

Research Article

Assessment of the Perceived Impact of Fisherfolk Livelihood Programs in Cabog, Dingalan, Aurora

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ABSTRACT

The Dumagats of Barangay Cabog, Dingalan, Aurora are indigenous people who rely on traditional fishing. These Dumagats are small-scale fisherfolk who are considered one of the marginalized sectors in the region. Moving towards the mission of Lyceum of the Philippines University-Manila to build a community extension program and be a catalyst for social transformation and custodian of Filipino culture and heritage, the College of Business Administration has conducted livelihood programs aimed at improving the living standards of Dumagat fisherfolk in Barangay Cabog, sitio Matawe, Dingalan, Aurora. Various efforts in developing livelihood opportunities and introducing new activities were implemented to generate income and food for the last five years. However, the sustainability of such alternative livelihood programs over time remains uncertain. The study assessed the perceived impact of Livelihood programs among Fisherfolk covering the programs implemented from 2018 to 2023. A total of 23 fisherfolk participated in the study. The study employs a mixed-method approach combining descriptive and correlational research designs and interviews to assess the perceived impact of the fisherfolk's livelihood program. The research used an adapted questionnaire to assess the perceived impact of the fisherfolk livelihood programs in terms of economic status and values gained. A correlation was employed to determine the significant difference in terms of effectiveness of the program and impact of the program as to economic status and values gained. Finally, the research used semi-structured interview questions to determine the challenges experienced by the beneficiaries. Results of the study revealed that the livelihood programs positively impacted the economic status and values gained among respondents. The project has brought about improvement in the living standards of the community members for the last five years. Furthermore, the study revealed a strong positive relationship between the impact of the livelihood program and the effectiveness of the program, which implies that the impact of the livelihood program is a reliable predictor of its success. However, the majority mentioned that the income they earn from fishing is not enough for them to save for the future. This is because of the challenges experienced by the beneficiaries during the implementation of the livelihood programs. Addressing these issues requires a comprehensive approach and long-term commitment from all stakeholders involved. Findings revealed that there is a need to create alternative livelihood projects to provide additional sources of income beyond fisheries. The study recommends continuous improvement of fishing resources and having direct market access to eliminate middlemen taking a cut of their income. There is a need to explore livelihood projects on agriculture as well as continuous capacity building, enabling fishers to manage new ventures. Regular assessment of the progress and impact of the projects is crucial to making the necessary adjustments and ensuring long-term success.

Keywords: Community extension, livelihood programs, fisherfolks, economic status, assessment

1. INTRODUCTION

One of the three fundamental functions of higher education institutions is community extension, which includes outreach programs, community development projects, and other forms of public service. It is through community extension programs that the community feels the presence of the institution (Salazar, 2020) to develop communities, people empowerment, and social justice, leading to transformed lives (Leabres et al, 2023). Lyceum of the Philippines University-Manila plays a crucial role in community extension and is committed to fulfilling one of its missions, which is to support a sustainable community extension program and be a catalyst for social transformation. In line with this, the College of Business Administration, with the Community Outreach and Service-Learning Department, has launched various livelihood projects in Barangay Cabog, Sitio Matawe, Dingalan, Aurora, a vibrant fishing community. The local economy is heavily reliant on traditional fishing, with many residents engaged in catching and selling fish and other seafood. The Dumagats are one of the indigenous peoples living in this area.

Many studies have highlighted the need to support and uplift small-scale fisherfolk. The study, for example, by Saye (2024)

in the small-scale fishery of Liberia, found that the small-scale fisheries sector is engulfed in numerous challenges, ranging from poverty to vulnerability and marginalization. Their vulnerabilities are exacerbated by their limited asset base and inadequate livelihood diversification strategies (Amadu et al., 2021). The same findings were reported in the study of fisherfolk's livelihood in the Philippines, highlighting the poor livelihood situations of small-scale fisherfolks (Agaton et al, 2023; Asio et al, 2024)

For the last five (5) years, the College of Business Administration, together with its faculty, students, and alumni, has undertaken several livelihood initiatives for the Dumagats in sitio Matawe, Cabog, Dingalan, Aurora. The livelihood projects include cultivation of ginger crops, hog raising projects, and provision of fishing boats and fishing materials to enhance local fishing activities. Furthermore, the college has conducted workshops aimed at imparting knowledge on organic fertilizer production and basic bookkeeping, designed to equip community members with essential skills for effective financial management.

