



t e c h n i c a l r e p o r t

**Participatory Climate Vulnerability and Risk Assessment (PCVRA)
for Adaptation Mitigation Initiatives in Agriculture (AMIA) Villages**



ANTIQUE

**AMIA Villages in the
Municipality of
Anini-y,
Province of Antique**

JULY 2023

IIRR 



technical report

Participatory Climate Vulnerability and Risk Assessment (PCVRA)
for Adaptation Mitigation Initiatives in Agriculture (AMIA) Villages

AMIA Villages in the Municipality of Anini-y, Province of Antique

International Institute of Rural Reconstruction
Department of Agriculture - Adaptation Mitigation Initiatives in Agriculture
(**DA-AMIA REGION 6**)



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ANINI-Y, ANTIQUE

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Barangay Profiles

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A. Background

Climate change poses a serious threat to the Philippines, putting development at risk and further endangering poor communities. The country's agri-fishery sector is particularly vulnerable. To combat these dangers, the Department of Agriculture introduced the **Adaptation and Mitigation Initiative in Agriculture (AMIA)**. This program aims to empower local communities in the agri-fisheries sector and help them adopt sustainable livelihoods and effectively manage climate risks. Climate change has varying impacts depending on the location and context, making certain sectors more vulnerable than others.

Development efforts should prioritize those who are most at risk, including small-scale farmers who rely on the climate, marginalized groups, and individuals lacking resources and access to information.

The **Participatory Vulnerability and Climate Risk Assessment (PCVRA)** promotes community empowerment through the creation of an information base that enables planning and action.

PCVRA aims to provide a better understanding of climate change to the community and inform them of the conditions and factors affecting their vulnerability. It also identifies the levels of risks to the community's livelihood and their capacity to adapt to the manifestations of climate change.

The main objective of the PCVRA is to identify the effects of climate change within the local populace and determine the nature of these climate-induced dangers in order to gain greater insight into their potential consequences and their effects on the community's vulnerability.

The **International Institute of Rural Reconstruction (IIRR)** facilitated PCVRA to provide local decision makers with comprehensive knowledge about climate-related risks and vulnerabilities, empowering them to develop effective solutions for addressing its impacts across multiple levels, ranging from households and farms to ecosystems and landscapes.

The outcomes of the PCVRA don't directly solve issues faced by rural communities. Instead, it becomes a basis for developing community-based strategies for adaptation. It is also used in decision-making processes involving various stakeholders. Ultimately, these efforts aim to improve the well-being of underprivileged individuals who are greatly impacted by climate change.

B. Methodology

Various sectors, including barangay council members, the Sangguniang Kabataan Chairman, barangay health workers, daycare workers, church representatives, school staff, businessmen, farmers, and fisherfolk were present at the event. The activity commenced with a short introduction followed by a discussion of the significance of PCVRA and its associated tools and techniques.



The following PCVRA instruments were used for information gathering:

1. **Timeline.** The group discussed past occurrences of climate hazards and the methods they utilized to manage them. They also strategized techniques to boost their resilience and improve their overall livelihood.
2. **Spot Map.** The community conducted a Spot Map exercise that pinpointed areas deemed vulnerable to hazards and risks. They also identified livelihood areas that are most affected by these dangers. Resource units, including crops, livestock, households, and natural resources, were discussed thoroughly with an emphasis on utilizing them effectively to meet the community's needs.
3. **Seasonal Calendar.** Showcases changes in weather conditions that have occurred over the past 5, 15, and 30 years. It encompasses details related to temperature, weather, crops, and livelihood.
4. **Livelihood Matrix.** It is a comprehensive breakdown of income-generating ventures. The participants are prompted to reflect on their involvement in these ventures and distinguish between gender-specific roles and decision-making responsibilities. The matrix is segmented into three primary age groups: Youth (aged 15-30), Middle Age (aged 31-59), and Senior Citizens (aged 60 and above).
5. **Resource Flow.** Identify the inflow (revenue earned from their means of livelihood) and outflow (costs incurred) of resources.
6. **Venn Diagram.** Utilized to depict the various institutions, associations, and individuals from the government and private sector that provide access to essential services. These categories are shown in proportions, with figures indicating the level or strength of each partnership with the community.

C. Provincial Profile

The province, with a total land area of 2,729.17 km² (1,053.74 sq mi), is an elongated stretch of land occupying the entire western side of the island. It is bounded by the rugged central mountains of Panay, bordering on the provinces of Aklan in the northeast, Capiz in the east, Iloilo in the southeast, and the Sulu Sea in the west. Its westernmost and northernmost point is Semirara Island at 12°07'10"N 121°21'10"E, while its eastern tip is approximately 11°01'N 122°19.5'E. Anini-y is the province's southernmost point at 10°24'24"N 121°57'38"E. Resembling a seahorse in shape, it is 155 km (96 mi) long and 35 km (22 mi) at its widest point.



Antique has a total road length of 340 km (210 mi) including a 120 km (75 mi) National Road linking the north and south of the province from Libertad in the north to Anini-y in the south. Transportation services are generally provided by tricycles, jeepneys, vans, and buses. There are also daily buses going back and forth to Manila via the roll-on/roll-off nautical highway and other neighboring provinces and cities including Iloilo City and Kalibo.

Located on the west coast of Panay Island, the province of Antique is mostly known for its natural attractions, including white beaches, islands, diving spots, waterfalls, and mountains. Thanks to its unique geography, it has been known as the province where the mountains meet the sea.

Its tourist attractions are scattered throughout its 18 municipalities, but one of its most famous spots, Malalison Island (also known as Mararison Island), is located off the coast of Culasi. Other must-see tourist attractions in Antique include Seco Island and Bugtong Bato Falls in Tibiao, Malumpati Cold Spring and Bugang River in Pandan, and the Antique Rice Terraces in San Remigio. San Remigio is also home to Rafflesias, the largest flower in the world.

As of December 2016, the National Roads in Antique are:

Secondary Road

- | | |
|--|---|
| <ul style="list-style-type: none"> • Anini-y-Tobias Fornier Road • Bantayan-San Pedro-Cubay Road • Iloilo-Antique Road • Pandan-Libertad-Aklan Boundary Road | <ul style="list-style-type: none"> • PC Barracks Road • San Jose Airport Road • San Jose Port Road |
|--|---|

Tertiary Road

- | | |
|--|---|
| <ul style="list-style-type: none"> • Alangan-Cubay-Sibalom Road • Atabay-Inabasan Road • Bantayan-San Pedro-Cubay Road • Bugasong-Valderrama Road • Bugo-Gen. Fullon Road • Hamtic-Bia-an-Egaña-Sibalom Road | <ul style="list-style-type: none"> • Malandog-Buhang Road • Odiong-Sibalom-San Remigio-Leon Road • Pacita-La Paz Drive • Sibalom-Pisanan Road • San Jose Cadre Road • San Remigio-Bugo Road |
|--|---|

D. Municipal Profile

Anini-y is a fourth Class municipality in the Province of Antique located on the southern tip of Panay Island. It has a total land area of 4,889.2959 hectares. The territorial jurisdiction of Anini-y stretches from Barangay Bayo Grande in the west to Barangay San Francisco in the east. The municipalities of Tobias Fornier and San Joaquin (Iloilo Province) bound its mountainous northern border while strung along its entire west, south, and east coasts are 17 coastal communities forming an arc against the waters of Panay Gulf. Six (6) of its 23 Barangays are in the uplands.

Topography and Slope

Anini-y is a municipality that encompasses a rolling to mountainous landscape with 86.815% of its total land area above the 18% slope varying degrees of slopes, ranging from moderate to very steep. The majority of the barangays are situated within such terrain, while the flat and low-lying areas with gentle slopes are limited and situated mainly along the coastal periphery. Regions with elevated terrain are highly susceptible to landslides, while areas around coastal zones, rivers, and creeks

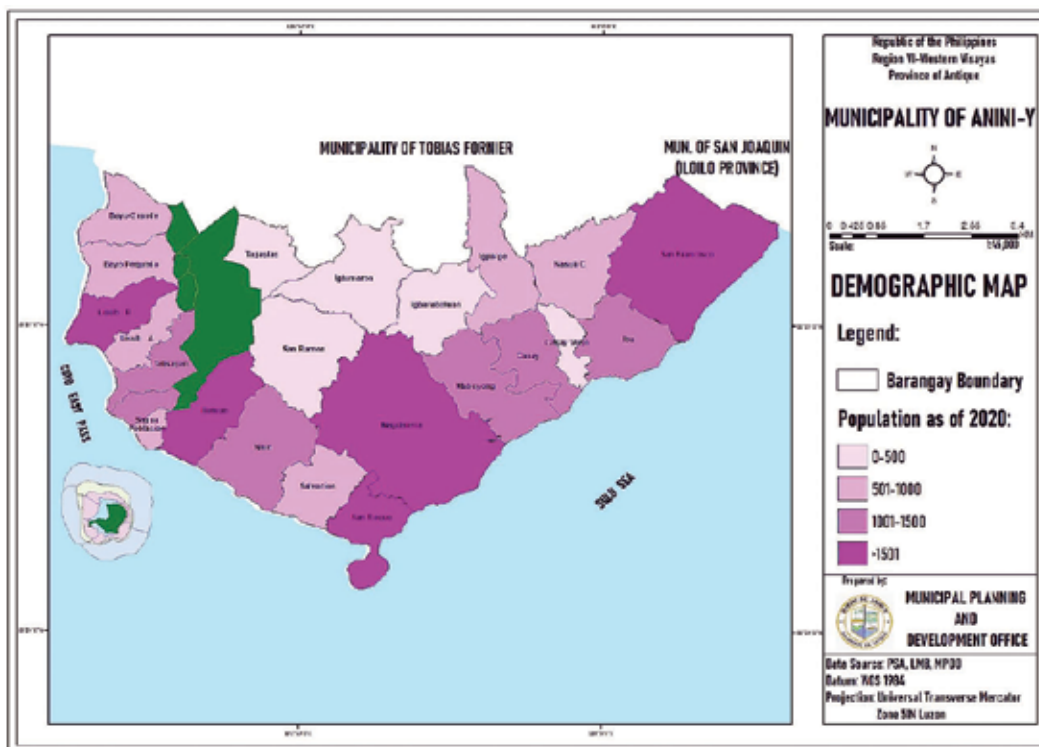


Figure 2. Municipal Map of Anini-y

face challenges with flooding. The topmost point of Anini-y is found in Barangay Tagaytay at around 400 meters above sea level. The streams and tributaries of the municipality follow a sinuous path that originates from deep ridges on one side of the rugged mountains and plateaus.

Climate and Rainfall

Anini-y follows the Type II Climate under the Coronas Climate Classification System by PAGASA. The town reflects two predominant seasons, one being dry from November to April and another being wet from May to October. The highest levels of rainfall occur from June to September, with July exhibiting the maximum rainfall of 45.72 cm. On the other hand, the month of April experiences the lowest level of rainfall, which is approximately 5.08 cm. Throughout the municipality, an average of 20.32 cm of rainfall is recorded. The region is noted for having the least amount of precipitation.

Population Size and Growth Rate

According to the 2020 Philippine Statistics Authority (Census of Population and Housing), the Municipality of Anini-y, Antique had a population of 22,018. As the center of the municipality and an urbanizing barangay, Poblacion only comprises 3.74% of the total population, yet it uses the minor Central District of Anini-y and major institutional and social services. Barangay Magdalena has the most people while Barangay Igbarabatan is the least populous.

Public Utilities

- Local Water District
- Electric Power Distributor
- Telecommunications
- Pawnshops
- Rural Banks
- Cooperatives
- Micro Finance Institutions

Economic Activity

- Agricultural
- Fishery
- Commercial and Services
- Industrial
- Tourism

E. Executive Summary

These climate hazards have caused significant damage to these industries, leading to reduced income and food production. These hazards include typhoons, earthquakes, droughts, and the Northeast and Southwest monsoons, locally known as Amihan and Habagat. The communities affected are largely dependent on agriculture and fishing for their livelihoods.

| Barangay | Description of Hazards | Impacts | Capacity of the community |
|------------------|--|---|---|
| NATO | | | |
| | The community identified four major climate events that they have experienced in the past - typhoons, droughts, earthquakes, and Southwest Monsoon (Habagat) | <p>The storm has caused immense damage to the local agricultural industry, destroying irrigation systems, and leaving many people unable to access the resources they need to make a living. Most agricultural land is rain-fed, meaning it relies on rainfall for irrigation. This can be a problem during dry months when farmers are unable to plant rice or other commodities that require irrigation.</p> <p>Earthquakes have also caused damage to some homes.</p> <p>The Southwest monsoon brings destructive winds and rains that can damage crops and reduce yields, making it difficult for farmers to make a living. It can also cause low fish harvests, leading to reduced income for coastal communities.</p> | <p>Rice farming and fishing are the two main sources of income for the people of Barangay Nato, with 70% of the population belonging to the lower income bracket. Unfortunately, these activities have been severely affected by climate-related hazards such as extreme weather events.</p> <p>This means that most of the population belongs to the lower income bracket, with limited financial resources and access to necessities.</p> |
| SAN ROQUE | | | |
| | The community identified typhoons and droughts as climate hazards. | <p>The typhoon has caused extensive damage to the barangay, including damages to homes and farms.</p> <p>The effects of drought have been severe, causing crop wilting and affecting 100% of rice farmers.</p> | <p>Purok 1 and 5 have more middle-class residents and thus may be able to withstand the effects of typhoons and droughts compared to other puroks with poorer residents. Three Puroks have the highest proportion of indigent residents, suggesting that the area may need more assistance in the event of a typhoon and drought.</p> |

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| Barangay | Description of Hazards | Impact | Capacity of the community |
|------------------|---|---|--|
| MAGDALENA | | | |
| | The community identified typhoons and droughts as the major climate hazards. | <p>Typhoons have a major impact on the community's livelihoods. It is estimated that 60% of the houses have been partially damaged because of the typhoon. Additionally, 30% of fishermen's boats were damaged, leaving them unable to work.</p> <p>The wilting of plants has had devastating consequences for rice farmers and the environment.</p> | The majority of its population lives in indigence. This means that the livelihood of these communities is often at-risk during times of climate disasters, such as typhoons and droughts. These crises can cause fear and anxiety in the community, and without the right resources and support, it can be very difficult to cope. |
| SALVACION | | | |
| | Communities recognize typhoons and droughts as the major climate hazards in their barangay. | <p>Areas that have been hit hardest by the typhoon have seen roofs torn off and walls collapsed. In addition to the destruction of homes, the agricultural sector has also suffered greatly.</p> <p>The impact of drought is devastating for both the livestock and farming sector. Drought reduces the amount of water available for both crops and livestock, leading to decreased yields and, in the worst cases, the death of animals due to dehydration.</p> | Sitio Dapog has a relatively low proportion of indigent households compared to Sitio Centro and Tuhaw. It is important to note that the term "indigent households" generally refers to households that are living in poverty and may not have access to basic necessities such as food, water, shelter, and healthcare. |

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Overall, the four barangays (Nato, San Roque, Magdalena, Salvacion) face similar climate risks such as typhoons and droughts. Barangay Butuan does not consider drought a hazard in their area. It can be seen in their seasonal calendar that rice farmers in their community are doing two cropping seasons of rice, compared to other neighboring barangays. Based on the assessment, they mention the availability of irrigation sources coming from Barangay Nato. It should be noted however that Barangay Nato considers drought to be a climate hazard in their community, and they can only plant rice in one cropping season.

The most serious impact of climate change in all the barangays has been the destruction of rice fields due to flooding (during typhoons) and drought. Rice farming is the primary source of living, but the erratic weather patterns caused by climate change have caused significant crop losses. This has led to food insecurity and an increase in poverty.

... table continued

| Barangay | Description of Hazards | Impact | Capacity of the community |
|---------------|--|--|--|
| BUTUAN | | | |
| | <p>The four major climate hazards identified include typhoon, earthquake, Northeast monsoon (Amihan), and Southwest monsoon (Habagat).</p> | <p>The destruction of the typhoon has been especially severe in the agricultural sector. Agricultural farms, which rely heavily on the weather and climate, have been most affected by the storm's destruction. This has caused a significant reduction in food production and income for many farmers. The typhoon has also caused significant damage to residential areas and other buildings. Many homes and buildings have sustained significant structural damage, and some have even been destroyed.</p> <p>The earthquake leaves some residents with trauma and nervous breakdowns, premature births of sows, and structural damage to some of the homes and buildings.</p> <p>The Amihan and Habagat – two warm, humid winds from the Pacific – have caused a reduction in fish production. As a result, the earnings of both small and large-scale fishermen have been significantly reduced. This has had a huge impact on the livelihoods of many fishermen and their families.</p> | <p>The overall community has a high capacity for withstanding climate hazards as most of the residents belong to the lower middle class. This is because the lower middle class are better able to access resources such as health care, education, and employment, which are all necessary to cope with climate hazards. Moreover, they are more likely to have access to technological innovations and advanced infrastructure that can help them prepare for and adapt to climate change.</p> |

Given the extensive damage, the barangay needs to take immediate action to support affected families and communities. This may include providing emergency shelter, food, and water, as well as assessing the damage to infrastructure and developing plans for reconstruction. The barangay council should coordinate with the national government and other organizations to mobilize resources and support for the recovery effort.

The effects of climate hazards are far-reaching and have had a major impact on the lives of many people. Governments and organizations must work together as it is an important factor to develop strategies and solutions to mitigate the effects of climate hazards. This can include providing support to those affected, improving infrastructure and access to resources, and increasing awareness about the risks posed by climate hazards.

AMIA Program

The Adaptation and Mitigation Initiative in Agriculture (AMIA) is a comprehensive and forward-thinking program designed to address the complex challenges and opportunities within the agricultural sector in the context of climate change and environmental sustainability. AMIA is primarily focused on promoting agricultural practices that are both adaptable to changing climatic conditions and mitigative of greenhouse gas emissions.

Climate change poses a significant threat to global food security and agricultural sustainability. Rising temperatures, altered precipitation patterns, and increased frequency of extreme weather events have the potential to disrupt crop yields, affect livestock production, and compromise the livelihoods of millions of farmers worldwide. Furthermore, agriculture is a notable contributor to greenhouse gas emissions through practices such as deforestation, soil degradation, and inefficient land use.

The AMIA emerged as a response to these pressing challenges. It was conceived with the understanding that the agricultural sector can be both a victim and a solution to climate change. AMIA aims to bridge the gap between agricultural adaptation and mitigation efforts by integrating them into a holistic framework.

AMIA seeks to enhance the resilience of agriculture to climate change by implementing climate-smart practices. This includes using drought-resistant crop varieties, improving water management, and developing early warning systems for extreme weather events.

In addition to adapting to climate change, AMIA places a strong emphasis on mitigating the environmental impact of agriculture. It promotes sustainable farming practices that reduce greenhouse gas emissions, such as reduced tillage, agroforestry, and the use of renewable energy sources.

