9,276.11	5,460.40	8,595.43	3,434.74	3,140.70	811.08	4,520.68	5,000.39	4,014.00	4,067.55	56,260.20
Rank	3	1	4	2	9	10	11	6	5	8	7	

1.2 Number of families dependent on farming/fishing as a main source of income((highest-lowest)**												
Number of Families	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
1. Farming	4,768	3,808	2,141	3,527	2,520	3,669	242	2,128	1,946	1,369	2,938	29,056
2. Fishing	220	657	290	1,135	370	155	211	302	-	111	259	3,710
Total	4,988	4,465	2,431	4,662	2,890	3,824	453	2,430	1,946	1,480	3,197	32,766
Rank	1	3	7	2	6	4	11	8	9	10	5	

1.3 Total agricultural production (lowest-highest)***												
Major Crops	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
1. Rice	4,231.89	3,779.23	-	3,372.60	2,479.24	4,175.62	603.92	380.00	16,700.52	70.00	1.50	35,794.52
2. Corn	461.50	810.00	152.00	935.60	378.14	6,369.00	-	494.40	84.12	99.30	240.00	10,024.06
3. Coconut*	9,379.66	13,144.44	6,936.77	14,746.04	5,761.12	1,083.55	1,187.93	2,846.11	3,351.21	6,598.41	10,149.11	75,184.35
4. Banana	2,579.50	5,000.00	2,231.60	8,452.50	2,214.00	728.00	124.80	2,350.00	10,849.56	13,617.00	563.00	48,709.96
5. Mango	5,272.00	17.50	15,068.98	31.00	12.00	18.00	-	3,500.00	-	4.50	2.20	23,926.18
6. Fish	692.48	283.00	-	214.80	296.00	16.55	909.98	145.00	-	6.50	-	2,564.31
Total	22,617.03	23,034.17	24,389.35	27,752.54	11,140.50	12,390.72	2,826.63	9,715.51	30,985.41	20,395.71	10,955.81	196,203.38
Ave. Production	3,769.51	3,839.03	6,097.34	4,625.42	1,856.75	2,065.12	706.66	1,619.25	7,746.35	3,399.29	2,191.16	32,700.56
Rank	6	7	10	9	3	4	1	2	11	8	5	

1.4 Potential area for development(highest-lowest)****												
Potential Area	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
Area for Expansion	1,260.00	578.00	435.00	251.00	126.00	696.00	80.00	645.00	126.00	162.00	614.00	4,973.00
Rank	1	5	6	7	9	2	10	3	9	8	4	

Sources: *PCA, 2009; ** SEP 2005; *** PAO; ****PAO/DA 2007 HVCC Development of Agribusiness Land

Summary Rank Points (1.1-1.4)	11	16	27	20	27	20	33	19	34	34	21

Detailed Ranking: Criteria No. 2 : General environmental condition and climatic risk exposure

INDICATORS	City/ Municipalities of Agusan del Norte											
2.1 Incidence of calamities(most-least)	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay	
Year												Total
2006	2	3	1	3	3	3	4	2	3	4	1	29
2007		2		2	2	3	1		3	1	2	16
2008	1						2	1				4
2009	1	1	1	1	1		1	1	1	1	1	10
Total	4	6	2	6	6	6	8	4	7	6	4	59
Rank	4	3	5	3	3	3	1	4	2	3	4	

2.2 Number of families affected by calamities (most-least)												
Year	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
2006	287	672	81	133	557	984	330	160	2,397	655	44	6,300
2007		188		381	100	848	526		1,334	70	92	3,539
2008	129						92	20				241
2009	1,188	14				362	7			115		1,686
Total	1,604	874	81	514	657	2,194	955	180	3,731	840	136	11,766
Rank	3	5	11	8	7	2	4	9	1	6	10	

2.3 Magnitude of area affected (highest-lowest)												
Major Crops	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
1. Rice	1,440.50	353.80	-	109.00	319.50	694.00	243.38	31.25	5,364.30	20.80	-	8,576.53
2. Corn	-	380.50	81.00	170.00	1.13	525.00	-	49.10	-	36.00	48.00	1,290.73
3. Rootcrops	21.00	-	-	196.50	8.50	-	2.00	1.50	-	167.50	10.00	407.00
4. Fruit Trees	-	-	-	10.00	0.30	-	-	1.00	-	-	-	11.30
5. Coconut	1.00	-	-	10.90	2.00	0.25	-	-	-	0.50	-	14.65
6. Cutflower	7.50	-	-	-	-	-	-	-	-	-	-	7.50
7. Assorted Vegetables	42.25	2.00	-	11.00	3.50	67.05	2.50	7.00	-	31.75	10.00	177.05
8. Banana	25.75	-	-	60.75	0.30	1.25	-	2.00	-	8.25	-	98.30
9. Squash	-	-	-	22.00	-	-	-	-	-	-	20.00	42.00
Total	1,538.00	736.30	81.00	590.15	335.23	1,287.55	247.88	91.85	5,364.30	264.80	88.00	10,625.06
Rank	2	4	11	5	6	3	8	9	1	7	10	