The focus of the College of Business Administration, Lyceum of the Philippines University-Manila, is to promote sustainable livelihood strategies that build resilience against economic and environmental shocks, particularly in communities that are dependent on fisheries. Fisherfolk livelihood programs are crucial for achieving several Sustainable Development Goals (SDGs), particularly SDG 1 - no poverty, SDG 2 - zero hunger, and SDG 8 - decent work and economic growth. These initiatives aim to alleviate poverty in the coastal population by improving the economic, social, and environmental conditions of communities. However, the creation of livelihoods and employment alternatives, especially for areas with high fishery dependency, is not easy (Pemeroy, et al, 2017). Barriers such as low levels of education and limited labor mobility must be considered. According to the Philippines Statistics Authority (2020), small-scale fisherfolk are one of the sectors with the highest poverty incidences in the Philippines, and more than 80 percent of the fishers are considered small-scale (Badiola et al, 2021). Their vulnerabilities are worsened by their poor livelihood asset base, poor livelihood diversification strategies, and frequent storms and wave surges (Amado, et al, 2021).

This study assessed the perceived impact of Livelihood programs among the Fisherfolk of the Dumagat community in Barangay Cabog, sitio Matawe, Dingalan, Aurora, covering the programs implemented from 2018 to 2023. A total of 23 fisherfolk participated in the study.

Specifically, the study sought to answer the following questions:

1. To assess the perceived impact of the fisherfolk livelihood project in terms of:
 - a. Economic status
 - b. Values gained
2. To determine the relationship between the impact and effectiveness of the fisherfolk livelihood project.
3. To determine the challenges experienced by the beneficiaries during the implementation of the fisherfolk livelihood program

2. MATERIALS AND METHODS

The study employs a mixed-method approach combining descriptive and correlational research designs and interviews to assess the impact of the fisherfolk's livelihood program on the beneficiaries of the program in Cabog, Dingalan, Aurora. The descriptive research method was used to systematically describe the characteristics of the population. This approach involves collecting quantitative data through surveys and questionnaires to provide a detailed picture of the current state of the respondents. In addition to the descriptive method, semi-structured interviews were conducted to gain deeper insights into the participants' experiences and perspectives. The respondents of the study include 23 beneficiaries of the program, which represents 100 percent of the total households that benefited from the program. The first part of the questionnaire used in this study is an adapted modified questionnaire of Elago and Malibiran in their study, Impact Assessment on Food Production & Processing as Livelihood Project. The second part consists of a semi-structured interview guide developed by the researchers to determine the challenges and opportunities for improvement in the implementation of the livelihood program. The researchers personally administered the questionnaire and interviewed households to address questions that the respondents could not understand. After the survey and interview, the results were validated by the Community Extension Coordinator in a focus group discussion. Quantitative data gathered were tabulated, tallied, and interpreted using statistical tools such as weighted mean to determine the impact and effectiveness of the livelihood project and Analysis of Variance (ANOVA) to determine if there is a significant relationship between effectiveness and impact of the fisherfolk livelihood program. Concurrently, qualitative data from the interviews were transcribed and thematically analyzed to extract key themes and insights.

3. RESULTS AND DISCUSSIONS

Most of the respondents belong to the age range of 34 and above, accounting for 78.26 percent of the total respondents. The fisherfolk livelihood program is male-dominated, with 65.22 percent, while 34.78 percent are female, and almost all are married at 95.65 percent. As to the monthly income of the respondents, the majority are only earning below 5,000 pesos, with 78.26 percent of the total respondents, while 61 percent have 5 or more household members. This means that the majority of the respondents are living below the poverty threshold of about 13,873 per month to meet their minimum basic food and non-food needs for a family of five as defined by the Philippine Statistics Authority in 2023. Bhayan (2016), asserts that fishing communities are generally classified among economically marginalized groups, primarily due to their reliance on traditional fishing techniques and equipment. The same results were reported in the study of Atillo (2024) and Enema and Quezon (2024) among small-scale fisheries earning low monthly incomes and living below the poverty line. With regards to the educational attainment of the respondents, 83 percent did not finish elementary schooling, while 17 percent finished elementary schooling. Several studies have highlighted lack of formal education among small-scale fisherfolks (Atillo, 2024; Huynh 2021; Macusi et al 2022)