AMIA is rooted in a community-centric approach. It recognizes that the success of adaptation and mitigation strategies relies on the active involvement of local farmers, communities, and relevant stakeholders. The program engages with farmers to co-create and implement solutions that are tailored to their specific needs and contexts.

AMIA collaborates with various stakeholders, including government agencies, non-governmental organizations, research institutions, and the private sector. These partnerships facilitate knowledge sharing, capacity building, and resource mobilization to support the program's objectives.

Research and innovation are at the core of AMIA. The program actively encourages the development and dissemination of cutting-edge agricultural technologies, practices, and policies that can enhance adaptation and mitigation efforts.

AMIA acknowledges the need to scale up successful adaptation and mitigation strategies and replicate them across different regions and agricultural contexts. This approach enables the program to have a more extensive impact and contribute to global sustainability goals.

To ensure the effectiveness of its initiatives, AMIA maintains a robust monitoring and evaluation system. Regular assessments are conducted to measure the impact of adaptation and mitigation strategies on agricultural productivity, environmental sustainability, and the well-being of rural communities.

AMIA in Antique

The program started in Anini-iy, Antique in 2022 . The MASAGANA ANINI-Y AMIA VILLAGE FARMERS ASSOCIATION has 4 farmers association, namely:

1. **Nato-Butuan Irrigators Association** (26 males and 27 females)
2. **Katilingban ka mga Mangunguma sa San Roque kag Salvacion** (7 males and 7 females)
3. **Anini-y Association of Organic Farmers** (54 males and 36 females)
4. **Centro Dapog Tuhaw Farmers Association** (24 males and 37)

Aside from organizing, AMIA facilitated the introduction of alternative livelihoods such as:

1. **Livestock Production**
 - a. Babuyang Walang Amoy Technology (BWAT) (20 heads of hybrid pigs 10 bags of feeds)
 - b. Pig Production (18 gilts, 2 boar)
2. **Poultry production:** Establishment of communal production system for native chicken where associations were provided with stocks and housing (150 heads per farmer and a communal production with 50 heads that has its own housing materials including incubator)
3. **Organic vegetable production** where materials were provided (e.g. 40 drums, 30 gallons of molasses, garden tools and vegetable seeds 40 gallon molasses, 140 bags of vermicast). A vacuum pack sealer was included.
4. **Vermi-composting facility** with a starter of 20 kilos vermi worms.
5. **Various trainings** such as business and enterprise management and meat processing were conducted.

F. Recommendations

Several strategies can be implemented to reduce the risk of climate hazards in all Barangays:

There are several strategies that can be implemented to reduce the risk of climate hazards in all barangays:

1. Develop an early warning systems: Early warning systems can help the communities prepare for and respond to climate hazards.
 - One specific recommendation for early warning systems for natural disasters would be to establish a interconnected network of sensors and monitoring stations that can capture real-time data on weather patterns, soil moisture, river/sea levels, and other environmental indicators. This information can be used to predict and forecast hazards that can affect the most vulnerable and disaster-prone areas such as coastal areas and agricultural lands.
 - To ensure that the early warning system is reliable and effective, it should be integrated with communication and alert systems that can reach out to the affected communities, giving them ample time to respond and prepare.
2. Improve infrastructure: Improving infrastructure such as roads and irrigation system can help the communities withstand the impacts of climate hazards.
 - Regular maintenance of existing roads and irrigation systems can help identify and address issues before any ensuing damage. These need structural maintenance to ensure that they are in optimal condition and are functioning properly.
 - Implement proper irrigation systems management such as using efficient watering systems.
3. Promote sustainable agriculture: Promoting sustainable agriculture practices can help reduce the impact of climate hazards on the agricultural sectors.
 - Encourage practices such as crop diversification, soil conservation, and water management.
 - Agro-biodiversification can be implemented in the area. Propagating a wide variety of trees, crops, and/or livestock creates a more resilient and sustainable agricultural system. This practice enhances soil health, reduces erosion, and improves water management.
 - Collaboration between farmers, researchers, and extension services can help identify the most appropriate agroforestry systems.
4. Raise awareness about climate risks: Help communities better understand the risk they face and take action to reduce those risks.
 - This can include activities such as community meetings, outreach programs and capacity building to raise awareness and preparedness.
 - Develop a community emergency response plan tailored to address specific needs that were identified using PCVRA tools.
 - Collaborate with various stakeholders to create and implement inclusive and responsive solutions.

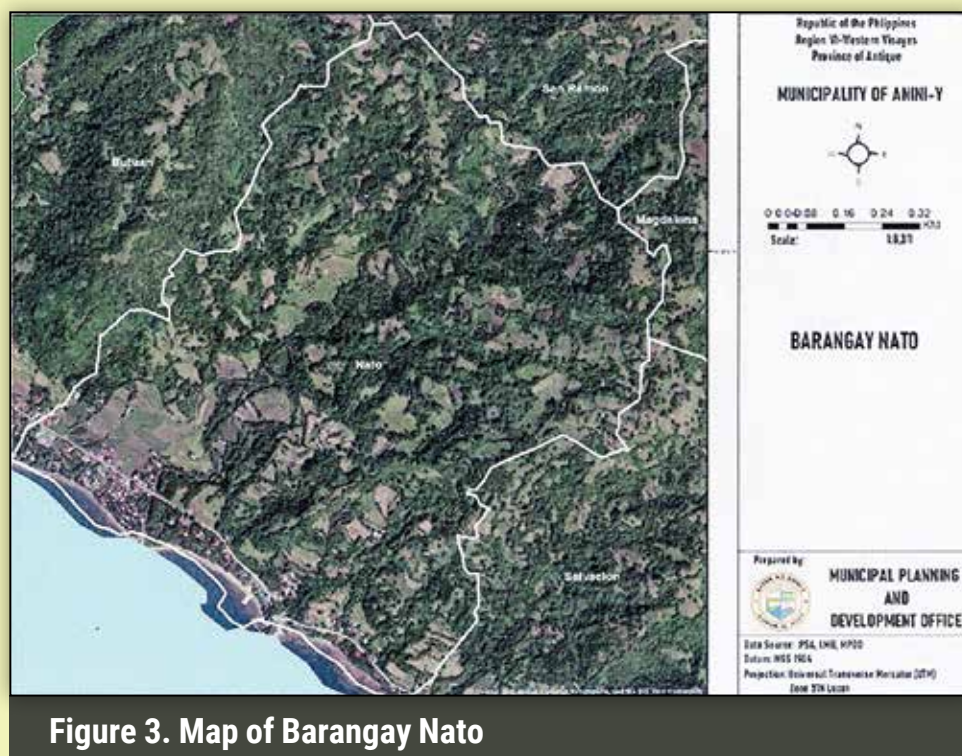
Barangay Nato

1. Introduction

1.1 Barangay Profile

Barangay Nato is a captivating neighborhood that forms part of the twenty-three (23) barangay cluster located within the Municipality of Anini-y. It boasts a prime location, nestled comfortably in the coastal region of Anini-y, Antique, making it the third barangay which doubles as a bustling hub of business activities in the local government area. The distance between Barangay Poblacion and Barangay Nato is about 1.3 km, and residents have options when it comes to transportation, including tricycles, jeepneys, and buses. Furthermore, Barangay Nato spans an impressive 556.380 ha, providing ample space for residents and visitors alike to bask in the abundance of natural wonders that this barangay has to offer.

According to the latest data available, a staggering 80% of the entire land area in this area has been designated for agricultural purposes. In contrast, only 10% is dedicated to forest and mountain ranges, while the remaining 10% has been designated for residential use. This region seems to be bordered by geographical features on all four sides - in the north, it is bounded by the imposing



mountain ranges of Barangay San Ramon, while the south is caressed by the gleaming Cuyo Sea. The east is adorned by the picturesque Barangay Salvacion, while the west is home to the charming Barangay Butuan.

Barangay Nato is classified into four distinct zones that form its geographical entity. The first two zones comprise the barangay proper, while the third zone encompasses the coastal region and consists of Sitio Igtuba, Sitio Nagarip, and Sitio Dorog located in upland regions. The fourth zone also has a coastal and upland component and comprises the Sitios of Sira-an, Igcumo, and Cansilayan.

Barangay Nato, situated in the eastern part of the municipality, is considered to be making great progress in different aspects. It is home to the popular Sira-an Hot Spring and Health Resort which draws in a large number of tourists. This hot spring is the only one of its kind in Antique, which makes it even more unique and special.

Population

Barangay Nato is considered to be one of the fastest developing barangay in the eastern side of the municipality of Anini-y. Based on the 2020 census, it has a total population of 1,187 (598 male, 589 female).

1.2 Household Classification

- | | |
|--|--|
| <ul style="list-style-type: none"> • Zone 1: 70% indigent 30% lower middle class • Zone 2: 70% indigent 30% lower middle class | <ul style="list-style-type: none"> • Zone 3: 80% indigent 20% lower middle class • Zone 4: 80% indigent 20% middle class |
|--|--|

1.3 Livelihood Status

There are various means of income generation in this barangay and the most popular ones include fishing, farming, carpentry, pawod making, bangus fry catching, and some individuals do engage in overseas employment as well.

Rice farming and fishing are two of the most important sources of livelihood in Barangay Nato. Despite their importance, a large majority of the people involved in these activities are tenants or laborers. In rice farming, only 10% of the people own the land while 90% are tenants. Meanwhile, in fishing, 80% are boat owners and 20% are laborers.

1.4 Sectoral Involvement in Livelihood

A. Farming

Farming activities are predominantly carried out by men, who account for 90% of involvement starting from land preparation to harvesting, including decision-making. In contrast, women's participation in farming activities and decision-making is as low as 10%.

Individuals aged between 15-31 hold a 25% share in farming activities.

Individuals between the ages of 31 to 59, commonly referred to as the middle-aged demographic, exhibit the predominant level of participation due to familial responsibilities. As they have dependents to take care of, their crops are intended for personal consumption.

Although elderly citizens are categorized as seniors, a number of them are still employed in the cultivation of rice paddies. This is to ensure that they can support their families without feeling like a burden to their offspring.

B. Hog Raising

When it comes to raising hogs, men tend to take on a more active role. However, women are also involved in certain tasks.

If both parents are unavailable, children are asked to assist with this task. Of the individuals between the ages of 15 and 30, approximately 20% participate in hog raising. This demographic includes several students who assist their parents to support their educational pursuits, while others are more focused on their studies.

Among middle-aged individuals, or those between 31 to 59 years old, 70% engage in hog raising to cater to their families' daily needs and finance their children's education. Surprisingly, approximately 10% of senior citizens persist in hog-raising activities despite their advanced age.

C. Fishing

Among those who engage in various fishing activities, 85% are men. The remaining 15% is composed of women who either assist their partners as helpers or stay at home.

Significantly, approximately 25% of individuals ranging from 15 to 30 years old are helping in fishing.

A considerable portion of this age group is comprised of students who are assisting their parents to make ends meet and fund their education. They also possess the skills required to perform repairs on boats and fishing equipment, such as fixing fishnets. Nonetheless, some parents do not involve their children in manual labor activities to enable them to concentrate on their academic pursuits.

2. Climate Change Perception

2.1 Climate Hazard

Barangay Nato, Anini-Y, Antique is no stranger to extreme weather events. They have identified four major climate events that they have experienced in the past - typhoons, droughts, earthquakes, and habagat. Typhoon Odette and Typhoon Paeng are two of the most recent typhoons that have hit Barangay Nato, leaving a trail of destruction in their wake. The effects of these extreme weather events can be devastating for the community and it is important to take proactive steps to prepare for them.

The seasonal calendar shows that there is a significant change in the start of the rainy season as compared to 15 and 30 years ago. Previously, rains are expected between May to September. In the recent years, rains occur between July to December.

As compared to 15 to 30 years ago when they can already plant rice in the month of May, participants claimed that at present they are planting rice during the month of July. Moreover, typhoons are experienced from October to December.

2.2 Impact

Barangay Nato experiences typhoons frequently, causing all of the community to suffer. This includes the lower class which comprises 70% of the population and the middle class which makes up the remaining 30%.

When it comes to their livelihood, their source of income would be farming, fishing, and livestock. 15 to 30 years ago, the majority of them planted and grew more rice, whereas today, more are planting vegetables in their backyard.

The barangay is facing a significant issue of drought, with an alarming 90% of its rice fields being impacted due to the lack of water. This has caused severe economic and social disruption in the

community, resulting in a decrease in agricultural production and income for many families. The majority of the farmers solely rely on rainfall, while only 10% of them are landowners and the rest are merely tenants. The situation is further exacerbated by the fact that there are limited options for alternative sources of water supply. To address this problem, it is necessary to explore sustainable solutions that will ensure access to a reliable source of water for the barangay's rice fields.

Barangay Nato suffers from the impact of Habagat, especially its coastal regions. In particular, 10 households belonging to the lower class were affected. The consequences of these weather conditions have had a significant influence on their livelihoods and income sources.

2.3 Coping Mechanism

The Barangay's swift and decisive action during the typhoon helped to prevent any loss of life or serious injury to its residents. By evacuating certain individuals to secure zones, they were able to ensure the safety of those most at risk. After the typhoon had passed, the Barangay immediately began a clearing operation to remove any debris or hazards that had been left behind. This was a crucial step in ensuring the safety of their residents and preventing any accidents or injuries.

Furthermore, the Barangay also made sure to repair any damage to the irrigation system. This was done to ensure that the farmers in the area would be able to continue their work and provide food for the community. The repairs also helped to prevent any further damage to the environment, which can have long-lasting effects.

For the fisherfolks in the area, the Barangay provided assistance by making necessary repairs to any damaged boats. This was a critical step in helping the fisherfolks get back to work and provide for their families. By taking swift action and providing necessary support, the Barangay was able to mitigate the impact of the typhoon on their community and help their residents recover as quickly as possible.

The effects of drought can be devastating, with crops failing and water supplies dwindling. To cope with these challenges, people had to become creative and find new ways to adapt. One solution that has emerged is the use of the deep well, a device that allows farmers to access water from deeper underground sources.

Another way that people have adapted to the drought is through backyard gardening. By growing food in their backyards, families can have an alternative source of food and can conserve resources in times of need.

Overall, the quick response and action of barangay officials can make a significant difference in the aftermath of an earthquake. By conducting thorough inspections, they can identify any potential hazards and take the necessary steps to address them. This not only protects residents from further harm but also helps to prevent further damage to property and infrastructure.

2.4 Capacity of the Community

The breakdown of the population in each zone of Barangay Nato provides insight into the socioeconomic conditions of each area. Zone 1 and Zone 2 have both 70% indigent and 30% lower middle class populations. Zone 3 has 80% indigent and 20% lower middle class, while Zone 4 has 80% indigent and 20% middle class. This means that the majority of the population in these zones belongs to the lower income bracket, with limited financial resources and access to necessities.

Understanding the socioeconomic makeup of different areas is important to creating solutions that address the specific needs and challenges faced by those who live there and identifying potential areas for targeted interventions and support.

2.5 Initial Plan of the Barangay

| Implications | Solution |
|--|--|
| <ul style="list-style-type: none"> Alternative livelihood/training | <ul style="list-style-type: none"> Training on food processing and value-adding activities Plan to use drought tolerant variety for rice and other crops |
| <ul style="list-style-type: none"> Lack of irrigation | <ul style="list-style-type: none"> Solar panel irrigation |
| <ul style="list-style-type: none"> Lack of health facilities and supplies, materials, and equipment during typhoon | <ul style="list-style-type: none"> Preparedness of E-BASKET/E-BAG Tree planting |
| <ul style="list-style-type: none"> Floods caused by typhoon and Habagat (southwest monsoon) | <ul style="list-style-type: none"> Proposal and budgeting for the construction of the seawall |
| <ul style="list-style-type: none"> Mental health (Earthquake) | <ul style="list-style-type: none"> Psychosocial training Earthquake drill at the barangay level |
| <ul style="list-style-type: none"> No evacuation center | <ul style="list-style-type: none"> Proposal and budgeting for the construction of the Evacuation Center |
| <ul style="list-style-type: none"> Lack of information and dissemination about insurance for rice, crops, & livestock | <ul style="list-style-type: none"> Proper coordination with the Agriculture Office regarding crop insurance. Ask the MAO to provide proper orientation about crop insurance Farmers plan to register their crops under PCIC |

3. Summary and Findings

As the effects of climate change become more apparent, it is crucial to immediately start taking action to protect our communities and infrastructure from its potential hazards. By pinpointing the vulnerable communities and areas that are at the greatest risk, proactive measures can be implemented to mitigate the potential damage and protect those who live and work in these areas.

Drought in Barangay Nato is a pressing concern that requires immediate attention to avoid further economic and social disruption in the community. With almost 90% of the rice fields impacted by the lack of water, the majority of the farmers who rely solely on rainfall are facing a significant decrease in agricultural production and income. This has a direct impact on the livelihoods of many families, especially those who rely on farming as their primary source of income.

Since most of the rice fields are rainfed, rice production is limited to only one cropping season per year. The start of rice production cycle in rainfed areas typically begins in June with land preparation. This is followed by the harvesting phase, which typically spans from August to September. It is important to note that the timing of the production cycle may vary depending on factors such as weather conditions and local farming practices. Despite the challenges posed by limited cropping seasons, rice farming remains the primary livelihood in Barangay Nato. Tenants (90%) have limited access to resources and do not have the financial capacity to invest in alternative water supply systems.

As a result of the typhoons that hit Barangay Nato, the communities were severely damaged. Many sectors and institutions have offered and helped during those difficult times (see Venn diagram). The Barangay, LGU, and Municipal Disaster Risk Reduction Management Office (MDRRMO) are among the fastest sectors to provide assistance during the typhoon. While DSWD and the Provincial Government provided the most assistance, it takes longer for them to access the support services.

In times of drought, the Municipal Agriculture Office is the only sector that provided support and assistance to the barangay.

4. Recommendations

1. Develop a community emergency response plan. This will enable communities to act immediately in case of disasters and calamities. Establish an efficient communication system and identify key personnel responsible for disseminating of information and implementing of evacuation protocols.

2. Designate and train an emergency response team that will assist the community and address urgent issues. The team should have the necessary equipment, training, and resources necessary to fulfill tasks in emergency response.
3. Conduct regular training, test and disaster drills in the community.
4. Implement proper irrigation systems management. Different crops require varying amounts of water at different growth stages. Implementing crop-specific irrigation systems can help the community conserve water by providing crops with adequate water depending on their specific requirements and growth stages.