Detailed Ranking: Criteria No. 2 : General environmental condition and climatic risk exposure

2.4 Presence of environmentally critical areas/bodies/watersheds (most-least)												
Hazard Type	Buenavista	Cabadbaran	Carmen	Jabonga	Kitcharao	Las Nieves	Magallanes	Nasipit	RTR	Santiago	Tubay	Total
1. No. of brgys. within earthquake fault		11		8	2	4			4	8	8	45
2. No. of brgys. subject to storm surge	5	6	7	4			5	14			8	49
3. No. of brgys. Susceptibie for Landslide												-
> High				1				1			2	4
> Moderate	3	3	3	5	7	2	1	1	-	-	2	27
> Low	3	3	2	9	2	5	-	6	3	8	8	49
Total	11	23	12	27	11	11	6	22	7	16	28	174
Rank	7	3	6	2	8	8	10	4	9	5	1	

Summary Rank Points	16	15	33	18	24	16	23	26	13	21	25

Detailed Ranking: Criteria No. 3 : Availability & access to Support Institution

INDICATORS	City / Municipalities of Agusan del Norte										
3.1 Presence of mills & agri-facilities(least-most)*	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
	11	8	1	7	10	9	5	2	6	3	3
1. Threshing/Shelling Facilities	49	33	-	4	49	54	-	3	2	2	-
2. Drying Facilities	29	32	5	28	35	21	16	3	19	6	12
3. Milling Facilities	13	8	-	5	6	13	-	-	6	-	-
4. Wharehouse/Storage Facilities	11	-	-	3	9	-	-	-	1	-	-
Total	102	73	5	40	99	88	16	6	28	8	12
3.2 Access to institution providing production assistance (least-most)**	6	4	1	10	9	7	3	5	11	8	2
	5.88	5.01	1.62	18.00	17.03	14.35	3.15	5.36	26.18	15.91	3.20
3.3Access to institution providing special support for coping to climate change.(least-most)	1	7	6	8	10	9	3	2	11	4	5
	2.19	13.18	5.09	15.9	17.9	16.43	4	2.29	26.17	4.97	5.04

*SOURCE: Post harvest facilities development plan, 2006 ** Percent Kis

Summary Rank Points (SRP)	18	19	8	25	29	25	11	9	28	15	10

Detailed Ranking : Criteria No. 4: Availability and access to insurance schemes and other risk transfer mechanisms

INDICATORS	City and Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
4. Availability and access to insurance schemes and other risk transfer mechanisms no crop/no personal insurance (1); w/ personal insurance but no crop insurance or w/ crop insurance but no personal insurance(2); with both personal and crop insurance (3)	3	3	2	2	2	2	2	2	3	3	2

Summary Rank Points	3	3	2	2	2	2	2	2	3	3	2

Detailed Ranking : Criteria No. 5 : Availability /access to financing instituions

INDICATORS	City and Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
5.1 Availability according to number:	9	10	5	8	2	6	11	1	3	7	4
Existing NGOs	5	1	2	5	4	5					
MFIs or Coops	17 coops	21 coops	6 coops	6 coops	5 coops	13 coops	8 coops	23 coops	3 coops	2 coops	1 coop
Banks -Rural & Commercial	5	9	6	6	5	5	5	6	5	7	5
Government Institution [LGU, Programs]	1	5	1	3			1		1		
Total	9	11	5	7	4	8	6	10	2	3	1
**5.2 Attitude towards loan availment											
History of loan availment	58%	64%	33%	76%	46%	64%	60%	29%	86%	77%	60%
Willingness to avail of loan [those who have not yet availed]	18%	22%	34%	12%	16%	36%	12%	18%		23%	35%
Positive attitude towards availment financing	76%	86%	67%	88%	62%	100%	72%	47%	86%	100%	95%
Total	7	6	9	4	10	2	8	11	5	1	3
Summary Rank Points	16	17	14	11	14	10	14	21	7	4	4

SOURCE : *Secondary data KI & FDG data

**KI Data

Detailed Ranking on Criteria No. 6: Level of pertinent knowledge and skills for agri-business, environment and resource management, climate/disaster risk reduction (incl. Range of Coping Strategies)