Table 1: Demographic and Socio-Economic Data

Age	Frequency	Percentile
18-25	1	4.35%
26-33	2	8.70%
34-41	9	39.13%
42-48	2	8.70%
49 and above	9	39.13%
Total	23	100%
Sex		
Male	15	65.22%
Female	8	34.78%
Total	23	100%
Civil Status		
Single	1	4.35%
Married	22	96.65%
Total	23	100%
Monthly Income		
Below 5,000	18	78.26%
5,001 – 10,000	4	17.39%
10,001 – 15,000	1	4.35%
Total	23	100%
Educational Attainment		
Elementary Graduate	4	17.39%
Elementary Level	19	82.61%
Did not attend school	0	-
Total	23	100%
Number of Household Member		
2	1	4.35%
3	5	21.74%
4	3	13.04%
5	4	17.39%
6	2	8.70%
7	4	17.39%
8	1	4.35%
9	1	4.35%
10	1	4.35%
11	1	4.35%
Total	23	100%

Table 2 shows the impact of the livelihood project in terms of economic status, with an overall weighted mean of 3.39, indicating that the majority of the beneficiaries believed that the fisherfolk livelihood program positively impacted their economic

status. This was validated in the focus group discussion where respondents were asked if, before joining the livelihood program, they had sufficient monthly income to meet the needs of their family. Most respondents mentioned that they don't have enough income to support their basic needs before joining the project. The indicator "help provide needs for my family" ranked first with a 3.70 weighted mean, followed by the item "help me improve our quality of life" with a weighted mean of 3.57. This means that as participants become active in joining the livelihood program, their financial situation improves. It could be noted, however, that the indicator "give me opportunity to save for the future" got the lowest weighted score of 2.83, indicating that the livelihood program helped them provide the needs of their family, but the income they earn from fishing is not enough for them to save for the future. This is because of the challenges experienced by the recipients of the livelihood program, which include the limited use of boats, as there are only two fishing boats provided to the beneficiaries. Twenty-three (23) fishers will share the use of fishing boats, posing a challenge to scheduling since not all beneficiaries were able to book the use of the fishing boat in a week. In addition, the weather contributes to another challenge as not all the time, the weather is conducive for fishing. In the event of bad weather, when fishers cannot go out for fishing, most of the respondents mentioned that they find alternative sources of income beyond the fishery. The study of Labayo and Preña (2023); Dokubo and Amadi (2022), and Ballesteros and Custodio (2023) provides insights on how livelihood projects can positively impact the economic status of fisherfolks.

Table 2: Impact of Livelihood Project in terms of Economic Status

Indicators	WM	Verbal Interpretation
The livelihood program help provide needs for my family	3.70	Strongly Agree
Help me have a regular source of income	3.48	Strongly Agree
Give me an opportunity to save for the future	2.83	Agree
Help me handle my finances very well	3.30	Strongly Agree
Help me increase my income	3.57	Strongly Agree
Help me improve our quality of life	3.48	Strongly Agree
Overall Weighted Mean	3.39	

Legend: 3.25-4.00=Strongly Agree; 2.50-3.24=Agree; 1.75-2.49=Disagree; 1.00-1.74=Strongly Disagree

Table 3 presents the impact of livelihood projects in terms of values gained. The overall weighted mean is 3.42, indicating a high impact of the livelihood project in terms of values gained. The indicator "made me feel that there are others who care for me" obtained the highest mean score of 3.61. Respondents strongly agree that when program coordinators take time to understand individual needs and tailor assistance accordingly, it fosters a sense of care and attention. In addition, interacting with the community beneficiary creates a supportive network by sharing experiences and encouragement, which contributes to feeling cared for. Other indicators tied at 3.39, which includes promoting collaboration and communication, developing my creativity, making me become a better citizen, and giving me a chance to be productive. Respondents mentioned that feeling supported and valued increased their self-confidence. The encouragement from the program coordinators and fellow participants created a positive atmosphere, allowing individuals to collaborate, share ideas, and learn from others. This interaction can spark creativity and lead to innovative projects. Respondents' active participation fosters a sense of responsibility and community engagement, which contributes to good citizenship. In addition to the livelihood program are training and capability building in various fields, which can also ignite creativity and open fresh perspectives. Livelihood programs often provide access to tools, materials, and networks that can empower individuals to explore their creativity. Lastly, livelihood programs equip individuals with practical skills. Learning how to start and manage a small business through livelihood programs can lead to increased productivity. When basic needs are met through livelihood programs, individuals can focus more on creative pursuits. By working towards common objectives, fisherfolks developed a sense of unity and shared purpose (Amadu, et al., 2021)