Annex A. PCVRA Tools Used

1. Timeline

| Typhoon Odette December 2021 | | | |
|-------------------------------------|---|--|--|
| Livelihood assets | Impacts on livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Natural | | | |
| Irrigation source | Damaged irrigation | Damaged irrigation was repaired as part of the clearing operation. | Plant more trees to increase ground cover in areas that are prone to flooding. |
| Crops | The storm caused immense damage to the local agricultural industry. | Raised crops again | Register their crop with the Philippine Crop Insurance Corporation (PCIC) to receive aid in case of crop damaged due to natural disasters. |
| Physical | | | |
| Houses | 23 houses were completely destroyed, while 235 homes were partially damaged. | The Barangay assessed the extent of the damage and prioritized aid. | The barangay council has proposed a budget for the construction of evacuation centers |
| Fishing equipment | Many fishing supplies, including boats, were damaged and some went missing. This left many people without access to the resources they need to make a living. | The community made necessary repairs to the damaged boats. | The community needs to prepare early and keep the boats in a safe area. |
| Human | | | |
| Individual distress | The storm has caused immense emotional distress to the community due to the damage on their houses. | After the typhoon devastation the Barangay conducted a clearing operation to ensure the safety of its residents. | Forced evacuation must be implemented in cases where flooding is imminent or expected. Conduct psychological counseling for affected residents |

table continued in the next page...

... table continued.

| Typhoon Paeng October 2022 | | | |
|---|---|--|--|
| Livelihood assets | Impacts on livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Natural | | | |
| Damaged crops | The occurrence of flash floods due to heavy rains and storm surges damage the crops . | DSWD distributed relief goods to those affected by the typhoon. The Barangay also conducted clearing operations in different zones/sitio. | Early harvesting of crops should also be done in case there is a forecasted typhoon coming. |
| Financial | | | |
| Financial capital | Loss of financial capital. | Borrow money again to restart restoring their livelihood. | Registration of their crops to PCIC. |
| Drought 2022 | | | |
| Natural | | | |
| Soil | The soil became compacted due to extreme heat. Farmers are unable to plant rice or other commodities. | Used the deep wells for irrigation. | They are finding ways to construct a solar panel irrigation system. |
| Crops | Wilting of their crops due to lack of water. | Venturing into backyard gardening. | Training for creating value-added products as alternative livelihood. |
| Earthquake 2022 | | | |
| Natural | | | |
| Houses | Some homes were slightly damaged by the earthquake. | Immediate inspection was done by the barangay officials. | A community earthquake drill can ensure that everyone in the community knows what to do in the event of an earthquake. |
| Southwest monsoon (Habagat) June- December | | | |
| Natural | | | |
| Crops | The Southwest monsoon brought destructive winds and rains that damaged crops and reduced yields. | They raised hogs and practiced backyard gardening to make sure that they have enough food during this time. | Registration of their crops to PCIC |
| Fishes | Habagat caused damage to boats and low fish harvests led to reduced incomes for coastal communities. | People living near the shoreline made sure to secure their boats and put them away from the shoreline. | Fisherfolks should be trained in food processing techniques specifically for seafoods. |

| 15 years ago 2008 – 2023 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|--------------------------------|----------------|-----|-----|-----|----------|------|------|------|----------------|----------------|----------------|----------------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | ✓ | ✓ | ✓ | | | |
| TEMPERATURE | → | → | ↑ | ↑ | → | → | → | → | → | → | → | → |
| RAINFALL | Low | Low | Low | Low | Moderate | High | High | High | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| B. Farming | | | | | Rice | Rice | Rice | Rice | Corn Mung bean | Corn Mung bean | Corn Mung bean | Corn Mung bean |
| C. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| D. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| E. Poultry | ALL YEAR ROUND | | | | | | | | | | | |

| 30 years ago 1993 – 2023 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|--------------------------------|----------------|-----|-----|-----|----------|----------|------|------|----------------|----------------|----------------|----------------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | ✓ | ✓ | ✓ | | | |
| TEMPERATURE | → | → | ↑ | ↑ | → | → | → | → | → | ↓ | ↓ | ↓ |
| RAINFALL | Low | Low | Low | Low | Moderate | Moderate | High | High | Moderate | Moderate | High | High |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| B. Farming | | | | | Rice | Rice | Rice | Rice | Corn Mung bean | Corn Mung bean | Corn Mung bean | Corn Mung bean |
| C. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| D. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| E. Poultry | ALL YEAR ROUND | | | | | | | | | | | |

LEGEND:

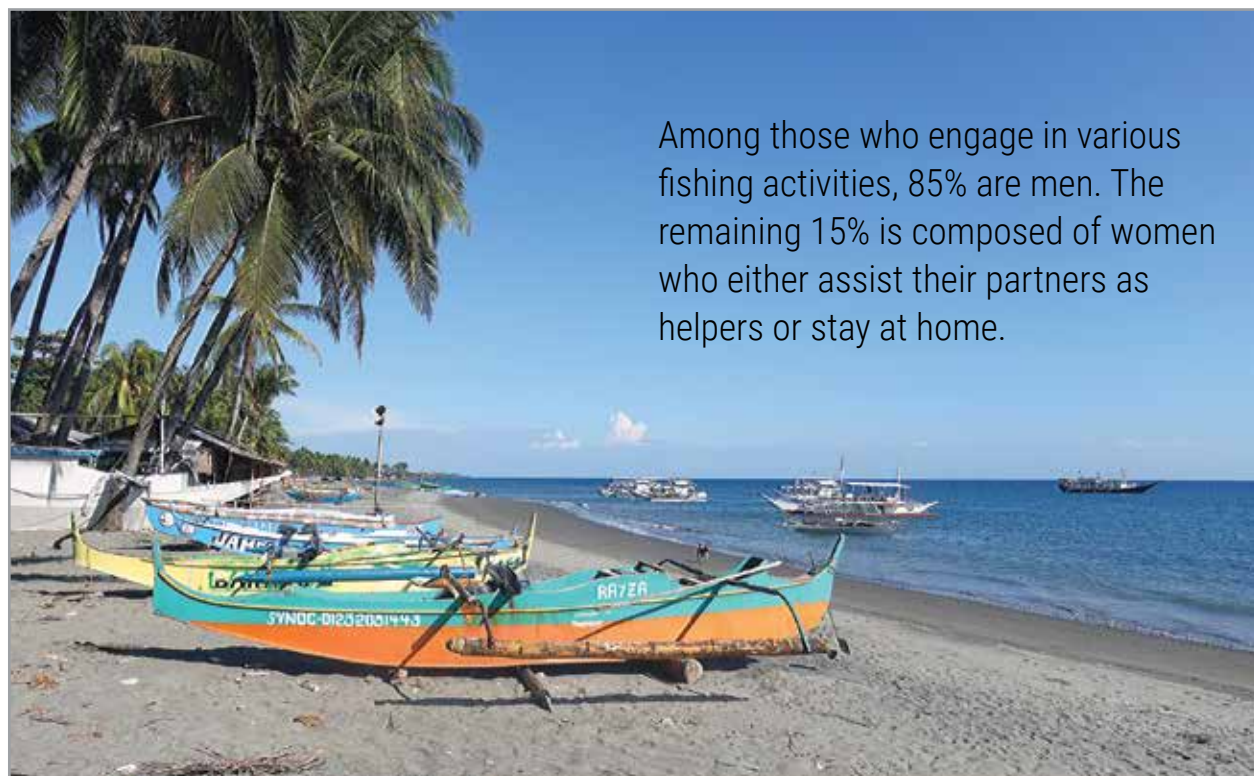
| | | |
|-----------------|-------------|----------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet | ↑ High | High |
| Dry | → Average | Moderate |
| | ↓ Low | Low |
| | | No Rain |

4. Livelihood Matrix

| LIVELIHOOD: RICE FARMING | Roles | | Decisions | | Sectoral Role | | |
|--|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Land preparation (pag-araro) | - | 100% | 50% | 50% | 25% | 70% | 5% |
| Land soaking (Kuliglig) | | 100% | 25% | 75% | 25% | 70% | 5% |
| Seed preparation and selection | 25% | 75% | 10% | 90% | 10% | 80% | 10% |
| Direct seeding | - | 100% | 10% | 90% | 10% | 80% | 10% |
| Preparation and application of herbicide | - | 100% | - | 100% | 10% | 80% | 10% |
| Irrigation | - | 100% | - | 100% | 25% | 70% | 5% |
| Preparation and application of fertilizer (1st application) | 10% | 90% | - | 100% | 25% | 70% | 5% |
| Top dressing and application of fertilizer (2nd application) | 10% | 90% | - | 100% | 25% | 70% | 5% |
| Application of foliar fertilizer (3rd and last application) | 5% | 95% | - | 100% | 20% | 80% | - |
| Weeding | 50% | 50% | 50% | 50% | 20% | 80% | - |
| Harvesting | - | 100% | - | 100% | 50% | 50% | - |
| Thresher | - | 100% | - | 100% | 50% | 50% | - |
| Drying | 50% | 50% | 50% | 50% | 30% | 70% | - |

| LIVELIHOOD: HOG RAISING | Roles | | Decisions | | Sectoral Role | | |
|---|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Purchase of piglets | 50% | 50% | 50% | 50% | 5% | 95% | - |
| Construction of pig pen house with waste management | - | 100% | - | 100% | 10% | 90% | 20% |
| Water source (Deep well) | - | 100% | - | 100% | 10% | 90% | 20% |
| Purchase of feeds and vitamins and dewormers | - | 50% | 50% | 50% | 25% | 75% | 20% |
| Cleaning of pig pen | 50% | 100% | - | 100% | - | 100% | - |
| Collecting waste | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Introduction of boar | - | 50% | 50% | 50% | 20% | 70% | 10% |
| Feeding and monitoring | 50% | 100% | - | 100% | 20% | 70% | 10% |
| Farrowing | 50% | 100% | - | 100% | 20% | 70% | 10% |
| Cleaning of piglets, cutting of tail and teeth | - | 100% | - | 100% | 20% | 70% | 10% |
| Medication (Vitamins and immunization) | - | | | | | | |
| Castration | - | | | | | | |
| Disposal/selling of piglets (2 months for disposal) | 50% | | | | | | |

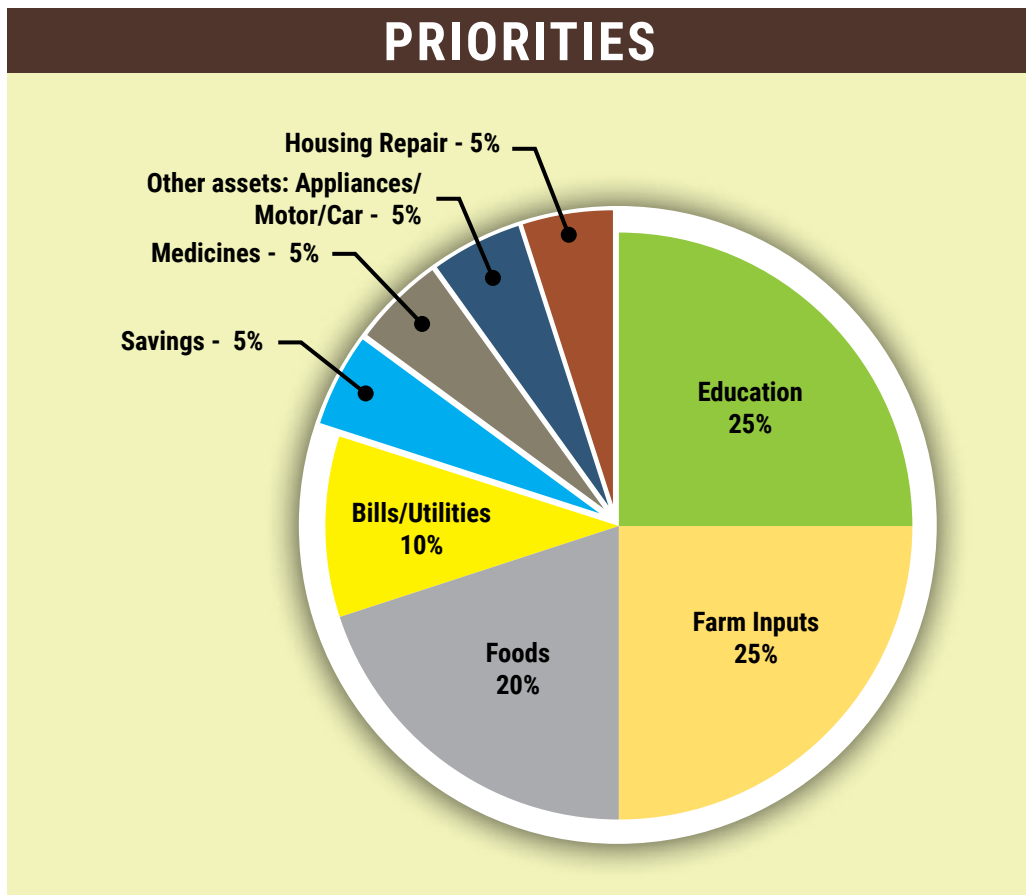
| LIVELIHOOD: FISHING | Roles | | Decisions | | Sectoral Role | | |
|---|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Preparing fish net, paddle, water dipper | - | 100% | - | 100% | 25% | 70% | 5% |
| Preparation of battery and reflector to attract fish | 10% | 90% | 10% | 90% | 25% | 70% | 5% |
| Purchase of gasoline and battery charging | - | 50% | - | 50% | 10% | 80% | 10% |
| Going to the middle of the sea and net casting/net throwing | - | 100% | - | 100% | 5% | 70% | 25% |
| Repair and maintenance of materials and machineries | 75% | 25% | 50% | 50% | 15% | 70% | 15% |
| Waiting for the release of fish net from water | - | 100% | - | 100% | 5% | 70% | 25% |
| Catch and release net | - | 100% | 10% | 90% | 10% | 80% | 10% |
| Docking and marketing | - | 100% | 90% | 10% | 50% | 25% | 25% |
| Pricing | - | 100% | - | 100% | 10% | 80% | 10% |



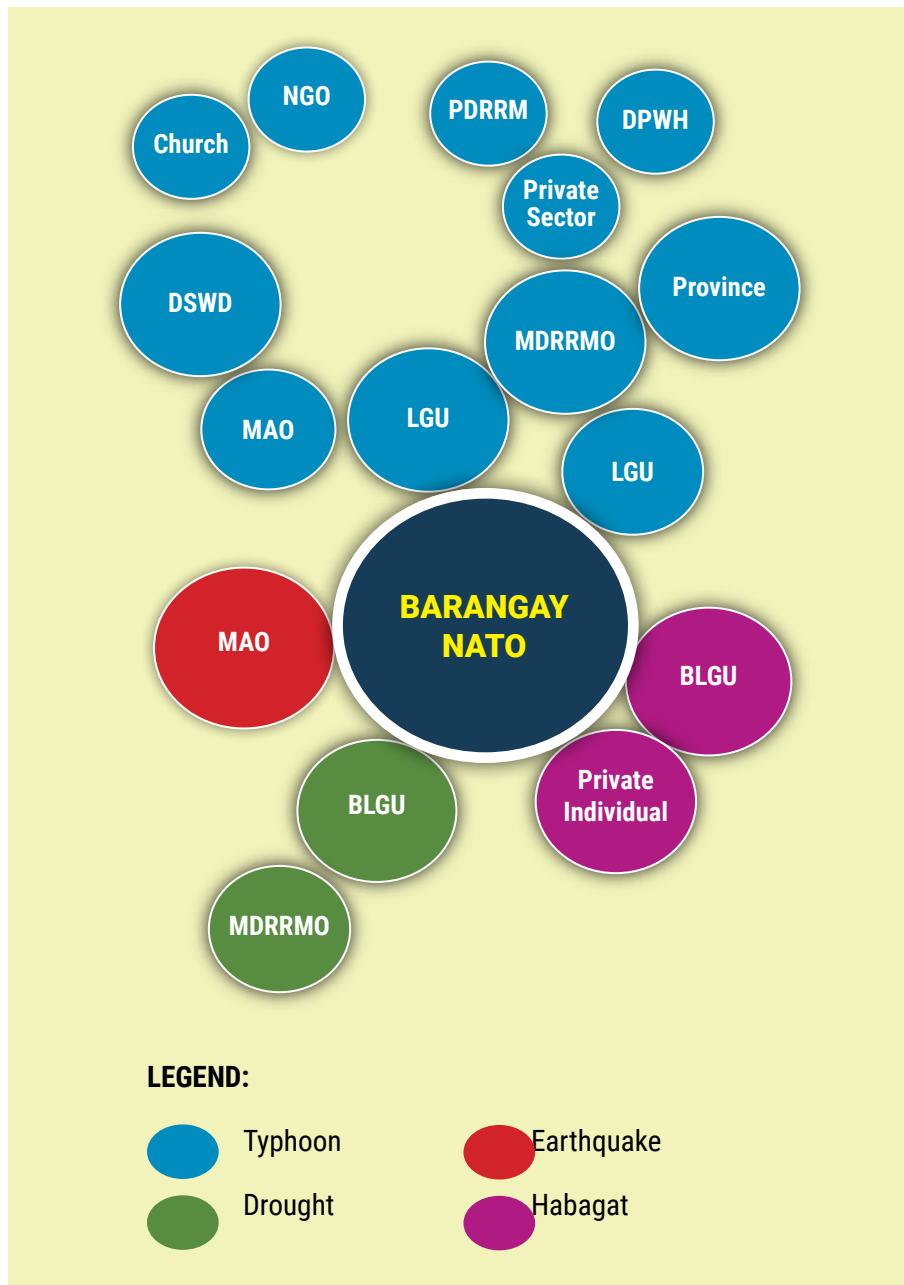
Among those who engage in various fishing activities, 85% are men. The remaining 15% is composed of women who either assist their partners as helpers or stay at home.

5. Resource Flow

| LIVELIHOODS | Outflow | Income |
|--------------|--|---|
| Rice farming | PhP 25, 000/ha. | (Intended for home consumption) |
| Fishing | <ul style="list-style-type: none"> ● Kayagkag - PhP 15,000 ● Palaran - PhP 15,000 ● Pukot - PhP 25,000 (materials and labor) ● Labay/long line/lambo - PhP 3,860 | <ul style="list-style-type: none"> ● Kayagkag - PhP 2,170 ● Palaran - PhP 3,720 ● Pukot - PhP 1,730 ● Labay/long line/lambo - PhP 6,700 |
| Hog raising | PhP 41,110 for 3-4 months | PhP 7,890 |



6. Venn Diagram



Barangay San Roque

1. Introduction

1.1. Barangay Profile

San Roque has a long and rich history that dates to the Spanish colonial period. At that time, the area was sparsely populated and covered in tall, wild cogon grass and other plants. When the Spaniards arrived, they set about clearing the land, cutting and burning the grasses for several days until the area was suitable for settlement. The handful of families who lived there were given lots on which they built their houses and were instructed to cultivate the land and plant rice, corn, and other crops.

After several days of hard work, the settlers built a small chapel, which they called a “Kapilya.” A Spanish priest would often come to San Roque to say mass. The town was named after the patron saint of dogs, San Roque, who is said to have healed a group of natives who were sick when he visited their homes with his dog. The people of San Roque adopted the name “*San Roque dakong buluhan*,” which means “*San Roque, the great healer.*”



Figure 4. Map of Barangay San Roque

Over time, more families and relatives of the Spaniards who first settled in San Roque joined the community. They too cleared the land, with permission from the Spaniards, and were taught to pray in Spanish and read the "*Kartilla*," a book that contained basic Christian teachings.

