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Challenges to Climate Change Resilience and Financial Support for Commercial Farmers in the Philippines: Implications for Sustainable Agricultural Production

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Abstract **- The Philippines' commercial farmers face complex and intricate obstacles to becoming resilient to climate change and obtaining sufficient funding. This research aimed to identify the challenges, issues, and barriers faced by farmers in achieving sustainable agricultural output, specifically with regard to financial assistance and climate change resilience. A qualitative phenomenological research approach was used, with 20 local farmers from Buenavista, Bohol Province, Region VII Central Visayas, serving as the research informants. Non-probability purposive sampling was employed to select participants engaged in commercial farming. The data were analyzed using thematic analysis. The findings revealed that the challenges and barriers confronting the farmers in their quest to achieve sustainable agricultural production in terms of climate change resilience included the following: inadequate farming machinery, farming literacy intensification, nature's catastrophic effects, inadequate farming equipment, insufficient farming finances, long processing times for financial assistance, and uncertainty regarding support. The challenges related to adequate financial support included time constraints in processing assistance and the lack of sufficient documentation, which resulted in a lack of aid. The study concluded that the challenges farmers face in obtaining adequate financial support and achieving resilience to climate change affect the promotion of sustainable agricultural production. Furthermore, farmers need greater access to formal loans from both public and commercial sectors, and farm machinery and equipment must be upgraded. By making these improvements, farmers will be able to allocate funds toward sustainable practices that will reduce risks and facilitate their recovery from climate-related disasters. These issues must be addressed to preserve the agricultural sector's viability and competitiveness in the face of enduring economic and environmental challenges.**

Keywords: **Commercial Farmers, Climate Change Resilience, Sustainable Agricultural Production, Financial Support, Thematic Analysis**

I. INTRODUCTION

Commercial farming is vital to the country's food supply and export economy. It focuses on the large-scale production of crops like rice, corn, and bananas. While mechanized farming boosts productivity, challenges such as agricultural financing and resilience to climate change are inevitable (Cruz, 2018).

Although mechanized farming boosts productivity, commercial farmers around the world, especially those in developing countries, also face significant financial challenges. Research from several continents shows that obtaining funding is a common issue that drastically reduces resilience and agricultural productivity (Buchhave & Belghith, 2022).

For example, research from Africa shows that high interest rates and strict collateral requirements make it difficult for smallholder farmers to obtain loans, resulting in underinvestment in crucial agricultural inputs (Clark & Mitchell, 2022). Similarly, studies conducted in Latin America have demonstrated that financial exclusion makes rural populations even poorer and hinders their ability to adapt to changes in the market and climate (Demirgüç-Kunt *et al.,* 2018). This global perspective underscores the need for customized financial solutions that can empower farmers and increase their resilience against economic shocks (Bangko *et al.,* 2022).

This study also examines the Philippines' regional context within the ASEAN framework. Studies conducted in neighboring countries like Vietnam and Thailand show that financial obstacles significantly hinder agricultural progress in Southeast Asia. For instance, a Vietnamese study found that smallholder farmers frequently lack access to legitimate financial institutions, forcing them to rely on informal financing channels that undermine their long-term viability (Debuque-Gonzales & Corpus, 2021).

Additionally, research from Malaysia highlights how government policies can assist farmers in obtaining agricultural credit, suggesting that the Philippines could benefit from similar approaches (Demirgüç-Kunt *et al.,* 2022). By synthesizing knowledge from ASEAN nations, this study will offer a comprehensive understanding of the

financial challenges faced by Filipino farmers and the potential for regional cooperation in addressing these issues. The project will address several interconnected issues, such as the impact of climate change on agricultural productivity and the ongoing difficulties in obtaining financing. Technologies, including community-based financing models and digital financial services, have emerged as viable solutions to improve farmers' financial resilience (Salignac *et al.,* 2019). Platforms that connect farmers directly with financial institutions, for example, have demonstrated the ability to reduce transaction costs and increase credit availability (Economic Policy Research Institute, 2020).