Table 3: Impact of Livelihood Project in terms of Values Gained

Indicators	WM	Verbal Interpretation
Promote collaboration and communication	3.39	Strongly Agree
Build up my confidence	3.35	Strongly Agree
Develop my creativity	3.39	Strongly Agree
Made me become a responsible citizen	3.39	Strongly Agree
Gave me a chance to be productive	3.39	Strongly Agree
Made me feel that there are others who care for me	3.61	Strongly Agree
Overall Weighted Mean	3.42	

Legend: 3.25-4.00=Strongly Agree; 2.50-3.24=Agree; 1.75-2.49=Disagree; 1.00-1.74=Strongly Disagree

Table 4 presents the effectiveness of the fisherfolk livelihood project with a composite mean of 3.53, indicating that the livelihood project is effective, as the program is rated positively by the respondents. The indicator “the project contributed to the improvement of our way of living” got the highest mean score of 3.83. This is a testament that the project has a significant positive impact on the community, underscoring the project’s vital role in enhancing the community’s way of living. Most of the respondents strongly agree that the fisherfolk livelihood project contributed to reducing poverty, vulnerability, and social exclusion among the Dumagat communities. Next in rank is the indicator “the livelihood program helped in increasing the family income,” with a mean score of 3.74. This reflects a positive impact on the economic well-being of the respondents, highlighting the livelihood programs’ tangible contribution to enhancing the family’s income. Tied in rank are the indicators “the project is well funded and supported by the college and LPU, the project is successful and effective, and the project benefited us to learn new knowledge and information with a weighted mean of 3.43. A well-funded and supported livelihood program can be a transformative force in communities by providing individuals with a means to generate income, thereby enhancing the quality of their lives. The College of Business Administration faculty and students invested in essential fishing resources such as boats, fishing gear, and safety equipment. These projects allow the fisherfolk to increase their income and support their families. However, while the livelihood projects offer immediate benefits and are positively perceived by small-scale fishers, the broader socio-economic and environmental challenges they face contribute to the ongoing struggle with poverty. The study on Sustainable Fisheries Livelihood Programme (SFLP) of the Food and Agriculture Organization of the United Nations (2005) demonstrated that while livelihood projects can significantly improve certain aspects of fisherfolk’s economic condition, persistent poverty remains a complex issue requiring comprehensive strategies and sustained efforts from all stakeholders involved.

Table 4: Effectiveness of the Livelihood Project

Indicators	WM	Verbal Interpretation
The livelihood program helped in increasing the family income	3.74	Strongly Agree
There is enough time allotted in the project to make it successful	3.30	Strongly Agree
The project is well funded and supported by the college and LPU	3.43	Strongly Agree
The project contributed to the improvement of our way of living	3.83	Strongly Agree
The project is successful and effective	3.43	Strongly Agree
The project benefited us to learn new knowledge and information	3.43	Strongly Agree
Overall Weighted Mean	3.53	

Legend: 3.25-4.00=Strongly Agree; 2.50-3.24=Agree; 1.75-2.49=Disagree; 1.00-1.74=Strongly Disagree

Table 5 presents the r-values showing the correlation between economic status and the effectiveness of the livelihood project. The results for Table I to III show that time allotted to the project and its perceived success and effectiveness have the strongest and most consistent relationships with positive livelihood outcomes.

Weak correlations (0.00–0.39) were observed between project funding and outcomes such as increasing family income, gaining regular income, handling finances, and improving quality of life. For example, the correlation between the project being well-funded and increased family income was only 0.006, indicating almost no linear relationship. Similarly, the project’s general contribution to living improvement also showed mostly weak correlations with economic gains.

Moderate correlations (0.40–0.69) appeared prominently between time allotted, project success, and key livelihood results. For instance, the time allotted for the project had moderate positive correlations with increasing family income ($r = 0.541$), handling finances well ($r = 0.575$), and improving quality of life ($r = 0.472$). This suggests that the more time participants dedicate to the livelihood project, the more likely they are to gain tangible financial benefits and better life management skills.