Despite their initial struggles, the Spaniards who settled in San Roque were friendly to the land and the people who lived there. When the old Spaniards died, their children took over, and the community continued to thrive. Today, San Roque is a vibrant and close-knit community that values its history and traditions.

Population

San Roque is a barangay located in the municipality of Anini-Y, in the province of Antique. As per the 2020 Census, it had a population of 1,434, which represented 6.51% of the total population of Anini-Y.

1.2 Household Classification

- | | |
|---|--|
| <ul style="list-style-type: none"> • Purok 1: 20% indigent 80% lower middle class • Purok 2: 90% indigent 10% lower middle class • Purok 3: 75% indigent 25% lower middle class | <ul style="list-style-type: none"> • Purok 4: 75% indigent 25% middle class • Purok 5: 20% indigent 80% lower middle class |
|---|--|

1.3 Livelihood Status

Most of the population relies on farming and fishing for their income, with many residents growing crops. In addition to agriculture and fishing, there are also some business owners and seafarers in the community. Small businesses such as sari-sari stores and carinderias provide additional sources of income, while seafarers work on ships.

1.4 Sectoral Involvement in Livelihood

A. Fishing

Women are mainly responsible for purchasing and hauling ice, while men are involved in all activities except for preparing materials for fishing, which is mostly done by youth aged 15-30 and those aged 31-59. Senior citizens are also involved in repairing and maintaining materials and machinery.

The sectorial role involves the purchase of gasoline, which is evenly split between men and women. Catching fish is done by men. Picking and transferring fish is also mainly done by both men and women.

Contacting buyers is mostly done by men, but women are also involved. The transfer of fish is mainly done by women while hauling is done by men. Weighing and packing is split evenly between men and women, while pricing is mostly done by men. Selling and vending is mostly done by women.

B. Hog Raising

For livestock/hog raising, both men and women have significant roles and decisions to make. Women and men have equal responsibility in cleaning and disinfecting the pig pen, monitoring after mating, and feeding the pigs. Men, however, take the lead in constructing the pig pen house and purchasing piglets. Women, on the other hand, take the lead in deworming after 100 days and 14 days before birthing and monitoring during labor.

Youth between 15-30 also have a role in this livelihood activity, particularly in monitoring the sows, while seniors have a minimal role in this activity, with only 10% involvement in most of the activities.

C. Farming

Women and men have equal roles in purchasing inputs, land preparation/cleaning, planting, and seed storage. However, men have a more significant role in spraying chemicals and harvesting. Youth aged 15-30 have a role in all activities except for seed storage, while senior citizens have a more limited role in all activities except for land preparation/cleaning.

The decisions in farming are made jointly by women and men. Both genders are involved in making decisions related to purchasing inputs, land preparation/cleaning, planting, spraying chemicals, harvesting, and seed storage.



2. Climate Change Perception

2.1 Climate Hazard

The impact of climate change on Barangay San Roque is significant, with typhoons and droughts being the two major climate events affecting the community. During typhoons, 100% of the residents were affected, with 130 families being evacuated to safe areas. The lower-class residents are most affected, with 30% of the community experiencing total damage to their homes, while 60% experienced partial damage. However, the community remains resilient, with 10% of the residents only experiencing slight damage.

It's also worth noting that the climate patterns observed in San Roque 30 years ago and 15 years ago may have been similar. Residents of San Roque observed changes 5 years ago in weather patterns, such as increased frequency or intensity of storms, changes in temperature or humidity, or changes in precipitation patterns.

In addition to typhoons, droughts are also a major problem in the barangay. Specifically, rice farming is 100% affected, with farmers relying solely on rain. This has impacted the community's source of income and their way of living. Despite these challenges, the residents are motivated to find solutions and engage in other livelihood interventions to supplement their income.

2.2 Impact

The devastating effects of the typhoon on Barangay San Roque have left the community in a state of disarray. With half of the houses fully destroyed and another 40% partially damaged, many families are left without homes or necessities. The destruction of the piggery roofs, barangay hall, and church only adds to the already dire situation. One family lost three pump boats, each valued at 45,000, significantly affecting their livelihood.

Furthermore, the typhoon caused extreme damage to bananas and coconuts, which are major sources of income for many families in Barangay San Roque, creating an even greater need for aid and assistance.

In addition to typhoons, drought is also a major problem in the barangay. Specifically, rice farming is 100% affected, with farmers relying solely on rain. This has impacted the community's source of income and their way of living. Despite these challenges, the residents are motivated to find solutions and engage in other livelihood interventions to supplement their income.

2.3 Coping Mechanism

Households living near the shorelines were evacuated to safer areas to ensure their safety. The barangay officials also distributed food packs to affected families to provide immediate assistance.

After the typhoon, the barangay officials of Barangay San Roque immediately conducted a clearing operation to remove debris and assess the damage caused by the typhoon. They also gathered data on those who were affected by the typhoon to identify the most vulnerable households.

Fishermen conducted repairs on boats and fish nets to support the recovery of the fishing industry, which is a significant source of income for many families in the barangay.

The community also implemented the bayanihan system, where people helped each other to rebuild their homes and recover from the disaster.

In response to the drought, the barangay council of Barangay San Roque has taken proactive measures to support affected families and communities. One of the key interventions has been the construction of additional deep wells to provide alternative sources of water for irrigation and household use. This has helped to mitigate the impact of the drought on agricultural productivity and ensure that families have access to clean and safe water.

Many families in the barangay have engaged in backyard gardening, particularly those who have access to a source of water. This has allowed them to grow their food and reduce their dependence on purchased produce, which may be more expensive due to the drought. Backyard gardening also promotes food security and provides a source of income for families.

Furthermore, the barangay council has introduced livelihood interventions such as hog raising and poultry production.

2.4 Capacity of the Community

The household classification could potentially affect the capacity of the community to respond and recover from climate hazards.

Puroks 1 and 5 have higher percentages of lower middle-class residents, which means they may have a better capacity to withstand a typhoon and the effect of drought compared to the other puroks with more indigent residents.

Purok 2 has the highest percentage of indigent residents at 90%, suggesting that this area may need more support in the event of a typhoon.

2.5 Initial Plan of the Barangay

| Implications | Solution |
|---|---|
| <ul style="list-style-type: none"> Farmers don't register their crops with the Philippine Crop Insurance Corporation | <ul style="list-style-type: none"> Farmers plan to register their crops under PCIC |
| <ul style="list-style-type: none"> No disaster risk key person in the farmer association | <ul style="list-style-type: none"> Will establish a committee on disaster risk reduction to develop plans and strategies to mitigate the impact of future disasters on their crops |
| <ul style="list-style-type: none"> No assistance was given to damaged boats | <ul style="list-style-type: none"> Fisherfolks associations will have their pump boats legally registered to ensure that they can receive assistance in case of damage or loss due to typhoons |
| <ul style="list-style-type: none"> Water scarcity in the community | <ul style="list-style-type: none"> Will seek help from the national government for the construction of rainwater banks and water catchment systems Purification of seawater as a potential source of irrigation water |

3. Summary and Findings

Overall, the barangay officials of Barangay San Roque took swift action to support affected families and communities after the typhoon. Communities were severely damaged as a result of the typhoon. It was the local governments of the Barangays who provided the most assistance during the typhoon. Many sectors and institutions stepped up to assist during these difficult times (see Venn Diagram). The DPWH provided the largest support for other climate hazards such as droughts.

The decline of farming in this community over the past few decades is evident, with a decrease in the number of people engaged in farming and a shift away from traditional practices. However, there are still some crops being grown, including rice, corn, and various fruits and vegetables.

For their source of livelihood, 25% of the residents farm rice, 40% raise hogs, and 5% in fishing.

It's worth noting that 70% of those engaged in fishing are considered lower class or indigent. Additionally, many of these fisherfolks also engage in hog raising, which could provide additional income and diversify their livelihoods.

Various types of fish are caught throughout the year, with Aloy being a constant presence. Other fish caught during the December to May season include Bulaw, Galunggong, Ulandes, and Flying Fish. During the June to November season, Tuna/Yellow Pin are caught, although this season sees a low harvest.

4. Recommendations

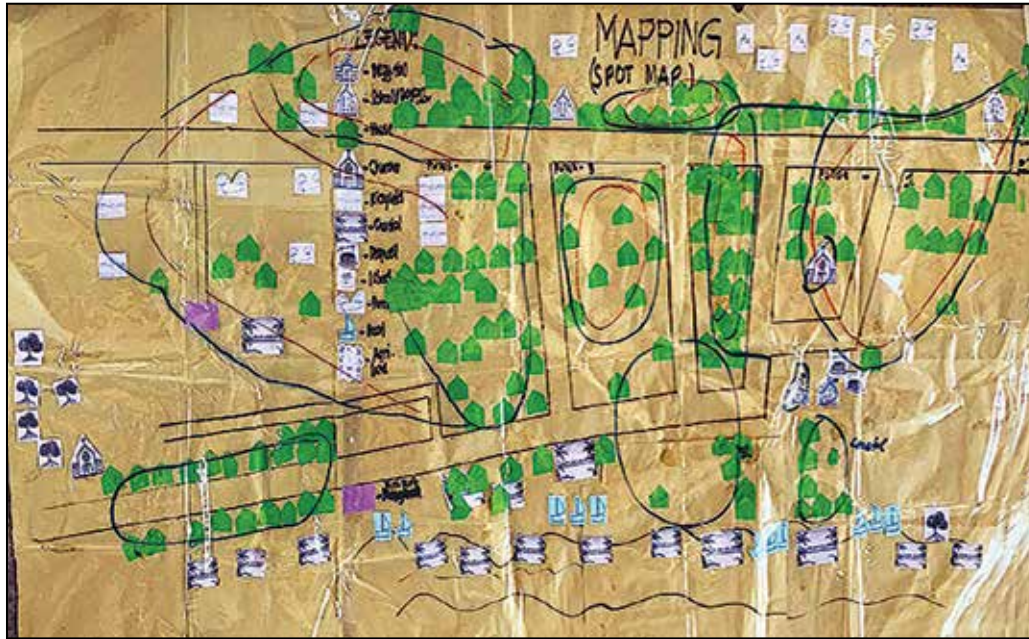
1. Create a strategy for the community's emergency response. Establish a reliable communication system and designate the essential persons in charge to provide any necessary updates and information within the Barangay.
2. Create and train an emergency response team that will help with pressing concerns. The team should be equipped with the knowledge, skills, and resources required to manage helping the community.

Annex B. PCVRA Tools Used

1. Timeline

| Typhoon Odette December 2021 | | | |
|-------------------------------------|---|--|--|
| Livelihood assets | Impacts on livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Natural | | | |
| Crops | 100% of bananas were damaged. | Immediately conducted a clearing operation and grew different crops. | To prepare for future typhoons, the farmers' association in Barangay San Roque will register their crops in the PCIC. |
| Physical | | | |
| Houses | 50% of the houses being totally damaged, 40% partially damaged, and 10% slightly damaged. | distributed food packs to affected families. | Problems related to typhoons or other natural disasters; the community members will report to the barangay council. |
| Pig pens | The piggery roofs were wrecked. | Repair of the pens. | The council will assess the situation and aid those affected. |
| Barangay Hall and Church | The barangay hall and church were slightly damaged. | Conducted a clearing operation to remove debris. | Ask assistance from the LGU. |
| Boats | Three units of pump boats were damaged. | Conducted repairs on boats and fish nets to support the recovery of the fishing industry, which is a significant source of income for many families in the barangay. | Fisher folks will have their pump boats legally registered to ensure that they can receive assistance in case of damage or loss due to typhoons. |
| Drought January-July 2022 | | | |
| Natural | | | |
| Crops | Wilting of plants, 100% of the rice farmers being affected. Decline in yield. | Many families in the barangay have engaged in backyard gardening. | The community will seek help from the national government for the construction of rainwater banks and water catchment systems. |

2. Spot Map



3. Seasonal Calendar

| 5 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|-----|-----|-----|---------|---------|----------------|----------|------|------|-----|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | | ✓ | | ✓ | | ✓ |
| TEMPERATURE | ↓ | ↓ | ↑ | ↑ | → | → | → | → | ↓ | → | → | ↓ |
| RAINFALL | Low | Low | Low | No Rain | No Rain | Moderate | Moderate | High | Low | Low | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Rice Farming | | | | | | Rice | Rice | Rice | Rice | | | |
| B. Hog Raising | | | | | | ALL YEAR ROUND | | | | | | |
| C. Fishing | | | | | | ALL YEAR ROUND | | | | | | |
| D. Vending | | | | | | ALL YEAR ROUND | | | | | | |
| E. Poultry | | | | | | ALL YEAR ROUND | | | | | | |

LEGEND:

| | | |
|-----------------|-------------|----------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet | ↑ High | High |
| Dry | → Average | Moderate |
| | ↓ Low | Low |
| | | No Rain |

| 15 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|-----|-----|----------|------|------|------|------|----------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | ✓ | ✓ | | | | |
| TEMPERATURE | ↓ | ↓ | ↑ | ↑ | → | → | → | → | ↓ | ↓ | ↓ | ↓ |
| RAINFALL | Low | Low | Low | Moderate | High | High | High | High | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Rice Farming | | | | | | Rice | Rice | Rice | Rice | | | |
| B. Hog Raising | ALL YEAR ROUND | | | | | | | | | | | |
| C. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| D. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| E. Poultry | ALL YEAR ROUND | | | | | | | | | | | |

| 30 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|-----|-----|----------|-------------|-------------|-------------|-------------|----------|-----------|-----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | ✓ | ✓ | | | | |
| TEMPERATURE | ↓ | ↓ | ↑ | ↑ | → | → | → | → | ↓ | ↓ | ↓ | ↓ |
| RAINFALL | Low | Low | Low | Moderate | High | High | High | High | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Rice Farming | | | | Corn | Corn Kadyos | Corn Kadyos | Corn Kadyos | Corn Kadyos | | Mung bean | Mung bean | |
| B. Hog Raising | ALL YEAR ROUND | | | | | | | | | | | |
| C. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| D. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| E. Copra | | | ✓ | | | | ✓ | | | | ✓ | |

LEGEND:

| | | |
|-----------------|------------------------------|---------------------------------------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet Dry | ↑ High → Average ↓ Low | High Moderate Low No Rain |

4. Livelihood Matrix

| LIVELIHOOD: LIVESTOCK / HOG RAISING (Fattening) | Roles | | Decisions | | Sectoral Role | | |
|--|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities (Nayon) | | | | | | | |
| Construction of pig pen house with manure waste management | 0% | 100% | 0% | 100% | 20% | 70% | 10% |
| Cleaning of pig pen | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Boar management/ insemination | 0% | 100% | 20% | 80% | 0 | 90% | 10% |
| Monitoring after insemination | 50% | 50% | 50% | 50% | 0 | 90% | 10% |
| Deworming after 100 days, 14 days before birthing | 0 | 100% | 0 | 100% | 0 | 80% | 20% |
| Monitoring during labor | 50% | 50% | 50% | 50% | 10% | 80% | 10% |
| Feeding | 50% | 50% | 50% | 50% | 0 | 80% | 20% |
| Fattening | | | | | | | |
| After 45 days, for disposal | 50% | 50% | 50% | 50% | 0 | 70% | 30% |
| Purchase of piglets | 50% | 50% | 50% | 50% | 0 | 70% | 30% |
| Purchase of feeds | 10% | 90% | 10% | 90% | 20% | 70% | 10% |
| Feeding | 20% | 80% | 20% | 80% | 20% | 70% | 10% |
| Deworming and vitamins | 50% | 30% | 50% | 50% | 0 | 80% | 20% |
| After 3-4 months disposal | 70% | 30% | 50% | 50% | 0 | 80% | 20% |

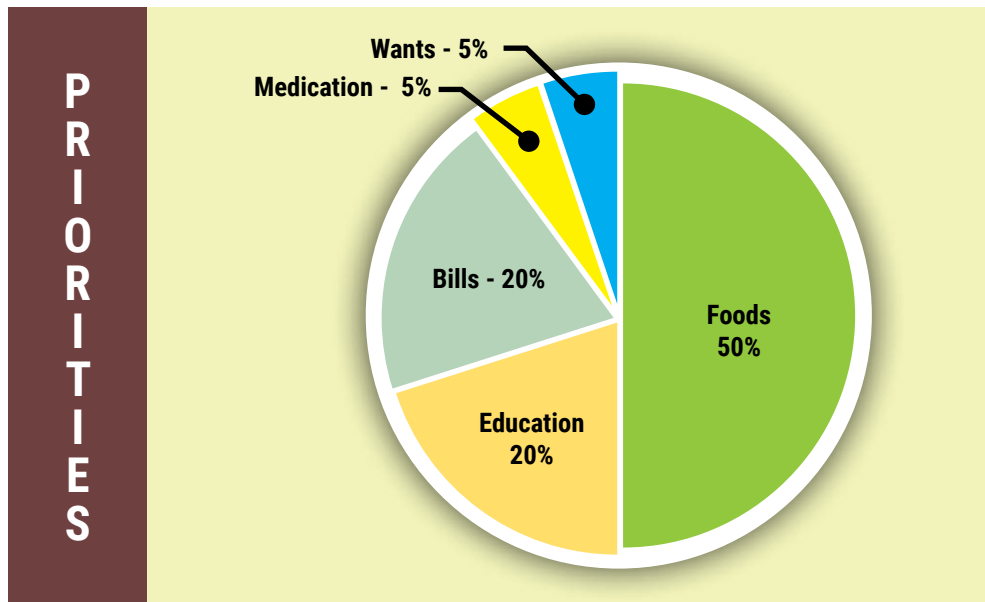
| LIVELIHOOD: FARMING | Roles | | Decisions | | Sectoral Role | | |
|---------------------------|-------|------|-----------|-----|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities (Nayon) | | | | | | | |
| Purchase of inputs | 50% | 50% | 50% | 50% | 10% | 80% | 10% |
| Land preparation/cleaning | 20% | 80% | 50% | 50% | 40% | 50% | 10% |
| Planting | 50% | 50% | 50% | 50% | 40% | 50% | 10% |
| Spraying of chemicals | 0% | 100% | 50% | 50% | 10% | 85% | 5% |
| Harvesting | 10% | 90% | 50% | 50% | 20% | 75% | 5% |
| Seed storage | 50% | 50% | 50% | 50% | 30% | 60% | 10% |

| LIVELIHOOD: VENDING | Roles | | Decisions | | Sectoral Role | | |
|---------------------|-------|-----|-----------|-----|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities (Nayon) | | | | | | | |
| Purchase of fish | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Pricing | 50% | 50% | 50% | 50% | 20% | 80% | 10% |
| Selling | 50% | 50% | 50% | 50% | 10% | 80% | 10% |