Despite these developments, many unanswered questions remain, particularly regarding how to apply these advances in the Philippine context. Given these challenges, the primary goal of this study is to fill gaps in the literature by focusing on the specific challenges of climate change resilience and adequate financial support faced by Filipino commercial farmers. The researchers' knowledge and experience in rural development and agricultural economics equip them to explore these complex issues.

The study's focus on these critical areas will provide valuable insights to improve policy decisions and strengthen the agricultural sector's resilience, particularly in the province of Bohol, Philippines. In summary, this introduction sets the stage for an in-depth investigation of the financial challenges and resilience concerns faced by Philippine commercial farmers, drawing on relevant international and regional literature. This study will be significant in supporting sustainable agricultural practices in the region due to its focus on research gaps and the researchers' qualifications.

The credibility of the research is enhanced by the researchers' extensive backgrounds in academics, agricultural economics, and rural development. Their expertise is further supported by a solid foundation in qualitative research techniques, ensuring that the data collected will be carefully and ethically analyzed. To ensure the study accurately reflects the conditions of the commercial farming industry in the Philippines, the researchers will also actively collaborate with local stakeholders, including farmers and agricultural experts.

II. OBJECTIVES OF THE STUDY

The study aims to explore the lived experiences of commercial farmers who face challenges in obtaining adequate financial support and demonstrating resilience to climate change. The goal is to provide comprehensive farming support systems to sustain agricultural production for both commercial and subsistence purposes.

III. MATERIALS AND METHODS

A qualitative phenomenological research approach was used. The study was conducted on selected farms in Buenavista, Bohol Province, Region VII, Central Visayas, where the primary sources of income for the local population include fishing, weaving, and agriculture. Non-probability purposive sampling was employed to select participants engaged in commercial farming. A total of 30 informants from this sector, representing selected barangays, provided data on the challenges they faced regarding climate change resilience and obtaining adequate financial support. The data were analyzed and interpreted using thematic analysis.

IV. RESULTS AND DISCUSSION

This section presents the challenges faced by farmers in their quest for sustainable agricultural production, specifically regarding climate change resilience and adequate financial support.

A. Challenges Confronting the Farmers in their Quest for Attaining Climate Change Resilience

The first question asked of the informants relates to the challenges they encountered in ensuring that the crops they planted would become resilient to extreme weather conditions (heat of the sun and rain) due to climate change. Based on their narratives, two themes emerged from the responses during the personal interview.

B. Inadequate Farming Machinery

The most prevalent challenges the local farmers face are varied and commonly relate to the lack of industrial equipment and financial capital to sustain the purchase of fertilizers and other farming supplies needed to ensure that the plants or crops withstand extreme weather conditions.

Usually, only a few farmers in Buenavista, Bohol, can sustain the effects of climate change since they need to purchase various modern equipment, such as pumping systems and other farming tools. Informant 2 stated: *"Various challenges were faced, including the need for farming equipment like water pumps and other water pumping systems. There is also a lack of financial resources, as not all farmers own their equipment, and others tend to rent equipment from other farmers, thus requiring them to have finances to do so. At this time, having insufficient fertilizer on a farm means failure in agriculture. The land area needs more nutrients because the longevity of cultivation has degraded the soil quality. Lastly, the farm's topography means the crop cannot grow well in areas where another plant is growing beside it, as it steals the available nutrients intended for the crops."*

The lack of a necessary water supply poses a challenge for local farmers in ensuring that the crops they planted survive during the intense hot season. Hence, Informant 4 shared: *"The most common problem farmers face is the lack of a water supply that enables crops to grow and survive. Water*

supply is essential, just like human life; without it, our crops would be in danger of catastrophe."

The issue in the support system for knowledge and ideas about innovative farming also challenges farmers in ensuring that the crops they planted are resilient to extreme weather conditions.