Strong correlations (0.70–1.00) were noted primarily where time commitment and well-organized implementation intersect with savings and financial management outcomes. Notably, the correlation between time allotted and the opportunity to save for the future was 0.801, which is within the strong range. Likewise, the project’s success and its benefit in providing new knowledge strongly correlated with the opportunity to save ($r = 0.715$ – 0.725) and handling finances ($r = 0.854$). These results indicate that structured time investment and effective program delivery significantly enhance participants’ capacity to save and manage finances better. The World Bank (2018) emphasized that the success of livelihood projects is often measured by the financial resilience and savings capacity of the beneficiaries. Orbeta et al I(2022) found that adequate funding and support in

livelihood programs are essential for enhancing the saving capacity of participants.

Table 5: Correlation Table of Economic Status and Effectiveness of Livelihood Project Indicators
The correlation results were grouped and interpreted using standard thresholds based on Guilford's (1956) and Cohen's (1988) widely accepted

		Effectiveness of the Livelihood Project					
		Family Income Improvement	Time Allocation	Project Funding and Support	Quality of Life Improvement	Project Success	Knowledge Acquisition
Impact of Livelihood Project in terms of Economic Status	Provision of Family Needs	.567**	.541**	0.006	0.195	0.007	0.199
	Income Stability	.615**	.691**	0.229	0.161	0.141	0.299
	Savings Opportunity	.399	.801**	.719**	.465*	.715**	.725**
	Financial Management	.575**	.854**	0.24	0.256	0.408	.635**
	Income Improvement	.562**	.649**	0.182	.523*	0.357	.592**
	Quality of Life	.472*	.741**	0.298	.439*	0.335	.565**
	Enhancement						

classifications: coefficients between 0.00–0.39 were considered weak, 0.40–0.69 as moderate, and 0.70–1.00 as strong. This approach aligns with published livelihood impact studies (e.g., Li et al., 2023; Alam et al., 2023).

Table 6 presents the r-values showing the correlation between values gained and the effectiveness of the livelihood project. The results for Table II to III further highlight the importance of time, learning, and active engagement for broader personal and social development.

Weak correlations (0.00–0.39) emerged between project funding or general living improvement and outcomes such as collaboration, confidence, creativity, and productivity. For example, the correlation between project funding and promoting collaboration and communication was only 0.323, which is weak. This indicates that funding alone does not directly build stronger collaboration or confidence.

Moderate correlations (0.40–0.69) were seen between time allotted and certain community aspects, such as feeling that others care ($r = 0.610$) and project benefits related to learning new knowledge and promoting collaboration ($r = 0.558$). These moderate links show that investing time and gaining new knowledge moderately improve community ties and individual perception of social support.

Strong correlations (0.70–1.00) were consistently present in the relationships between time allotted and building confidence ($r = 0.930$), developing creativity ($r = 0.858$), becoming a responsible citizen ($r = 0.858$), and being productive ($r = 0.858$). Likewise, the benefit of gaining new knowledge showed strong ties with personal development, such as building confidence ($r = 0.833$) and developing creativity ($r = 0.734$). These results confirm that when participants spend sufficient time on the project and gain meaningful learning, they significantly strengthen their social and personal development. Suratno and Hutabarat (2018) found that self-confidence significantly influences time management and learning outcomes, as confident individuals are more likely to engage effectively in their tasks.

Table 6: Correlation Table of Values Gained and Effectiveness of Livelihood Project Indicators

		Effectiveness of the Livelihood Project					
		Family Income Improvement	Time Allocation	Project Funding and Support	Quality of Life Improvement	Project Success	Knowledge Acquisition
Impact of Livelihood Project in terms of Values Gained	Collaboration and Communication	.557**	.776**	0.323	0.28	0.362	.558**
	Self-confidence Development	0.36	.930**	.637**	0.335	.716**	.833**
	Creativity Development	0.395	.858**	.425*	0.368	.477*	.734**
	Civic Responsibility	0.395	.858**	.700**	0.368	.786**	.734**
	Productivity Opportunity	0.395	.858**	.700**	0.368	.786**	.734**
	Social Support	.447*	.610**	0.401	0.102	0.295	0.344

The correlation results were grouped and interpreted using standard thresholds based on Guilford's (1956) and Cohen's (1988) widely accepted classifications: coefficients between **0.00–0.39** were considered **weak**, **0.40–0.69** as **moderate**, and **0.70–1.00** as **strong**. This approach aligns with published livelihood impact studies (e.g., Li et al., 2023; Alam et al., 2023).