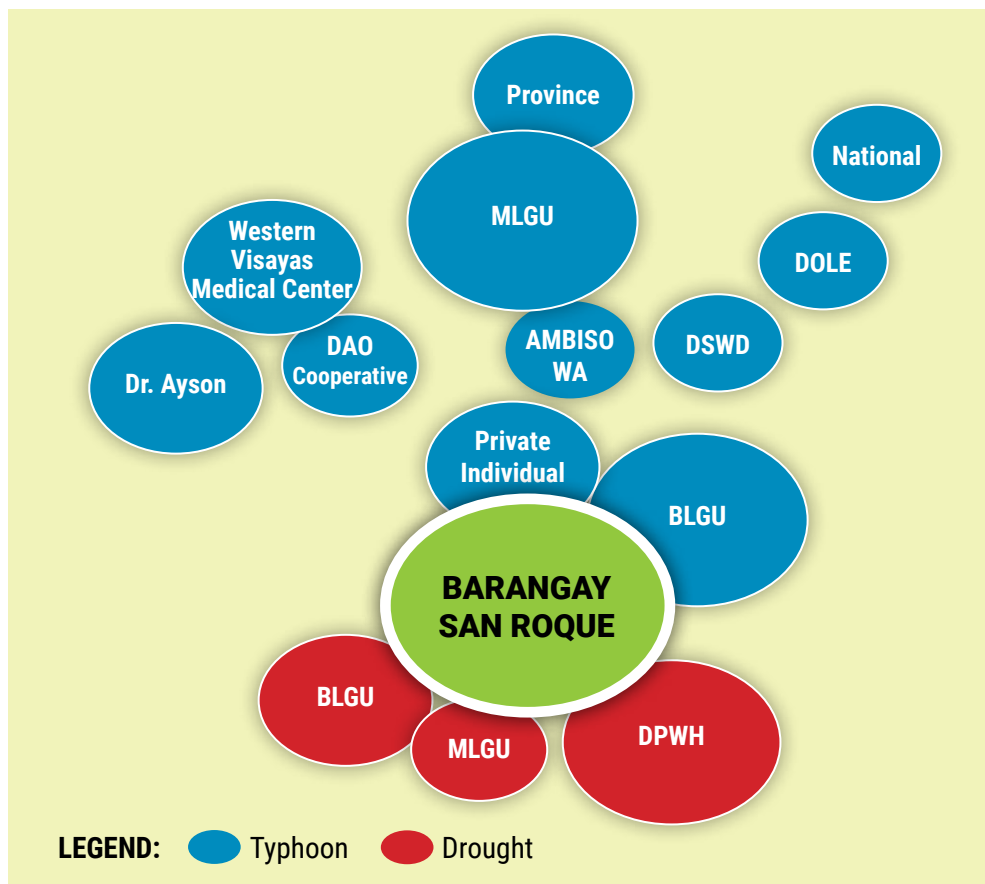
| LIVELIHOOD: FISHING | Roles | | Decisions | | Sectoral Role | | |
|--|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Purchase and hauling of ice | - | 100% | - | 100% | 20% | 70% | 10% |
| Bayanihan/hauling of boats | - | 100% | - | 100% | 20% | 80% | - |
| Preparing of materials for fishing (Fish net, paddle, battery, lights, dipper, styro foam, and food consumption) | 30% | 70% | 20% | 80% | 10% | 80% | 10% |
| Repair and maintenance of materials and machineries | - | 100% | - | 100% | 20% | 70% | 10% |
| Purchase of gasoline | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Catching of fish (Hook and line, pamaulo, pamansi , balsa, padamag) | - | 100% | - | 100% | 20% | 70% | 10% |
| Picking of fish from fish net and transfer fish to styro foam | - | 100% | - | 100% | 20% | 70% | 10% |
| Docking | - | 100% | 30% | 100% | 20% | 70% | 10% |
| Contact buyer | 30% | 70% | - | 70% | 20% | 70% | 10% |
| Transfer of fish | - | 100% | - | 100% | 70% | 30% | - |
| Hauling | - | 100% | - | 100% | 70% | 30% | - |
| Weighing and packing | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Pricing | 30% | 70% | 30% | 70% | 20% | 70% | 10% |
| Selling/vending | 70% | 30% | 70% | 30% | 10% | 80% | 10% |
| Computation of all expenses | 70% | 30% | 70% | 30% | 10% | 80% | 10% |
| Handling the income | 80% | 20% | 80% | 20% | 10% | 80% | 10% |

5. Resource Flow

| LIVELIHOODS | Outflow | Income |
|---------------------|--|--|
| Rice farming | PhP 11,118 /ha. | (intended for home consumption) |
| Fishing | <ul style="list-style-type: none"> ● Pamansi – PhP 11,080 ● Padamag – PhP 9,300 ● Pambaulo – PhP 9,500 ● Pambalsa – PhP 77,780 | <ul style="list-style-type: none"> ● Pamansi – PhP 32,890 ● Padamag – PhP 10,250 ● Pambaulo – PhP 6,900 ● Pambalsa – PhP 212,500 |
| Hog raising | PhP 22,925 for 3-4 months | PhP 45,000 |
| Vending | PhP 1,300 | PhP 200 day |



6. Venn Diagram



Barangay Magdalena

1. Introduction

1.1 Barangay Profile

Barangay Magdalena in Anini-y, Antique was originally a small community composed of houses located near the sea and mountains. When the Spaniards arrived, the people in the area were introduced to Christianity and became Christians. As a result, they were baptized and adapted various Christian rituals for marriage, baptism, and other sacraments.

One of the most significant rituals in Barangay Magdalena are weddings. During this event, the groom's family would give gifts to the bride's family and serve them with food and drinks. This practice was done to show respect and appreciation to the bride's family. In return, the bride's family would also give their own gifts to the groom's family. The wedding celebration would continue after the ceremony as the families and lovers would gather for a night of drinking lambanog (a local alcoholic beverage) and dancing.

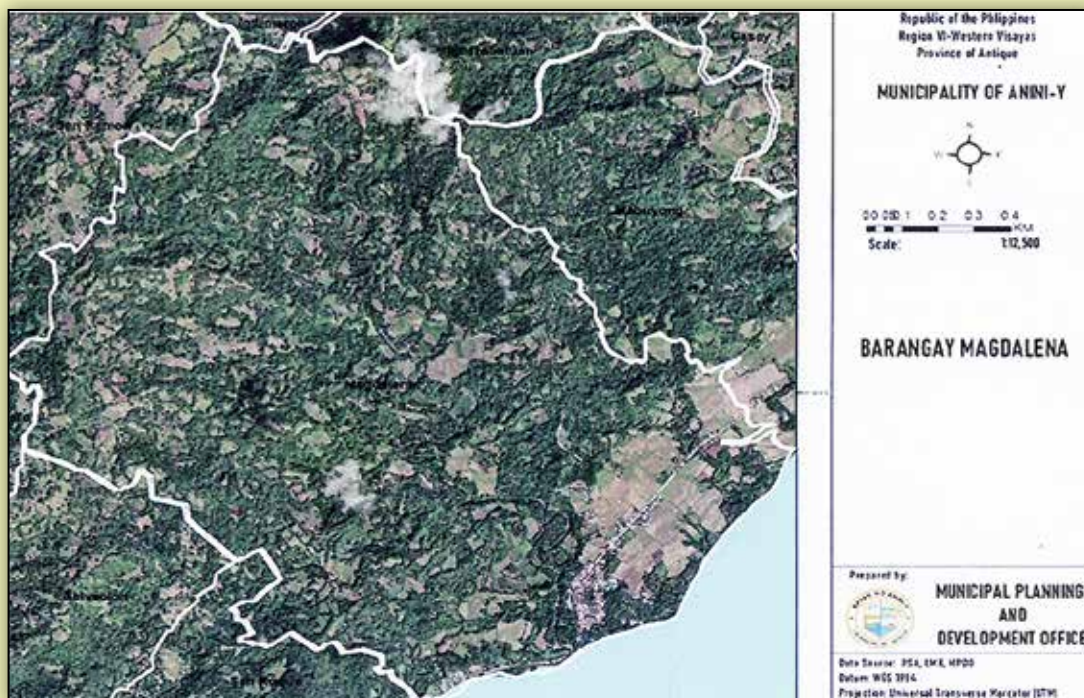


Figure 5. Map of Barangay Magdalena

Over time, Barangay Magdalena became a prosperous village under Spanish colonial rule. The people continued to practice their Christian faith and developed a unique culture that blended their indigenous traditions with those of the Spanish colonizers. Today, Barangay Magdalena remains a vibrant community that celebrates its rich history and traditions.

Population

Magdalena is a barangay in the province of Antique's municipality of Anini-Y. 2,175 people live there as of the 2020 Census. This accounted for 9.88% of Anini-y's entire population.

1.2 Household Classification

| | | | |
|---------------------------|--|-------------------------|--|
| • Sitio Pait: | 90% indigent 10% lower middle class | • Sitio Igtuba: | 90% indigent 10% lower middle class |
| • Sitio Cababaan: | 90% indigent 10% lower middle class | • Sitio Puti: | 90% indigent 10% middle class |
| • Sitio Igcanipa: | 60% indigent 40% lower middle class | • Sitio Duncaan: | 5% indigent 95% middle class |
| • Sitio Panabigan: | 10% indigent 90% middle class | • Sitio Look: | 5% indigent 95% lower middle class |
| • Sitio Mapisong: | 10% indigent 90% lower middle class | • Sitio Dawis: | 40% indigent 60% middle class |
| • Sitio Igbacia: | 90% indigent 10% lower middle class | • Sitio Proper: | 5% indigent 95% middle class |

1.3 Livelihood Status

The major sources of livelihood in Barangay Magdalena are farming, fishing, and hog raising. These three activities are the main sources of income for the residents of Magdalena.

1.4 Sectoral Involvement in Livelihood

A. Farming

Women tend to have a smaller role in decision-making, sectoral role, and activities related to farming compared to men. However, women are more involved in weeding and seed soaking, while men are more involved in tree lacing and cultivation.

There is also a notable difference in the involvement of youth and senior citizens in farming activities. Youth aged 15-30 are more involved in watering, while senior citizens have a smaller role in all activities.

To address the gender gap, it is essential to provide equal access to resources, education, and training for women in farming. Encouraging women to participate in decision-making and sectoral roles can also help bridge the gap.

Additionally, involving more youth in farming activities can help sustain the industry and provide opportunities for the younger generation.

B. Hog Raising

Hog raising is a sector that provides opportunities for both men and women. However, some activities are more dominated by one gender than the other. Women are more involved in feeding, monitoring, and selling, while men are more involved in the construction of pens, and purchasing of feeds. Youth are more involved in feeding, selling, and monitoring, while senior citizens are more involved in disposal.

C. Fishing

Women are primarily responsible for preparing the necessary tools, such as nylon, bulbs, blocks, and chest boxes, with a 100% involvement rate. Men, on the other hand, are primarily responsible for catching fish, with a 95% involvement rate.

The sectoral role of women and men in Pasibog fishing is equally divided, with a 50-50% involvement rate in catching and selling activities. The youth aged 15-30 have a 10% involvement rate in fishing activities, while those aged 31-59 have a 90% involvement rate. Senior citizens have a 10% involvement rate in releasing hook and line activities.

2. Climate Change Perception

2.1 Climate Hazard

Drought has been a significant problem in the community of Magdalena, particularly affecting rice farmers. The wilting of plants has affected 100% of rice farmers, leading them to engage in other livelihood interventions such as hog raising and poultry production.

Beginning in 2018, there was no rain from February through April, based on the seasonal calendar. In those months, few farmers grow vegetables in their backyards for domestic consumption.

Those with deep wells can engage in small-scale gardening but prioritize water for drinking and household use over-irrigation.

Typhoons have become more common in the months of June to December during the past five years, compared to 15 and 30 years ago, wherein typhoons only occurred from June to August.

It is important to note that farmers plant rice starting from May to August. They start the land preparation during May when there is enough rain. Unfortunately, the typhoon's damage to their rice field results in significant losses.

2.2 Impact

On December 17, 2021, Typhoon Odette hit the affected areas hard, causing significant damage to the communities. According to reports, 30% of the houses were utterly destroyed, while 60% of the houses were partially damaged, and 10% were slightly damaged.

Additionally, 30% of the fishermen were affected by the typhoon. The landslide caused a significant loss of bananas and coconuts. The typhoon also resulted in the loss of 50% of poultry and livestock.

In the barangay, the drought has been a major problem as well, especially for rice farmers. All (100%) of rice farmers have been impacted by the wilting of plants.

2.3 Coping Mechanism

After the devastation of the typhoon, the barangay officials conducted clearing operations. Food packs are given to affected households during typhoons.

They engaged in other livelihood interventions such as hog raising and poultry production to drought which makes crop cultivation difficult.

2.4 Capacity of the Community

The majority of the communities are indigent with a very low percentage of lower middle class. This indicates a lack of resources and means to cope during times of typhoons and drought.

To improve the community's ability to cope, it may be helpful to focus on providing support and resources to these households, such as access to emergency food as well as education on disaster preparedness measures. Additionally, community outreach and engagement programs could help to foster a sense of community and resilience, which may also aid in coping during times of crisis.

2.5 Initial Plan of the Barangay

| Implications | Solution |
|---|---|
| <ul style="list-style-type: none"> ● Lack of information regarding crop insurance | <ul style="list-style-type: none"> ● Will coordinate with LGU for the orientation about crop insurance |
| <ul style="list-style-type: none"> ● Lack of water irrigation | <ul style="list-style-type: none"> ● Will propose a budget for an additional deep well for community use |
| <ul style="list-style-type: none"> ● No training on value-adding products | <ul style="list-style-type: none"> ● Will ask the LGU to provide training on value-adding activities |
| <ul style="list-style-type: none"> ● No training in disaster risk management (DRR) | <ul style="list-style-type: none"> ● Barangay will facilitate the DRR training in coordination with LGU |

3. Summary and Findings

Drought in Barangay Magdalena is a pressing concern that requires immediate attention to prevent further economic and social disruptions. Due to the lack of water in 90% of ricefields, a significant drop in agricultural production and income is being experienced by farmers who rely purely on rainfall. The result has a direct impact on the livelihoods of many families, especially those who depend on agriculture as their primary source of income.

As a result of the typhoon, the communities were severely damaged. Many sectors and institutions have stepped up to help during these difficult times. In particular, the barangay and municipal local governments and the Department of Social Welfare and Development provided the most assistance during the typhoon.

Most of the communities in Magdalena are indigent. This indicates a lack of resources and means to cope during times of typhoons and drought. Damages vary widely between the different areas. The community's capacity to cope following a typhoon seems to be dependent on factors such as economic status, infrastructure, location, and household ownership

In times of natural disasters like typhoons and droughts, it is important to have proper disaster risk reduction plans in place. The government and local officials must work together to provide aid and support to the affected communities to help them recover from the devastation caused by these disasters.

4. Recommendations

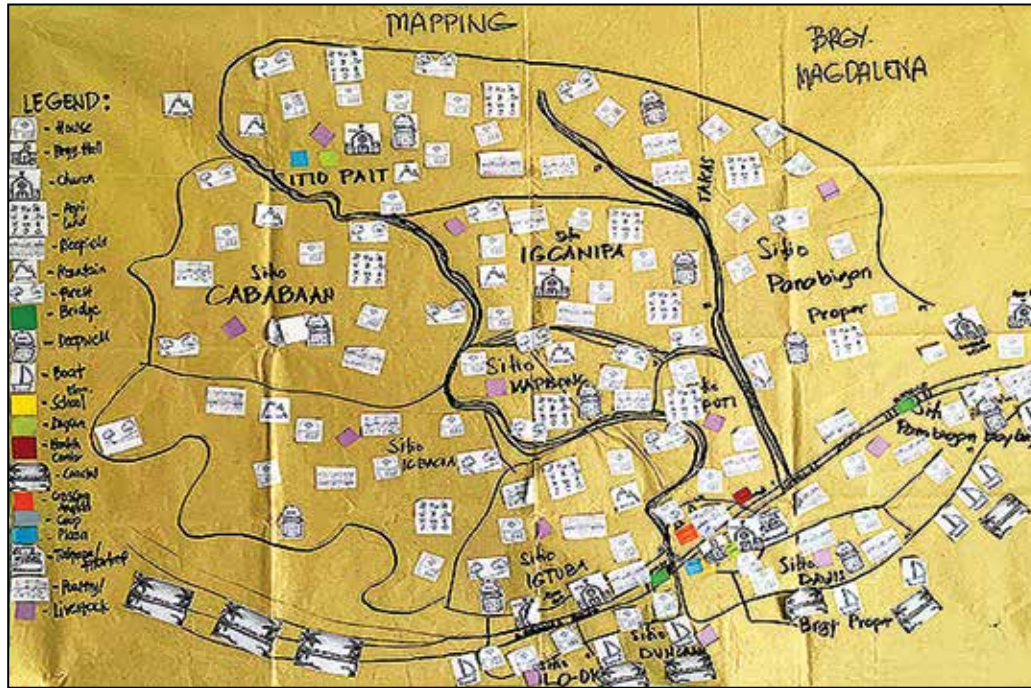
1. Implementing proper irrigation systems management in rural areas affected by drought requires collaborative efforts from all stakeholders such as farmers, governments, NGOs, and private sector players.
2. Create a water distribution networks: Can help in efficiently managing water resources by developing distribution network. Farmers can take water from centralized source and use it irrigating their crops in the field.