Furthermore, Informant 5 revealed: *"The availability of good-quality seedlings is crucial to ensuring that crops are planted, along with water supply, fertilizers, and farm location. It is crucial because we farmers rely only on what exists; we do not acquire any strategies or techniques from innovations. In other words, no such training or information is coming from the government or any other agencies that would enhance our capabilities and learning regarding farming."*

Based on the informants' narratives, the local farmers in Buenavista, Bohol, faced a shortage of modern equipment that could be used to ensure that the plants could withstand extreme heat, especially during the onset of El Niño. However, they cannot address these problems in their capacity, as most small-scale farmers lack the financial resources to purchase various machines and high-tech equipment.

Additionally, they need more training on modern farming methods, similar to developed economies, to learn the best practices in agricultural production amid climate change. Moreover, the availability of farming equipment like water pumps and farming support systems remains a significant challenge.

A strong focus on adaptation to climate change, emphasizing agriculture and water management in the most vulnerable sectors, requires urgent action. To increase the resilience of agriculture, the extension of irrigation could be viewed as an adjunctive approach to conservation methods and a change in the timing of sowing or planting. Improving the economy's climate resilience is a significant task that no single institution can complete on its own. Considering that Local Government Units (LGUs) control a large share of public spending in many highly climate-vulnerable sectors, the LGU may want to establish strategic partnerships with farmers to optimize the planning and implementation of adaptation efforts across levels of government and budgetary lines (Mereu *et al.,* 2017).

C. Farming Literacy Intensification

The local farmers, who usually do not have formal training in modern methods, need to undergo various seminars to learn the techniques for ensuring crop resilience, which is at the core of climate change. There is a need for local farmers to be aware of new techniques to combat climate change that affects their crops and yield. This is significant because it is a crucial part of agricultural production, where farmers' knowledge and ideas lead to success. Informant 1 stated: *"Knowledge is essential in identifying the right techniques to withstand climate change. As farmers, aside from our own knowledge, we should have a training program or a seminar from the LGU on the innovations and adaptations in the farming system to boost our yield. It requires rain so that crops can withstand the heat and will not be weathered; also, we need to ensure that someone else will look after the crops so they are not consumed by the different insects and pests that will emerge because of the changing climate. For this instance, there will be a good harvest."*

In addition to Informant 1's revelation, it was discussed that farmers need new knowledge on modern farming techniques to stay abreast of trends and innovations. Furthermore, the absence of governmental support for irrigation systems poses challenges.

Hence, Informant 3 shared: *Lack of knowledge in farming is a common challenge, for we need to be updated on innovations and techniques. Lack of support in water irrigation is also a factor in both small- and large-scale farming, which relies only on available rainfall. The farm's location is also challenging because some farms are not prone to moisture and have calm climates conducive to crops."*

The essence of knowledge-based actions among farmers offers a greater advantage in making decisions about classifying crops that need to be planted at a particular time. Furthermore, Informant 6 said: *"First, the right crop must be identified. Timing is very important in crop choice to ensure the plant's survival in the face of climate change. Choose the right plant or crop to withstand extreme weather conditions."*

Based on the narratives of the research participants, the local farmers need to learn new farming techniques that focus on and foster resilience during the sudden change of climate and extreme heat. Moreover, most farmers residing in rural areas need to be more knowledgeable and informed about new farming methods. Hence, they require governmental support and assistance so that they will not only rely on their experience and traditional farming knowledge.

The knowledge qualities of farmers may impact farm economic performance. For increased technical efficiency, non-formal information sources, including seminars and competence-based learning, are essential. Within the instruments used for strengthening farmers' knowledge potential, supporting non-formal education and young farmers' enrollment in agricultural production should remain priorities. The impact of educational methods and potential knowledge traits on farm efficiency has yet to be examined in the context of economic transition, despite data supporting the role of knowledge in improving farm performance (Gordana, 2013).

V. THEMATIC CATEGORIES OF THE KEY INFORMANTS' RESPONSES

A. Common Themes Emanating from the Perception of Key Informants

This section of the chapter presents the common themes articulated by the informants, who were the resident farmers, regarding the challenges they face in their pursuit of sustainable agricultural production in climate change resilience. Figure 2 illustrates the thematic categories related to these challenges. These common themes emerged during personal interviews with the study's key informants and were analyzed using thematic analysis.