Table 7 presents the composite mean association between the impact of the livelihood project and the effectiveness of the livelihood project. The r-values indicate a strong positive correlation between the impact of the livelihood program and the effectiveness of the program, which means that the program is effective in improving the living conditions of those who participated in the program. The p-values also suggest that there is a strong positive relationship between the two variables. Given the strong statistical significance, it implies that the impact of the livelihood program is a reliable predictor of its success. The greater the impact, the more effective the programs are. The study of Dokubo and Amadi (2021) and Asio et al. (2024) provides valuable insights into how effective livelihood programs can positively impact the economic and social values of fisherfolk.

Table 7: Relationship between the impact of the livelihood project and its effectiveness

Impact	p-value	r-value	Interpretation
Economic Status	.000	.744**	Significant
Values Gained	.000	.835**	Significant

Challenges in the Implementation of the Livelihood Program

Fisherfolk livelihood programs in Cabog, Matawe, Dingalan, Aurora is essential in enhancing the economic stability and resilience of the Dumagat beneficiaries. However, there are challenges experienced by the beneficiaries that have affected the effectiveness of the implementation program. Among the challenges experienced by the respondents during the implementation of the fisherfolk livelihood program mentioned during the interview and focus group discussion are the following:

1. Limited number of fishing boats and fishing gears: most of the respondents mentioned that the number of boats provided by the College of Business Administration is not enough to accommodate the number of beneficiaries. Two boats are provided for the Dumagats of Dingalan, Aurora, with a total of 23 fisherfolk beneficiaries. With the limited number of boats, not all members are given the chance to use the boat for fishing, which could sometimes lead to conflict among members. In addition, one boat was severely damaged during the typhoon and is beyond repair. The boat's engine is still working, but there is a need to buy or fabricate a new boat. Emily Dupaya, MAEDUP president, mentioned in our interview "*nagkaroon po ng problem nung isa na lang ang tumatakbong bangka kasi naka quota po yung pwede sumakay. Hinde naman po pwedeng marami at maliit lang yung bangka.*" It is the wish of the fisherfolks to provide them with an additional boat that is

durable and long-lasting. Without adequate boats, fisherfolks struggle to access more productive fishing areas, restricting their catch to less abundant coastal waters, resulting in lower income. The Dumagats also struggle to afford essential fishing materials, as many of these are costly. The college provided them with fishing gear like headlamps, goggles, nets, hooks, and baits. However, frequent use of these fishing materials can cause them to deteriorate over time. The need for repair or replacement adds to the financial burden of fisherfolk. According to Jeniline, the chieftain of the community *“malaki ang tulong ng mga flashlight, antipara at iba pang materyales kasi yan po ang ginagamit nila araw-araw sa hanap bubay”*.