Annex C. PCVRA Tools Used

1. Timeline

| Typhoon Odette December 17, 2021 | | | |
|---|---|---|--|
| Livelihood assets | Impacts on livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Natural | | | |
| Crops | 100% damage on bananas. | Conducted clearing operations and regrow crops. | Any concerns or damage should be reported to the Barangay council. Will register to PCIC. |
| Physical | | | |
| House | 30% of the houses were completely destroyed, while 60% of the houses were partially damaged, and 10% were slightly damaged. | Affected household received food packs from the LGU. Force evacuation was implemented. | Listen to typhoon update All fisherfolk must be legally registered with their own pump boats. |
| Boat | 30% of fishermen's boat were affected. | Conducted repair. | |
| Drought 2017, 2018, 2019 | | | |
| Natural | | | |
| Soil and Crop | The wilting of plants has affected of rice production due to soil compaction and not enough rainfall. | They engage in other livelihood interventions such as hog raising and poultry production. | |

2. Spot Map



3. Seasonal Calendar

| 5 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|---------|---------|---------|------------------------|------|------|------|------------|------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| TEMPERATURE | ↓ | ↓ | → | ↑ | ↑ | → | → | → | → | → | → | → |
| RAINFALL | Low | No Rain | No Rain | No Rain | Moderate | High | High | High | High | High | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming | Vegetables | | | | Rice, Corn, Vegetables | | | | Vegetables | | | |
| B. Livestock/Ruminants | ALL YEAR ROUND | | | | | | | | | | | |
| C. Fishing | ALL YEAR ROUND | | | | | | | | | | | |

LEGEND:

| | | |
|-----------------|------------------------|------------------------------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet Dry | ↑ High → Average ↓ Low | High Moderate Low No Rain |

| 15 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|-----------------------------|----------|---------|---------|------------------------|------|------|------|------------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | ✓ | ✓ | | | | | |
| TEMPERATURE | ↓ | → | ↑ | ↑ | → | → | → | → | → | → | → | → |
| RAINFALL | Moderate | Moderate | No Rain | No Rain | Moderate | High | High | High | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming - 70% | Vegetables | | | | Rice, Corn, Vegetables | | | | Vegetables | | | |
| B. Livestock - 60% | ALL YEAR ROUND | | | | | | | | | | | |
| C. Fishing - 20% | ALL YEAR ROUND | | | | | | | | | | | |
| D. Buldos - 10% | Catching Bangus Fingerlings | | | | | | | | | | | |

| 30 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|-----------------------------|---------|---------|---------|------------------------|------|------|----------|------------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | ✓ | ✓ | ✓ | | | | |
| TEMPERATURE | ↓ | ↑ | ↑ | ↑ | → | → | → | → | → | → | → | → |
| RAINFALL | Moderate | No Rain | No Rain | No Rain | Moderate | High | High | Moderate | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming - 70% | Vegetables | | | | Rice, Corn, Vegetables | | | | Vegetables | | | |
| B. Livestock - 50% | ALL YEAR ROUND | | | | | | | | | | | |
| C. Fishing - 10% | ALL YEAR ROUND | | | | | | | | | | | |
| D. Buldos - 10% | Catching Bangus Fingerlings | | | | | | | | | | | |

LEGEND:

| | | |
|-----------------|-------------|----------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet | ↑ High | High |
| Dry | → Average | Moderate |
| | ↓ Low | Low |
| | | No Rain |

4. Livelihood Matrix

| LIVELIHOOD: FARMING (Rice/Vegetables) | Roles | | Decisions | | Sectoral Role | | |
|--|-------|-----|-----------|-----|----------------|-------|-------------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Land preparation | | | | | | | |
| Cultivation | 90% | 10% | 40% | 60% | 10% | 50% | 40% |
| Weeding | 90% | 10% | 40% | 60% | 10% | 50% | 40% |
| Seed selection | 50% | 50% | 50% | 50% | | 50% | 50% |
| Seed soaking | 40% | 60% | 40% | 60% | 5% | 50% | 45% |
| Transplanting | 40% | 60% | 40% | 60% | 10% | 60% | 10% |
| Watering | 60% | 40% | 50% | 50% | 30% | 60% | |
| Fertilizer application | 40% | 60% | 40% | 60% | 30% | 60% | 10% |
| Pesticide application | 40% | 60% | 40% | 60% | 30% | 60% | 10% |
| Harvesting | 50% | 50% | 50% | 50% | 40% | 50% | 10% |
| Selling | 80% | 20% | 80% | 20% | 10% | 70% | 20% |

| LIVELIHOOD: LIVESTOCK (Hog Raising/Fattening/Breeding) | Roles | | Decisions | | Sectoral Role | | |
|---|-------|-----|-----------|-----|----------------|-------|-------------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Buying of piglets | 50% | 50% | 50% | 50% | | 50% | 50% |
| Repair of pigpen | 40% | 60% | 40% | 60% | 5% | 50% | 45% |
| Purchasing of feeds | 40% | 60% | 40% | 60% | 10% | 60% | 10% |
| Feeding and deworming | 60% | 40% | 50% | 50% | 30% | 60% | |
| Selling of weanlings | 40% | 60% | 40% | 60% | 30% | 60% | 10% |
| Handling of boar | 40% | 60% | 40% | 60% | 30% | 60% | 10% |
| Monitoring of sows | 50% | 50% | 50% | 50% | 50% | 50% | 50% |
| Deworming | 50% | 50% | 50% | 50% | 5% | 65% | 30% |
| Farrowing | 50% | 50% | 50% | 50% | 5% | 65% | 30% |
| Feeding the sows and gilt | 10% | 90% | 50% | 50% | 5% | 90% | 50% |
| Selling | 50% | 50% | 50% | 50% | 20% | 70% | 10% |

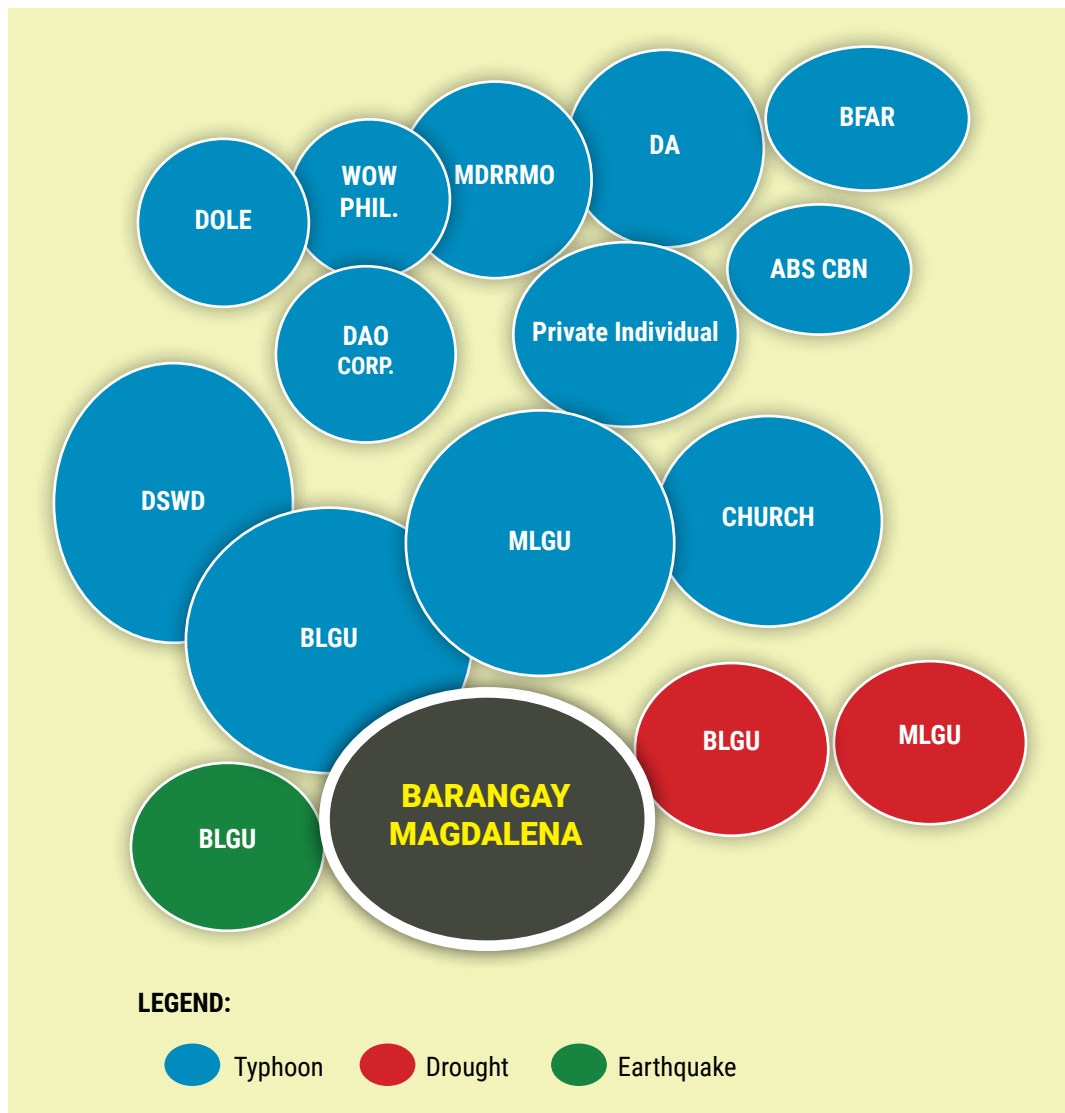
| LIVELIHOOD: FISHING (Pasibog) | Roles | | Decisions | | Sectoral Role | | |
|--|-------|------|-----------|-----|----------------|-------|-------------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| 1. Preparation of nylon, bulb, block, and chest box | | 100% | 50% | 50% | 20% | 70% | 10% |
| 2. Catching fish | 5% | 95% | 50% | 50% | 10% | 90% | |
| 3. Releasing of hook and line | | 100% | 50% | 50% | 10% | 80% | 10% |
| 4. Selling | 40% | 60% | 50% | 50% | 10% | 80% | 10% |

5. Resource Flow

| LIVELIHOODS | Outflow | Income |
|-----------------------------------|--|---|
| Farming (Rice) Area: 3 ha. | Seeds, fertilizer, pesticides and herbicides, labor = PhP 17,000.00 Gross income: PhP 52,000.00 | Total harvested: 70 sacks x 500/sack = PhP 35,000.00 Net income: PhP 18,000.00 |
| Livestock (5 heads) | Piglets, feeds, medication = PhP 44,000.00 Gross income: PhP 110,000.00 | 5 heads x 13,200.00 = PhP 66,000.00 Net income: PhP 16,000.00 |
| Fishing | Materials = PhP 3,360.00 Gross income: PhP 7,860.00 | 30 kg x 150 = PhP 4,500.00 Net income: PhP 1,140.00 |



6. Venn Diagram



Barangay Salvacion

1. Introduction

1.1. Barangay Profile

Barangay Salvacion used to be under the jurisdiction of Barangay San Roque. During that time, there were only two groups of residents in the area. One group lived in the upper part of the barangay, situated between San Roque and Magdalena. This group was mostly composed of people from Magdalena, and they called themselves "*Igadaganas Takas*." Over time, this group gradually increased in number, reaching twelve households.

The other group lived near the road or center of Barangay Salvacion, and they called themselves "*Idaganas Ubos*." This group was composed of eleven residents. However, the people living in Igadaganas Takas were not satisfied with the official management of the church in San Roque. As a result, they decided to separate from the church in San Roque and form their church.

On January 12, 1968, the three sitios in the area officially became barrios. The name of their barangay was chosen to be Salvacion, in honor of their patron. This was a significant change for the community, as they were now recognized as an official barangay.

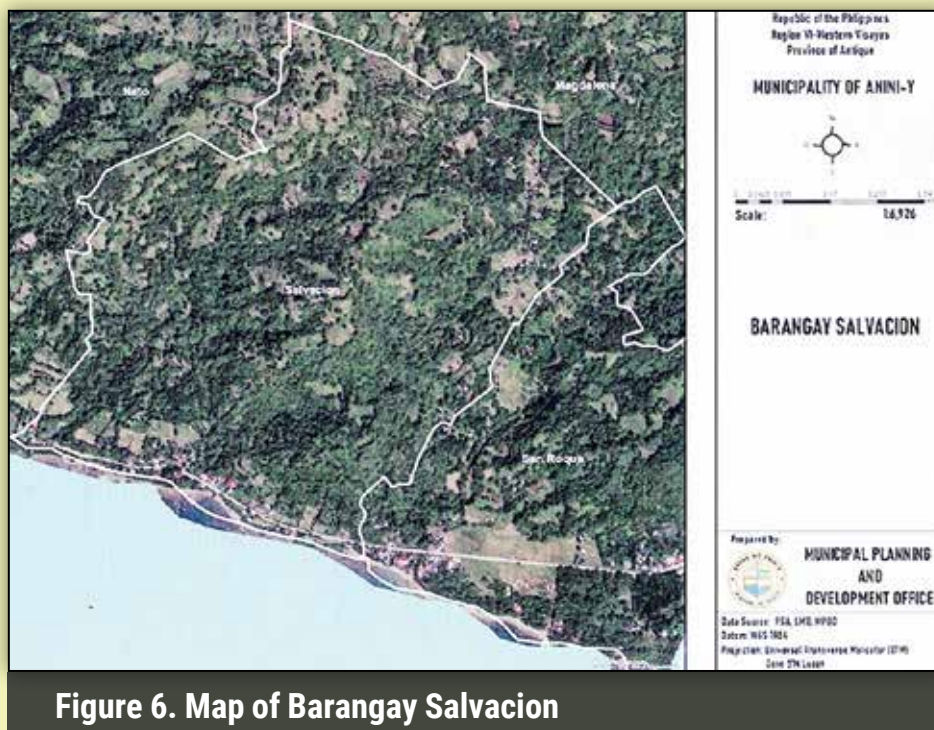


Figure 6. Map of Barangay Salvacion

Population

Salvacion is a barangay located in the municipality of Anini-Y, Antique. As of the 2020 Census, the population of Salvacion was 830, which accounted for 3.77% of the total population of Anini-Y.

1.2 Household Classification

- **Sitio Dapog:** 20% indigent
80% lower middle class
- **Sitio Centro:** 80% indigent
20% lower middle class
- **Sito Tuhaw:** 90% indigent
10% lower middle class

1.3 Livelihood Status

The major sources of livelihood in Salvacion, Anini-Y, Antique are farming, fishing, and hog raising. These three industries are the main sources of income for the residents of Salvacion given its location in a coastal area and its land suitable for agriculture. Some residents work as laborers, engage in carpentry, and work abroad as overseas Filipino workers (OFWs).

1.4 Sectoral Involvement in Livelihood

A. Farming

Women have a higher role in sectoral decision-making, particularly in selling at the market where they have a 70% share. Men, on the other hand, have a higher role in plowing/land preparation and planting, with a 100% share in both activities.

In terms of age groups, the youth (15-30) have a higher role in activities such as watering and drying/seed selection, with a 30% and 20% share, respectively. Senior citizens, on the other hand, have a minimal role in most activities, with a 10% share in clearing of farm sites and an 80% share in drying/seed selection.

It is interesting to note that in some activities, such as harvesting, there is an equal distribution of roles and decisions between men and women (50% each). This suggests that there is gender equality in certain aspects of the farming process.

B. Hog Raising

Fishing is a livelihood that involves multiple activities and roles. Women have a sectoral role in the fabrication of pump boats, making puddles for boats, and purchasing nets and nylon. Men have a higher role in the purchase of gas/fuel, and catching fish.

Youth have a higher role in catching fish and senior citizens have a higher role in selling to the market. The decisions made for each activity are generally split between the different roles, with some activities having a unanimous decision across all roles. Overall, fishing involves a collaborative effort from all the different roles and activities to ensure a successful catch and sale.

C. Fishing

The fishermen are men between the ages of 31 and 50. They prepare all the equipment required for fishing. When they have to go to the ocean at night, their meals are prepared by women, usually their wives.

The selling of fish is split evenly between men and women in terms of participation, decision-making, and sectoral role. The sorting and grading of fish is dominated by women in terms of participation, decision-making, and sectoral role. Youth in the 15-30 age group also have a significant role in this activity.

2. Climate Change Perception

2.1 Climate Hazards

Barangay Salvacion is facing significant challenges related to climate change, specifically typhoons, and droughts. Typhoons have caused widespread devastation in the barangay.

Drought is also a significant problem in Barangay Salvacion, with farmers being the most affected.

15 years ago, the dry season lasted for two months, but currently it lasts for three to four months, particularly during February to May.

2.2 Impact

Typhoon Odette hit the Philippines on December 17, 2021, causing significant damage to houses, livelihoods, and crops. It significantly impacted the livelihoods of 30% of fishermen. The agricultural sector also suffered greatly, damaging 100% of bananas and affecting 50% of poultry and livestock.

Due to the lack of water, farmers can only plant rice every year, reducing their income and productivity. Additionally, people who rely on water for daily use are also affected, since the deep well cannot sustain their needs.

2.3 Coping Mechanism

The community banded together with the help of local officials to begin the process of recovery, including clearing operations, data gathering, and distribution of food packs.

One of the first steps taken was a thorough clearing operation to remove debris and ensure safe passage through the affected areas.

Food packs were distributed to those in need by the local government unit, providing necessary sustenance to those who had lost access to their usual sources of food.

Efforts were made to repair boats and fish nets, which are critical to the livelihoods of many in the area.

2.4 Capacity of the Community

In Sitio Dapog, 20% of the households are classified as indigent, while the remaining 80% are classified as lower middle class. This indicates that Sitio Dapog has a relatively low proportion of indigent households.

In Sitio Centro, on the other hand, the majority of households (80%) are classified as indigent, while only 30% are classified as lower middle class. This indicates that Sitio Centro has a higher proportion of indigent households compared to Sitio Dapog.

In Sitio Tuhaw, the proportion of indigent households is the highest among the three sitios, with 90% of households being classified as indigent. The remaining 10% are classified as lower middle class. This indicates that Sitio Tuhaw has the highest concentration of indigent households in Barangay Salavacion.

2.5 Initial Plan of the Barangay

| Implications | Solution |
|---|--|
| <ul style="list-style-type: none"> • No crop insurance | <ul style="list-style-type: none"> • Farmers plan to register their crops under PCIC |
| <ul style="list-style-type: none"> • Lack of irrigation water | <ul style="list-style-type: none"> • Seeking help from the national government for water impounding facilities or community deep well |
| <ul style="list-style-type: none"> • Lack of training for value-adding | <ul style="list-style-type: none"> • Planning to seek help from LGU to conduct training on food processing |

3. Summary and Findings

As the impacts of climate change become more evident, an active approach can be taken to mitigate the damage and protect those living and working in these areas.

It is evident from the damages caused to the houses in the affected area that the typhoon was devastating. Agricultural losses have also been severe. Fishermen are adversely affected, with 30% being affected by the typhoon.

The wilting of plants due to drought has caused a loss of income for farmers, with 100% of rice farmers affected. One way to mitigate the effects of drought is to look for alternative sources of water.

Drought was devastating for both livestock and the agricultural sector. Livestock growth is stunted due to the lack of water and lack of food, which can cause long-term damage to the health and productivity of the animals. The wilting of plants is also a significant problem.

Additionally, people who rely on water for daily use are also affected, as the deep well cannot sustain their needs.

Through a combination of community resilience and external support, the affected residents were able to begin the process of rebuilding and moving forward from the devastating effects of the typhoon.