Various challenges contribute to procrastination in agricultural production among farmers. The first question addressed the challenges encountered in ensuring that the crops they planted would be resilient to extreme weather conditions, such as heat and rainfall, as effects of climate change. The following themes emerged:

1. Inadequate Farming Machinery: To ensure crop resiliency, rural farmers must implement various mechanisms in their agricultural activities. Machinery is essential for improving productivity and ensuring crops are not severely damaged during calamities or extreme weather events. Mechanization in agriculture is a multifaceted issue. However, a notable distinction exists between the use of mechanization in developed and developing nations. Developing countries typically design food security policies in response to significant economic challenges, such as population growth, poverty eradication, environmental protection, climate change mitigation, and malnutrition (Emami *et al.,* 2018).

2. Literacy Intensification: Farmers must acquire knowledge and skills regarding various farming strategies and techniques suited to the current climate conditions in the Philippines, which is highly vulnerable to sudden changes in temperature, moisture, and wind strength. Literacy in farming is vital for survival, especially during damaging calamities. Efforts to gain knowledge about innovative farming techniques for resilience cannot be accomplished by farmers alone; they require support from both public and private sectors. Jambo *et al.,* (2019) explained that agricultural techniques and technologies fostering sustainable farming intensification often stem from existing farm practices, the adoption of new practices, or adaptations of both. The adoption rate of sustainable intensification practices remains low and is influenced by on-farm biophysical and socio-economic conditions. Information dissemination is critical to the success of agricultural practices and food security. Agricultural extension officers should actively share information with farmers (Sokoya *et al.,* 2014).

The second question posed to the participants focused on the challenges faced in protecting crops during strong typhoons, heavy rains, floods, and other weather events. Based on the informants' responses, three themes emerged:

3. Nature's Catastrophic Effects: To mitigate, prevent, and reduce the negative impacts of natural disasters on agriculture, disaster risk reduction strategies are necessary. Resilient food production systems are essential to agricultural growth and productivity in the face of climate change. This requires the sustainable use of resources, such as land, water, soil nutrients, and genetic resources, with a strong emphasis on disaster risk reduction technologies and practices. However, progress in integrating disaster risk reduction into the agricultural sector remains limited. While many countries have national disaster risk reduction frameworks, few include agriculture, food security, and nutrition in their policies. Effective risk reduction within agriculture requires supportive policies that promote sector-specific disaster risk reduction planning, early warning systems, and adequate financial resources (Caracalla, 2015).

4. Inadequate Farming Equipment: For developing countries to reduce poverty and improve food security, agriculture must become more mechanized. Subsistence farming is declining, and conservation agriculture (C.A.) is often seen as the only viable cropping strategy. However, the global farm machinery industry has yet to focus on developing tools for C.A. Seeding, harvesting, and land preparation tools must be compatible with production systems. However, agricultural machinery has largely been based on tractor tillage, and conservation agriculture still faces challenges in seeding equipment, especially in diverse conditions. Precision guidance systems and compatibility with permanent raised-bed and controlled-traffic cropping systems remain underdeveloped (Tullberg, 2009).

5. Insufficient Farming Finances: Access to finance is crucial for a developed agricultural industry, but integrating small farmers into financial systems remains a challenge in emerging nations. Countries with well-developed financial markets tend to have more advanced agricultural sectors. Ruete (2015) emphasized that financial institutions alone cannot address the rural sector's needs. Governments should promote laws and regulations related to new financial instruments and increase awareness of existing options.

6. Long Processing Time for Financial Assistance: In the Philippines, farmers face difficulties securing loans from commercial banks. Many rely on loan sharks, who offer high-interest loans. The lack of necessary documentation and collateral further limits access to formal lending. Piñol (2018) noted that the inability to access funds from banks highlights the need for a revamp of the government's conditional cash transfer program. The Department of Agriculture (DA) proposed a Php 50 billion budget for an easy-access financing program, offering loans of up to Php 50,000 to qualifying farmers and fishermen, though this amount is significantly lower than subsidies provided by other Southeast Asian countries.