2. **Scheduling and coordination on the use of boats:** Many beneficiaries mentioned during the focus group discussion that there is a problem when it comes to scheduling the use of boats. Some members expressed frustration over missed opportunities to join the fishing because of double bookings and biases or favoritism, resulting in inequitable access to boats. Emily and Jeniline both mentioned *“nagkakaron po ng tampuhan kapag di po nakakasama sa pangingsida yung iba”*. This needs to be addressed to ensure that all fisherfolk benefit equitably. While there are internal ways to settle the perceived unfair scheduling, there must be a clear and transparent scheduling system that all beneficiaries agree upon for better coordination of boat usage.
3. **Maintenance and repairs:** Another concern that the beneficiaries mentioned is the cost of the boat's repairs and maintenance. Repair and maintenance of fishing boats are essential to extend the lifespan of the boat, making it more efficient and seaworthy. Frequent use and environmental factors can accelerate the wear and tear of the boat. Despite the importance of maintenance, many fisherfolks have financial constraints, making it difficult to afford the necessary materials and tools for repairs and maintenance. Members share a percentage of their sale by the members, whoever uses the boats must give a percentage share of their harvest, called *butaw*, for repairs and maintenance. However, not all fishing activities are successful, and sometimes harvests are not even enough to cover the operating expenses. Emily mentioned *“Kung minsan po iilan lang nakakabalik ng konsumo nila na biniram galing sa pondo, yung iba po, hinde na nakakabayad ng konsumo kasi lugi sila kaya nanubos po yung pondo sa bangka. Kaya kadalasan, kapag nasira yung bangka, sinasarili ko po yung gastos”*. Most fishers are operating on a tight budget as earnings from fishing are often not enough to cover the expenses, with many instances of loss or breakeven. This sacrifices the regular upkeep of the boat.
4. **Market Access:** The fishing community is in the remote coastal area of Dingalan, Aurora. It is far from larger markets, and transportation costs exacerbate the problem. The absence of affordable transportation forced Dumagat fishermen to sell their catch to a middleman in the area at a lower price. Most of the fisherfolk rely on middleman to sell their catch, who mostly take advantage of the fishers' lack of direct access to markets, resulting in less control over prices and cuts in their income. To address the issue, fisherfolks would like to establish a small “talipapa” or local wet market where they can directly sell their catch and other products to the community. This will allow fisherfolks to have direct access to consumers without relying on the middlemen as well as eliminating the long-distance transportation, resulting in better prices, reduced post-harvest cost, and increasing their income. Ms. Dupaya mentioned during the interview *“dagdag kita po yan pag may talipapa na po. Kami na po ang magbebenta sa mga turista, hinde na lang sila. At least po yung tubo doon sa amin na po labat mapupunta”*.
5. **Limited income from fishing -** Another challenge that the beneficiaries mentioned is the limited income they earn from fishing especially during typhoons and off-season. Fishing trips are often cancelled due to storms or strong winds. The unpredictable weather conditions in the area limit the fishing activities of the Dumagats, resulting in significant income loss. During the interview with the Chieftain and MAEDUP president, they mentioned *“nung nakaraang taon po habagatin, pero ngayun po madalas po kasi yung sama ng panhon”*. The two leaders mentioned that there are financial struggles, as earnings from fishing are often just enough to cover expenses, with many instances of losses. All respondents requested other livelihood projects as an alternative source of income, such as agricultural activities, to mitigate the economic impact of limited fishing and to reduce their dependence on fishing. Diversifying income sources can help them acquire new skills and reduce their dependence on fishing alone.
6. **Climate change –** The majority of the respondents mentioned that changes in weather patterns have disrupted their fishing activities, resulting in a significant loss of catch and income. Increased frequency and intensity of severe weather conditions can cause damage to boats and fishing gear, leading to financial strain and vulnerability. Many respondents mentioned that *“Nung nakaraang taon po ay habagatin, mas madalas po kasi yung sama ng panhon kaya di kami masyado nakaka pangisda. Aayos yan ng mga ilang araw tapos sasama na naman ang panhon.”* The region is prone to storms and the southwest monsoon, locally known as “habagat.” This brings intense rainfall, strong winds, flooding, and landslides in the area, disrupting fishing and agricultural activities. If fishers are unable to fish, they face immediate financial losses, which can impact their ability to support their families and meet their basic needs. If fishing is not possible, fishers seek alternative sources of income or rely on government assistance.

4. CONCLUSION

The fisherfolk's livelihood project contributed a positive impact on the economic status and values gained by the beneficiaries. The project has brought about improvement in the living standard of community members over the last five years. This is supported by the research findings revealing a strong positive correlation between the impact of the livelihood program and the effectiveness of the program. However, due to the small-scale nature of their operations, environmental conditions, and limited resources, many fisherfolks earn meager incomes not enough to meet their basic needs, hence, there is a need to sustain and enhance those livelihood projects. Addressing these challenges requires a comprehensive and adaptive approach involving collaboration among different actors involved in the livelihood programs, focusing on building resilience within the community. This includes continuous improvement of fishing resources; establishing direct market access to eliminate middlemen; training programs for small business management; creation of alternative livelihood projects in agriculture to provide an additional source of income; and better collaboration among stakeholders to ensure that the project will continue to thrive and support the livelihood of fishers. The assessment can further explore the challenges experienced by the Dumagat fisherfolk so that the College of Business Administration and government bodies can continue to respond to the needs of the community with particular emphasis on the development of supplemental and alternative livelihoods to address the root cause of vulnerability of small-scale fisherfolk.

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