4. Recommendation

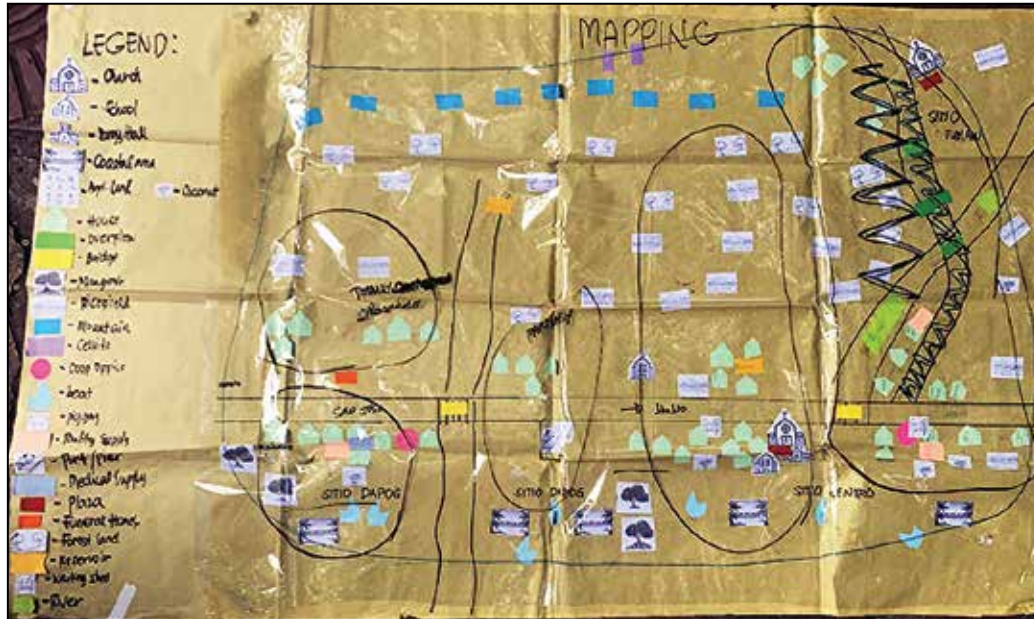
1. Inform the farmers about the value of crop insurance and help them register their crops with the PCIC.

Annex D. PCVRA Tools Used

1. Timeline

| Typhoon Odette December 17, 2021 | | | |
|---|---|---|--|
| Livelihood assets | Impacts on Livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Natural | | | |
| House | With 30% of the houses fully destroyed and 60% partially damaged, the residents are facing a difficult time rebuilding their homes and lives. | Food packs were distributed to affected families. | Concerns or problems should be reported to the council promptly. |
| Road | The roads were blocked takes long time to be cleared. | Conducted clearing operation to remove debris and ensure safe passage. | Organize a committee on disaster risk reduction. |
| Financial | | | |
| Livelihood | 50% of poultry and livestock are affected/died. | Barangay assessed the extent of the damage and prioritized aid efforts. | Secure the welfare of the animals as well. |
| Drought 2017, 2018, 2019 | | | |
| Financial | | | |
| Livelihood | Livestock growth was stunted due to the lack of water | Some asked water from their neighbor. | Propose a community deep well. |
| Natural | | | |
| Crop | The wilting of plants | Some asked water from their neighbor. | Community deep well should be established. |

2. Spot Map



3. Seasonal Calendar

| 5 Years Ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|-----|---------|------------------|---------|----------|----------|------|-------------|------|----------|------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | | | ✓ | ✓ | ✓ | ✓ |
| TEMPERATURE | → | → | → | ↑ | ↑ | → | → | ↓ | → | → | → | → |
| RAINFALL | Low | Low | No Rain | No Rain | No Rain | Moderate | Moderate | High | Moderate | High | Moderate | High |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming | Vegetables | | | Rice, Root Crops | | | Rice | | Corn, Mungo | | | |
| B. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| C. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| D. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| E. Copra | | | | Harvest | | | | | | | Harvest | |

LEGEND:

| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
|-----------------|-------------|----------|
| Wet | ↑ High | High |
| Dry | → Average | Moderate |
| | ↓ Low | Low |
| | | No Rain |

| 15 Years Ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|----------|----------|---------|------------|------|------|------|----------|-----|---------|-----|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | | ✓ | ✓ | | | | |
| TEMPERATURE | → | ↑ | ↑ | ↑ | → | ↓ | ↓ | ↓ | → | → | → | → |
| RAINFALL | Moderate | Moderate | Moderate | Low | Moderate | High | High | High | Moderate | Low | Low | Low |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming | Corn | | | | Rice, Corn | | | | Corn | | | |
| B. Fishing | ALL YEAR ROUND | | | | | | | | | | | |
| C. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| D. Vending | ALL YEAR ROUND | | | | | | | | | | | |
| E. Copra | | | | Harvest | | | | | | | Harvest | |

| 30 Years Ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|------------------------------|----------|--------------------|----------|------|--------------------------|------|---------|---------|---------|---------|---------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | ✓ | | | ✓ | | | | |
| TEMPERATURE | → | ↑ | ↑ | ↑ | → | ↓ | ↓ | ↓ | → | → | → | → |
| RAINFALL | Moderate | Moderate | Low | Moderate | High | High | High | No Rain | No Rain | No Rain | No Rain | No Rain |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Farming | Camote | | Rice, Corn, Camote | | | Camote, Mungbean, Peanut | | | | | | |
| B. Boldos | ALL YEAR ROUND | | | | | | | | | | | |
| C. Selling | Selling of indigenous fruits | | | | | | | | | | | |
| D. Copra | | | | ✓ | | | | | | | ✓ | |

LEGEND:

| | | |
|-----------------|------------------------------|------------------------------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet Dry | ↑ High → Average ↓ Low | High Moderate Low No Rain |

4. Livelihood Matrix

| LIVELIHOOD: FARMING | Roles | | Decisions | | Sectoral Role | | |
|-------------------------------|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities | | | | | | | |
| Rice/Vegetables | 30% | 70% | 0% | 100% | 10% | 80% | 10% |
| Clearing of the farm site | 0% | 100% | | 100% | 30% | 50% | 20% |
| Plowing/land preparation | 20% | 80% | 50% | 50% | 20% | 70% | 10% |
| Seed soaking/seed preparation | 0% | 100% | 50% | 100% | 30% | 70% | 0% |
| Planting | 30% | 70% | 50% | 50% | 40% | 60% | 0% |
| Application of fertilizer | | | | | | | |

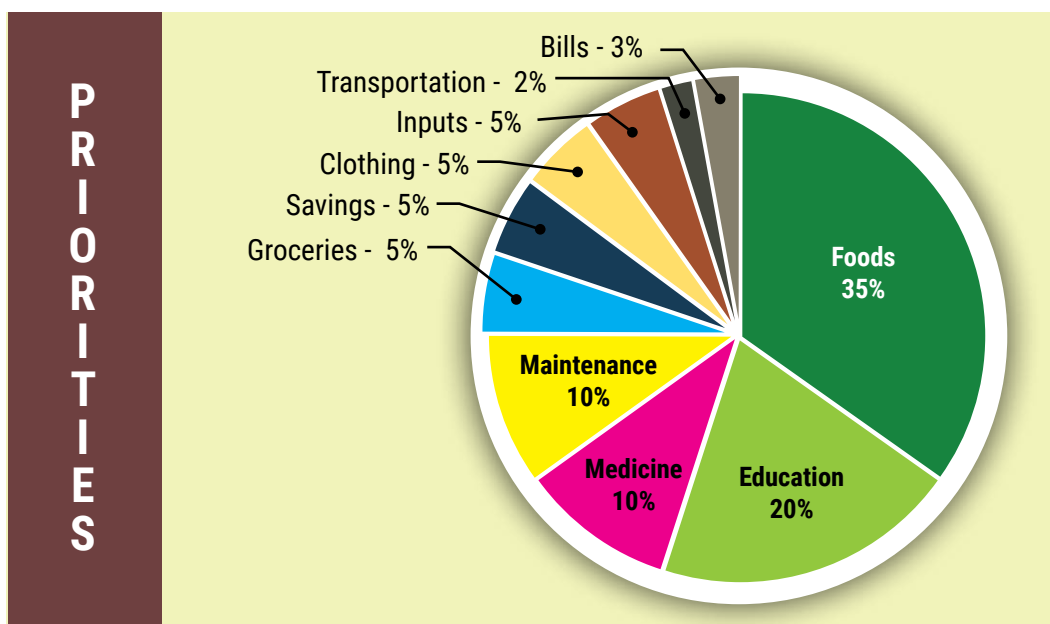
| LIVELIHOOD: LIVESTOCK | Roles | | Decisions | | Sectoral Role | | |
|------------------------------|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities | | | | | | | |
| HOG RAISING/FATTENING | | | | | | | |
| Construction of cage | | 100% | 50% | 50% | 20% | 70% | 10% |
| Purchase of piglets | 50% | 50% | 50% | 50% | 20% | 70% | 10% |
| Purchase of feeds | 30% | 70% | 50% | 50% | 20% | 70% | 10% |
| Deworming/vitamins | 10% | 90% | 50% | 50% | 20% | 70% | 10% |
| Feeding | 70% | 30% | 70% | 30% | 20% | 70% | 10% |
| Selling to market | 30% | 70% | 50% | 50% | 30% | 50% | 20% |
| BREEDING | | | | | | | |
| Exposing to boar/mating | 30% | 70% | 50% | 50% | | 50% | 50% |
| Farrowing | 70% | 30% | 70% | 30% | 5% | 55% | 40% |
| Castration | | 100% | | 100% | | 80% | 20% |
| Selling of piglets | 50% | 50% | 50% | 50% | 30% | 50% | 20% |
| Watering | 50% | 50% | 50% | 50% | 30% | 60% | 10% |
| Harvesting | 50% | 50% | 20% | 80% | 40% | 60% | 0% |
| Drying/seed selection | 30% | 70% | 20% | 80% | 20% | 80% | 0% |
| Selling to market | 70% | 30% | 50% | 50% | 20% | 80% | 0% |

| LIVELIHOOD: VENDING | Roles | | Decisions | | Sectoral Role | | |
|---|-------|-----|-----------|-----|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Activities | | | | | | | |
| Buying wholesale fish, fruits, and vegetables | 50% | 50% | 50% | 50% | 0% | 80% | 10% |
| Sorting and grading | 100% | 0% | 100% | 0% | 20% | 60% | 20% |
| Vending | 90% | 10% | 90% | 10% | 10% | 80% | 10% |

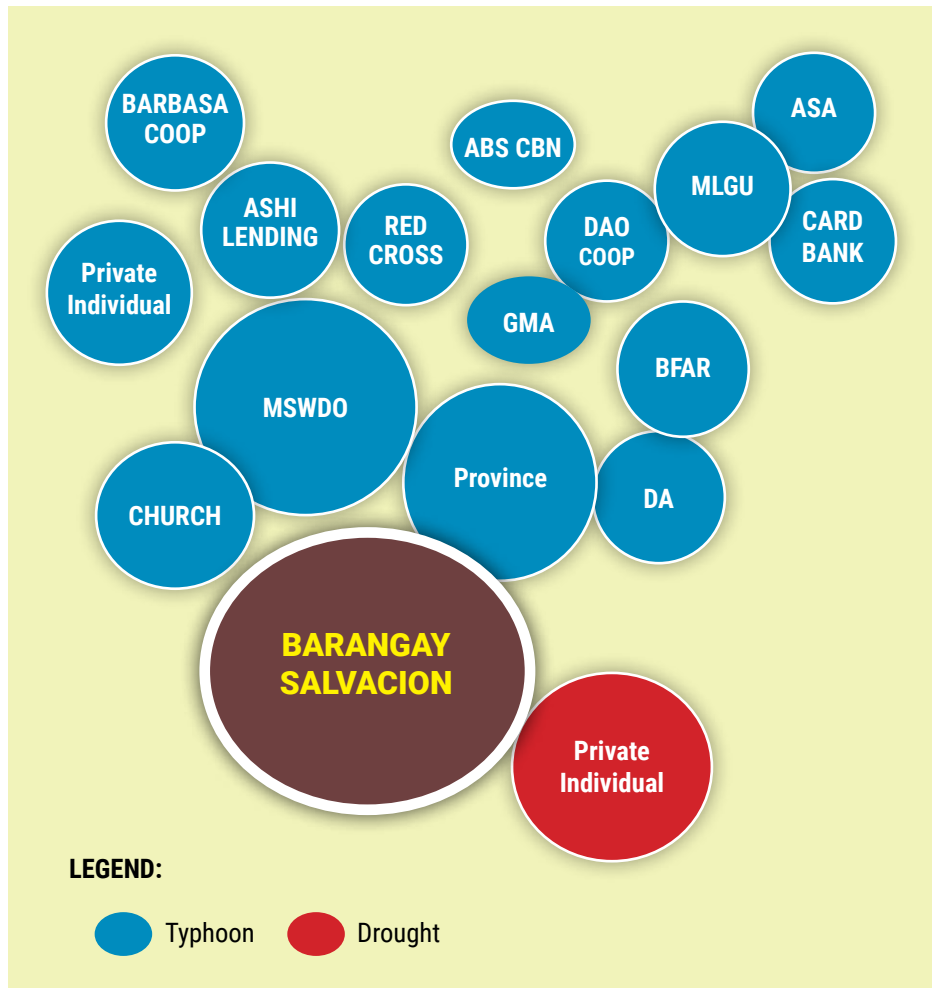
| LIVELIHOOD: FISHING | Roles | | Decisions | | Sectoral Role | | |
|-------------------------------|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Fish net/hook and line | | | | | | | |
| Fabrication of pump boat | | 100% | 50% | 50% | 20% | 50% | 30% |
| Preparation of water scoop | | 100% | | 100% | 20% | 50% | 30% |
| Making a puddle for a boat | | 100% | 50% | 100% | | 50% | 50% |
| Purchase of gas/fuel | 50% | 50% | 50% | 50% | | 50% | 50% |
| Purchase of net | | 100% | 50% | 50% | | 50% | 50% |
| Purchase of needle | 50% | 50% | 50% | 50% | 10% | 50% | 40% |
| Purchase of nylon | 50% | 50% | 50% | 50% | 10% | 50% | 40% |
| Lightings for fish | 50% | 50% | 50% | 50% | 10% | 50% | 40% |
| Catching fish | | 100% | 0 | 100% | 30% | 50% | 20% |
| Selling to market | 80% | 20% | 50% | 50% | 20% | 60% | 20% |

5. Resource Flow

| LIVELIHOODS | Outflow | Income |
|--------------------|---|--|
| Farming | <ul style="list-style-type: none"> Rice - PhP 21,000.00/ha. Vegetables - PhP 300 | (intended for home consumption) <ul style="list-style-type: none"> Vegetables - PhP 2,800 |
| Fishing | <ul style="list-style-type: none"> Pamansi - PhP 11,590 Panglabay - PhP 4,120 Pukot - PhP 32,100 | <ul style="list-style-type: none"> Pamansi - PhP 9,640 Panglabay - PhP 1,880 Pukot - PhP 87,900 |
| Hog raising | - PhP 37,300 for 3-4 months | - PhP 23,020 |



6.Venn Diagram



Barangay Butuan

1. Introduction

1.1 Barangay Profile

According to the ancestors of Butuan, the name of their barangay has two possible origins. The first version dates back to the Spanish era, during which an old woman was passing through the area while catching sour fruits from a tree known as “*Batuan*.” It is said that the woman was so impressed with the fruit that she asked the locals what the name of the place was. This led to the name “*Butuan*” being derived from the word “*Batuan*.”

Another version of the story involves the use of “*Batuan*” fruit as a souring agent for fish soup by the people of the barangay. When the Spaniards arrived and asked the locals where they were located, one of the natives responded with “*Batuan*.” This response led to the name “*Butuan*” being agreed upon by the people of the barangay.

Regardless of which version is true, the name “*Butuan*” is a significant part of the barangay’s history and culture. It is a reminder of the area’s rich heritage and the influences of the Spanish colonization period. Today, Butuan is a thriving and dynamic barangay, with a vibrant community that cherishes its past while embracing the future.

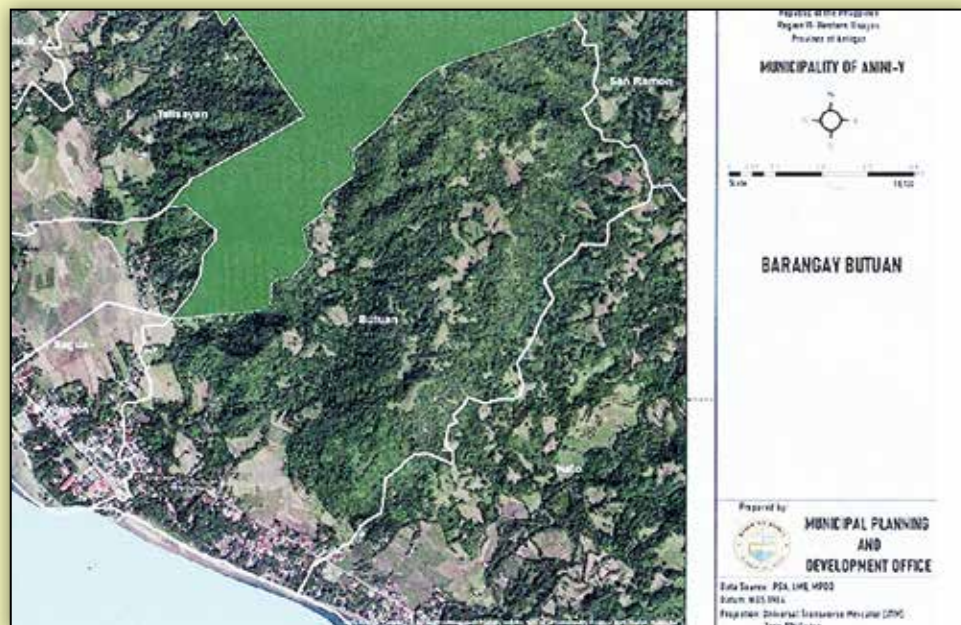


Figure 7. Map of Barangay Butuan

Barangay Butuan is a small but vibrant community located in the northern part of Barangay Poblacion, which is a part of the Municipality of Anini-y. With a land area of approximately 172,345 hectares, the barangay is a mix of plain lands and coastal areas. Despite its small size, Barangay Butuan is a close-knit community that values hard work, family, and tradition. The residents of the barangay take pride in their livelihoods and work together to support each other and their families. With its beautiful scenery, rich culture, and strong community spirit, Barangay Butuan is truly a gem in the Municipality of Anini-y.

Population

Butuan is a barangay located in the province of Antique specifically in the municipality of Anini-Y. According to the 2020 Census, its population was recorded to be 1,450, which is equivalent to 6.59% of the total population of Anini-Y.

1.2 Household Classification

- | | |
|---|--|
| <ul style="list-style-type: none"> • Purok Centro: 40% indigent 60% lower middle class • Purok Cagbang: 80% indigent 20% lower middle class | <ul style="list-style-type: none"> • Purok Tinago: 65% indigent 35% lower middle class • Bagong Bayan: 20% indigent 80% lower middle class |
|---|--|

1.3 Livelihood Status

Most of the residents in Barangay Butuan are farmers and fisherfolks, with their farms located in the northern part of the barangay and their fishing activities taking place in the southern part near the sea. In addition to farming and fishing, some residents are business owners, while others work as seafarers or overseas Filipino workers (OFWs).

1.4 Sectoral Involvement in Livelihood

A. Farming

Women and men are both involved in various activities, such as land preparation, seed soaking, direct planting, and harvest.

Additionally, the harvest is shared between the owner and laborer, with a portion going to the laborer for sale and distribution among themselves.

B. Hog Raising

Those aged 31-50 have the highest sectorial role among all age groups. Both men and women are equally involved in all activities. Senior citizens have a very small role in the process.

C. Fishing

Men are responsible for most of the preparation materials for fishing, with women contributing only 5%.