INDICATORS	City / Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
6.1 Trainings Related to production Availed (least- most)	1	5	4	8	6	7	1	3	7	7	2
Percent KIs	4%	35%	25%	75%	46%	62%	4%	21%	62%	162%	5%
6.2 Training related to coping w/ climatic changes(highest-lowest)	11	9	8	1	5	2	7	10	3	4	6
Percent KIs	27.50%	34.75%	35.50%	53.50%	41.80%	52.80%	36.40%	33.40%	50%	44.60%	38%
6.3 Reported Training Needs (most-least)	3	5	4	3	1	5	1	5	2	6	5
	8	6	7	8	10	6	10	6	9	4	6
Summary Rank Points	**15**	**19**	**16**	**12**	**12**	**14**	**9**	**18**	**12**	**17**	**13**

Detailed Ranking : Criteria No. 7: Existence of GO, LGU, NGO/PO and/or collaborative initiatives relating to agri-business and climate risk reduction (Sustainability);

INDICATORS	City / Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
7.1 Community organizations in the area (most-least)	1	5	8	3	1	4	2	7	6	9	10
	19	11	5	14	19	13	18	7	9	4	2
7.2 Memberships in these organizations (most-least)	2	6	7	4	1	3	3	8	5	9	6
	614	326	133	330	961	342	342	112	329	105	326
7.3 LGU/NGO supported initiatives (most-least)	10	3	6	9	4	5	9	8	2	1	7
	38%	173%	77%	45%	169%	127%	45%	50%	237%	252%	60.50%
Summary Rank Points	**13**	**14**	**21**	**16**	**6**	**12**	**14**	**23**	**13**	**19**	**23**

Detailed Ranking : Criteria No. 8 : Poverty incidence

INDICATORS	City / Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
8.1 LGU Income Classification (Lowest-Highest)	4	5	2	2	1	3	2	3	2	2	3
	Second		Fourth	Fourth	Fifth	Third	Fourth	Third	Fourth	Fourth	Third
8.2 Households with Income below Poverty Threshold (Most-Least)	2	1	7	4	8	5	10	3	10	9	6
	4,977	5,478	2,343	2,941	2,280	2,633	1,851	3,109	1,889	2,024	2,388
8.3 Poverty Incidence (Most-Least)	9	10	6	1	3	5	8	11	2	4	7
	49.91%	47.47%	61.41%	79.88%	69.98%	63.48%	54.00%	47.39%	70.22%	64.11%	59.77%
Summary Rank Points	**15**	**16**	**15**	**7**	**12**	**13**	**20**	**17**	**14**	**15**	**16**

Source: *SEP 2005 ; CBMS 2007

Note: 8.1 - Ranked from highest to lowest

8.2 - Ranked from fifth to component city

8.3 - Ranked from highest to lowest

Source: *SEP 2005

**CBMS 2007

Detailed Ranking : Criteria No. 9 : Peace and order issues and concerns

INDICATORS	City / Municipalities of Agusan del Norte										
	Buen	Cabad	Car	Jab	Kitcha	Las Nie	Mag	Nas	RTR	Santi	Tubay
9.1 No. of Barangays w/ reported insurgency (least-most)	4	4	4	3	4	7	-	3	2	3	2
Summary Rank Points	**4**	**4**	**4**	**3**	**4**	**5**	**1**	**3**	**2**	**3**	**2**

Source: DILG ADN

Based on the above data, the PAC qualified four Agusan del Norte wherein the Climate Change Adaptation Project will be showcased and implemented. These are:

1 – Jabonga
2 – Las Nieves
3 – RTR
4 -- Buenavista

These four municipalities constitute the priority farming communities of the Climate Change Adaptation Project.

A Climate Change Adaptation Project implemented by the International Labour Organization (ILO), *a specialized agency of the United Nations (UN)* with GOP partners Department of Labor and Employment (DOLE), Department of Trade and Industry (DTI) and the Province of Agusan del Norte (AdN)

For further information, contact:

ASIAN DECENT WORK DECADE 2006 2015

ILO Country Office for the Philippines
19th Floor, Yuchengco Tower, RCBC Plaza
6819 Ayala Avenue, Makati City
1200 Philippines
Telephone: +63 2 5809900
Fax: +63 2 8657597
www.ilo.org/manila

ILO - CCAP Office
3rd Floor, D & V Plaza Building
J.C. Aquino Avenue, Butuan City
8600 Philippines
Telefax: +63 85 3424378
Mobile: +63 917 724 7381
e-mail: villacortal@ilo.org

Climate **R**esilient
Farming **C**ommunities
in Agusan del **N**orte through
Innovative **R**isk **T**ransfer **M**echanisms

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(1) Implementing joint programmes that strengthen public policy development and ensure measurable impact on select MDGs

(2) Engaging in advocacy and mobilization efforts that keep the MDGs high on the political agenda

(3) Learning through continuous monitoring and evaluation using these to scale up and inform future action.

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