2. Climate Change Perception

2.1 Climate Hazard

Barangay Butuan is composed of Purok Centro, Purok Tinago, Purok Cagbang, and Purok Bagong Bayan/New Town. It has a total of 333 households. The community identified three climate hazards: typhoon, earthquake, and the Northeast and Southeast monsoons (Amihan and Habagat). However, typhoons and earthquakes were identified to have a major impact on their livelihood capitals.

2.2 Impact

A typhoon caused significant damage in Butuan, with 100% of houses affected (20% of the houses are totally damaged, 70% are partially damaged, and 10% are slightly damaged). Additionally, 70% of trees and fruit trees have been damaged. Boats and other materials used for fishing have also been lost. The cost of all commodities has increased, and there have been losses of financial capital.

During typhoon Paeng, flash floods occurred and caused significant damage. Three houses were completely damaged as a result of the floods.

The effects of the earthquake have left some residents with trauma/nervous breakdowns, premature births of sows, and structural damage to some of the homes and buildings.

A reduction in fish production due to the Amihan and Habagat has led to diminished earnings. The impact of this phenomenon has extended to all fisherfolk.

2.3 Coping Mechanism

Clearing operations have been conducted to remove debris and other obstructions caused by the typhoon.

The bayanihan system has been implemented to encourage community members to work together. Farmers have received crop insurance from PCIC.

Pump boats and fishing gears were repaired to help fisherfolk resume their livelihood.

Cash assistance was provided by the LGU and provincial government to help affected individuals and families recover from the damages caused by the typhoon.

2.4 Capacity of the Community

Purok Centro has 40% indigent and 60% lower middle-class residents, Purok Cagbang has 80% indigent and 20% lower middle-class residents, Purok Tinago has 65% indigent and 35% lower middle-class residents, and Bagong Bayan has 20% indigent and 80% lower middle-class residents. Based on this information, it can be concluded that the overall community has a high capacity to adapt to climate hazards as the majority of the residents belong to the lower middle class.

However, it is also worth noting that even the areas with a higher percentage of lower middle-class households may still be vulnerable to climate hazards due to a lack of infrastructure and resources. To assess the capacity of these communities to climate hazards, it may be helpful to consider factors such as access to emergency services, evacuation centers, and disaster preparedness plans.

2.5 Initial Plan of the Barangay

| Implications | Solution |
|---|---|
| <ul style="list-style-type: none"> ● No training in disaster risk management | <ul style="list-style-type: none"> ● Training on Disaster Preparedness |
| <ul style="list-style-type: none"> ● No value-added activities for fish products | <ul style="list-style-type: none"> ● Training on value-adding activities especially among fisher folks |
| <ul style="list-style-type: none"> ● No psycho-social training | <ul style="list-style-type: none"> ● Training on Psychosocial |
| <ul style="list-style-type: none"> ● No alternative livelihood | <ul style="list-style-type: none"> ● Move hog raising to the upland and away from populated areas |
| <ul style="list-style-type: none"> ● Community lacks training in responding to earthquakes | <ul style="list-style-type: none"> ● Earthquake Drill Barangay Level |

3. Summary and Findings

In conclusion, identifying the major climate events that have occurred highlighted the importance of understanding and preparing for climate hazards to mitigate impacts on the community and ecosystems.

Almost all of Butuan's homes have been affected by the typhoon, with 20% completely damaged, 70% partially damaged, and 10% slightly damaged. Boats and fishing equipment have also been lost. All commodities have become more expensive, and financial capital has been lost as a result.

Aside from typhoons, reduced fish production resulting from the Amihan and Habagat monsoons have reduced fishermen's earnings.

The assessment revealed that the majority of the residents are lower middle class, so they have a high capacity to adapt to and bounce back from climate hazards. The residents also run businesses and work as seafarers or overseas Filipinos, in addition to farming and fishing.

When natural disasters such as typhoons hit, communities are often left vulnerable and in need of support services. Typhoons can be devastating for communities, leaving behind a trail of destruction and financial hardship. To help those affected by the typhoon, many organizations have stepped up to provide support (see Venn Diagram). This support includes financial assistance, as well as other forms of aid such as food, clothing, and emergency kits. Through these efforts, organizations are helping to alleviate the suffering of those impacted by the typhoon and ensure that they can rebuild their lives in the aftermath.

4. Recommendation

1. Develop a community emergency response plan: Have collaboration with various stakeholders to handle various emergency situations. This plan should be tailored to the specific needs of the community.

Annex E. PCVRA Tools Used

1. Timeline

| Typhoon Odette December 17, 2021 | | | |
|---|---|---|--|
| Livelihood assets | Impacts on Livelihood | Coping strategies implemented | Strategies in case of reoccurrence of the event |
| Physical | | | |
| Houses | 100% of houses affected. 20% of the houses were totally damaged, 70% were partially damaged, and 10% were slightly damaged. | Clearing operations were conducted. The bayanihan system was implemented. | Preparedness of e-basket/e-bag can |
| Boats | Boats and other materials used for fishing were lost. | Cash assistance is being provided by the LGU. | Securing pump boats in safe areas |
| Natural | | | |
| Crops | 70% of trees and other crops were damaged. | Farmers received crop insurance from PCIC. | Planting more trees. |
| Financial | | | |
| Livelihood | High mortality rate of livestock and poultry. | Cash assistance was provided by the LGU. | Stay informed and be prepared for any upcoming typhoons. |
| Commodities | The cost of all commodities has increased. | Utilized the food packs from the relief. | |
| Typhoon Paeng October 2022 | | | |
| Physical | | | |
| Houses | Three houses were totally damaged as a result of the floods. Others got slight damages. | Clearing operations were conducted. Relief goods from DSWD were provided to affected families | Conduct trainings on DRR. |
| Human | | | |
| Residents | Panic and emotional distress among families. | Keeping tight bond within their family | Psychosocial and preparedness trainings must be conducted to help individuals and families cope with the emotional and psychological impact of natural disasters |
| Earthquake November 2022 | | | |
| Human | | | |
| Inhabitants | Left some residents with trauma/nervous breakdowns. | Validation and monitoring of affected areas was carried out. | Earthquake training at barangay level must be conducted. |
| Physical | | | |
| Infrastructures | Structural damage to some of the homes and buildings. | Immediate repair of the damage structure. | Reporting to LGU for the damage assessment. |
| Habagat and Amihan June - December | | | |
| Natural | | | |
| Fishes | A reduction in fish production resulting from the Amihan and Habagat have led to diminished earnings. | Securing of boats and other equipment in the safe area. Engage in backyard gardening and hog raising. | Training on food processing and preservation. |

2. Spot Map



3. Seasonal Calendar

| 5 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|------|---------|---------|---------|-----------|------|------|------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| TEMPERATURE | ↓ | ↓ | → | ↑ | → | → | → | ↓ | ↓ | ↓ | ↓ | ↓ |
| RAINFALL | Low | Low | No Rain | No Rain | No Rain | High | High | High | High | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Fishing | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| B. Farming | Veg. | Veg. | Veg. | Veg. | Corn | Corn Rice | Rice | Rice | Rice | Rice | Rice | Rice |
| C. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| D. Copra | ✓ | | | ✓ | | | ✓ | | | ✓ | | |

LEGEND:

| | | |
|-----------------|-------------|----------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet | ↑ High | High |
| Dry | → Average | Moderate |
| | ↓ Low | Low |
| | | No Rain |

| 15 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|------|------|---------|------|-----------|---------|------|---------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| TEMPERATURE | ↓ | → | ↓ | ↑ | ↑ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| RAINFALL | | | | | Low | Moderate | High | High | High | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Fishing | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| B. Farming | Veg. | Veg. | Veg. | Veg. | Corn | Corn Rice | Rice | Rice | Rice | Rice | Rice | Rice |
| C. Livestock | ALL YEAR ROUND | | | | | | | | | | | |
| D. Copra | Harvest | | | Harvest | | | Harvest | | Harvest | | | |

| 30 years ago | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----------------------------|----------------|------|------|---------|------|-----------|----------|----------|----------|----------|----------|----------|
| CLIMATE PATTERN (Wet & Dry) | | | | | | | | | | | | |
| TYPHOON | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| TEMPERATURE | ↑ | ↑ | ↑ | ↑ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| RAINFALL | | | | | Low | Moderate | Moderate | Moderate | Moderate | Moderate | Moderate | Moderate |
| LIVELIHOODS: | | | | | | | | | | | | |
| A. Boldos - 15% | ALL YEAR ROUND | | | | | | | | | | | |
| B. Farming - 75% | Veg. | Veg. | Veg. | Veg. | Corn | Corn Rice | Rice | Rice | Rice | Rice | Rice | Rice |
| C. Livestock - 75% | ALL YEAR ROUND | | | | | | | | | | | |
| D. Copra - 50% | Harvest | | | Harvest | | | Harvest | | | Harvest | | |
| E. Pottery - 3% | ALL YEAR ROUND | | | | | | | | | | | |
| F. Ht Weaving | ALL YEAR ROUND | | | | | | | | | | | |
| G. Asinan - 3% | ALL YEAR ROUND | | | | | | | | | | | |

LEGEND:

| | | |
|-----------------|------------------------------|---------------------------------------|
| CLIMATE PATTERN | TEMPERATURE | RAINFALL |
| Wet Dry | ↑ High → Average ↓ Low | High Moderate Low No Rain |

4. Livelihood Matrix

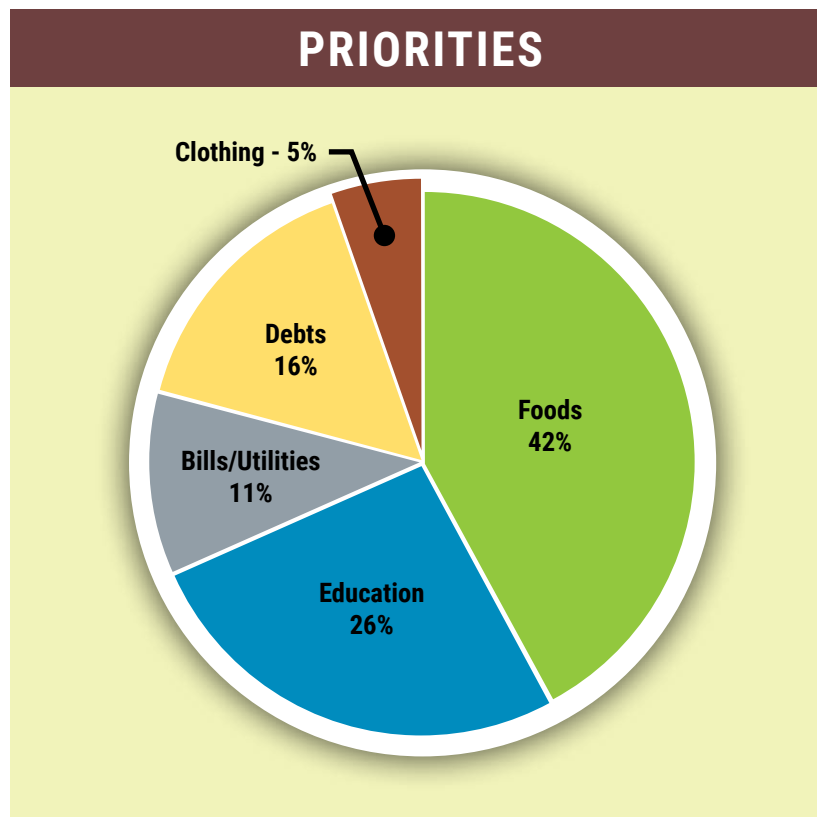
| LIVELIHOOD: RICE FARMING | Roles | | Decisions | | Sectoral Role | | |
|--------------------------------|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Land preparation | | 100% | 50% | 50% | 5% | 94% | 1% |
| Seed soaking | | 100% | 50% | 95% | 0 | 95% | 5% |
| Planting | 5% | 95% | 5% | 95% | 0 | 95% | 5% |
| Fertilizer application | | 100% | | 100% | 5% | 90% | 5% |
| Watering | | 100% | | 100% | 10% | 80% | 10% |
| 2nd application of fertilizers | | 100% | | 100% | 10% | 80% | 10% |
| Weeding | 50% | 50% | 50% | 50% | 10% | 80% | 10% |
| Insecticide application | | 100% | | 100% | 10% | 80% | 10% |
| Harvesting | | 100% | 5% | 95% | 10% | 80% | 10% |
| Hauling | | 100% | | 100% | 10% | 80% | 10% |
| Threshing | | 100% | | 100% | 10% | 80% | 10% |

| LIVELIHOOD: FISHING/PAMASOL | Roles | | Decisions | | Sectoral Role | | |
|-----------------------------|-------|------|-----------|------|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Preparing of materials | 5% | 95% | | 100% | 30% | 40% | 30% |
| Buying and hauling of ice | | 100% | | 100% | 40% | 50% | 10% |
| Fishing | | 100% | | 100% | 10% | 80% | 10% |
| Docking/ weighing | 5% | 95% | 5% | 95% | 40% | 50% | 10% |
| Computing all the income | | 100% | 5% | 95% | 20% | 70% | 10% |

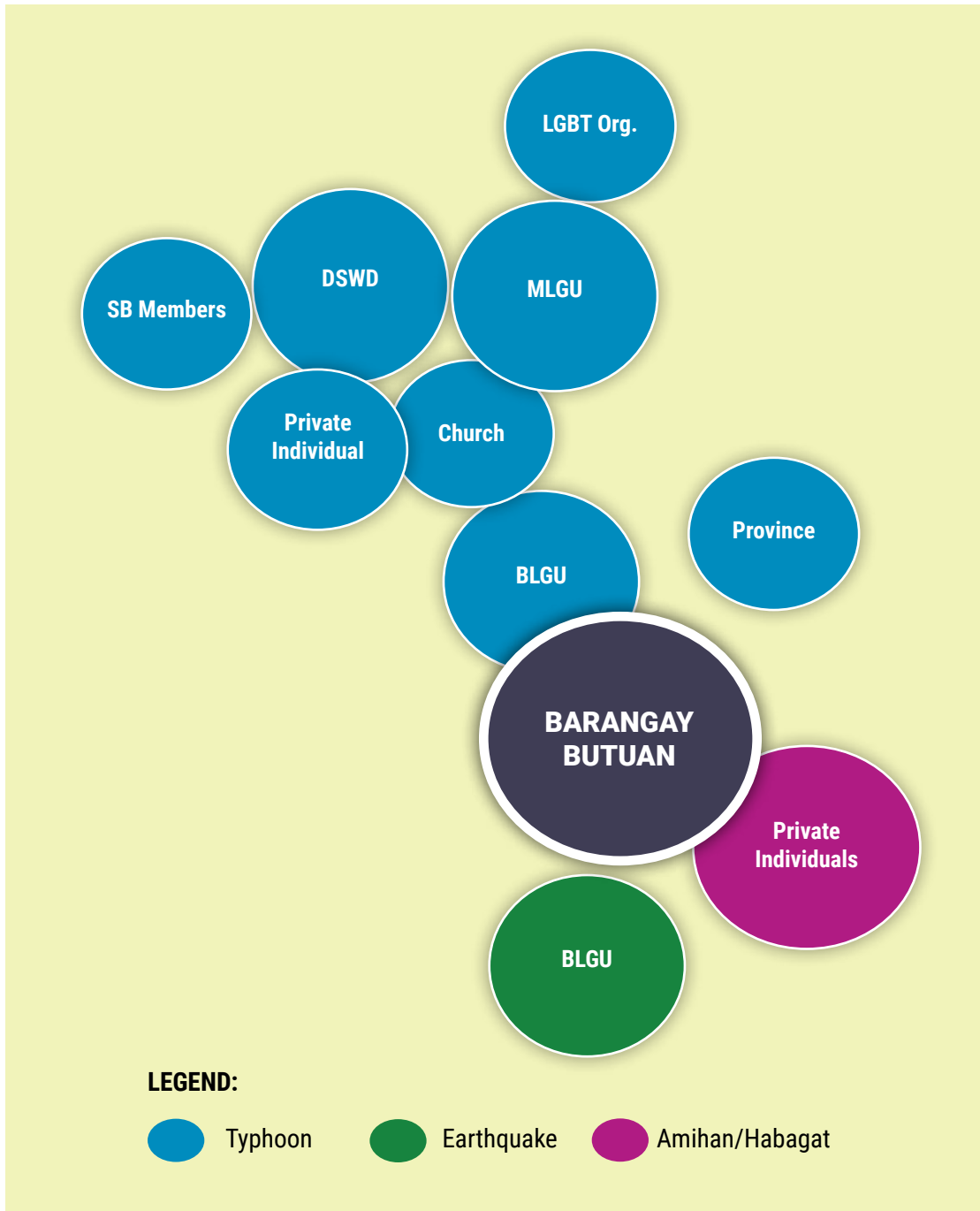
| LIVELIHOOD: HOG RAISING | Roles | | Decisions | | Sectoral Role | | |
|-------------------------|-------|------|-----------|-----|---------------|-------|----------------|
| | Women | Men | Women | Men | Youth 15-30 | 31-59 | Senior Citizen |
| Buying of piglets | 50% | 50% | 50% | 50% | 5% | 85% | 10% |
| Constructing the pigpen | | 100% | 50% | 50% | 5% | 85% | 10% |
| Buying of feeds | 50% | 50% | 50% | 50% | 5% | 85% | 10% |
| Feeding | 60% | 40% | 50% | 50% | 5% | 85% | 10% |
| Deworming | 60% | 40% | 50% | 50% | 5% | 85% | 10% |
| Monitoring | 60% | 40% | 50% | 50% | 5% | 85% | 10% |

5. Resource Flow

| LIVELIHOODS | Outflow | Income |
|-------------|-----------------------------|----------------------------|
| Fishing | Hook and line – PhP 21,920 | Hook and line – PhP 12,333 |
| Farming | – PhP 14,700/ha. | – PhP 24,500 |
| Hog raising | – PhP 16,000 for 3-4 months | – PhP 13,700 |



6. Venn Diagram





IIRR Staff

Magnolia Rosimo
Susan Del Rio
Farah Gaud Urdelas
Sheela De Felipe
Royden Nicolas
Carlo Cargando

DA-AMIA TEAM

Carmelita C. Fantilanan
Jineveb S. Siva
Rodolfo C. Grana, Jr.
Jehann Q. Pitogo
Jocie V. Manangan
Jenny B. Labanero

Council Members and Volunteers

Barangay Butuan
Barangay Nato
Barangay Magdalena
Barangay Salvacion
Barangay San Roque

Local Government Unit

Municipality of Anini-y
Anini-y Municipal Agriculture Office
MA: Ms. Clemencia V. Castillo

Farmers' Association

Nato-Butuan Irrigators Association
Anini-y Association of Organic Farmers
Centro Dapog Tuhaw Farmers Association
Masagana Anini-y AMIA Village Farmers Association
Katilingban ka mga Mangunguma sa San Roque kag Salvacion

AMIA Villages in the
Municipality of Anini-y,
Province of Antique