7. Uncertainty of Support for Farmers: Agriculture is crucial to the Philippine economy. Of the country's 30 million hectares of land, one-third is used for agriculture, with two-thirds of the population dependent on these lands for livelihood (Briones, 2002).

Smallholder farmers are integral to rural development but often face marginalization and vulnerability due to changing social, political, and environmental conditions. The Republic Act (R.A.) No. 7607, the "Magna Carta of Small Farmers," was enacted to empower small farmers and integrate them into government planning and development efforts. However, for the law to fulfill its purpose, the government must adhere to its provisions and ensure adequate funding (Aquino *et al.,* 2013).

B. Challenges Confronting the Farmers in their Quest for Attaining Adequate Financial Support

This part presents the participants' narrations regarding their challenges in their quest for attaining sustainable agricultural production, specifically regarding adequate financial support.

Adequate financial support is crucial in farmers' pursuit of sustainable agricultural production, for it is the backbone of the production process. This would enhance productivity and efficiency so that farmers can play their role in the economy of providing necessary commodities essential for human survival and rural economic growth and development.

The first question asked to the informants pertains to the challenges encountered in seeking financial support from the local government unit (LGU) for their agricultural production.

Time Constraints in Processing: Naturally, a process takes time to fulfill. However, whenever money issues are brought into play, farmers tend to have second thoughts about anticipating any assistance from the Local Government Unit (LGU) since money issues require thorough evaluation and examination of the papers needed to confirm their validity before approval.

For the farmers in the study environment, it was just a waste of time for them to ask for financial aid. Hence, they tend to do it on their own. Based on the experience, Informant 3 shared that: *At this time, it really takes a long time to process assistance, and we farmers, whether we are into small or big-scale farming, sometimes will no longer wait; it's just a waste of time, and there's no assurance.*

Informant 4 disclosed that their problem in asking for aid from the government was due to time constraints in processing the documents before the money was released. However, there are cases in which they have spent so much time and effort complying with the requirements, yet there is no assurance that financial assistance will not be given to them. I was elucidated that: *There was not enough budget; if there was any, it took time to process the documents and other needed papers. The needed assistance is difficult to acquire, which is difficult because not all farmers can finance independently. This is whywhy no one among others will continue because only a few are capable of doing so.*

On the part of Informant 5, they undertake their farming activity out of their own risk and capability since any financial help from the government is hard to acquire. He said that: *Financial support from the Local Government Unit (LGU) is very difficult nowadays for us farmers. We usually do farming at our own risk and resources, so we are not waiting for that assistance, for it might be delayed or there is no assurance of acquiring it at the end of the process. It would just mean a waste of time for us. Time is crucial because we depend on the weather to increase crop productivity.*

Informant 6 said that the farmer would be lucky if the location of his farm had an existing irrigation system that would support the crops, especially during hot months. Aside from that, any support from the government would just be wasted. He was able to express his sentiments by saying: *If you rely on financial support from the Local Government Unit (LGU), if there is any, it will take time to arrive. In farming, you are lucky if your farm is situated in an area supported by irrigation or with existing water resources. On my part, as a farmer, I rely on rainy days, not on irrigation. Farmers do not have a good harvest for almost a year. They will give importance to us farmers because they are the ones who provide us with food to eat.*

Based on the narrations of the research informants, the greatest problem that they encountered the moment they asked for assistance and support from the Local Government Unit (LGU) was the length of time spent in processing the documentary requirements and the lack of assurance that they will be able to obtain the needed need. Time is essential for them because not all farmers can generate money to finance production. Aside from financial aid, infrastructural support, such as irrigation systems, is also hard to obtain. A farmer would be lucky if his farm is near the irrigation system with a steady water supply aside from the rain, for its absence will wither the plants during El Niño. Unfortunately, the government does not prioritize the essential government support to the farmers. Processing and approval of the needed assistance should be made possible in a shorter period.

The farming industry has been neglected for many months. Government after government has not given the attention it desires in order for it to be profitable. The people are not blaming the government for everything, but substantial support is needed from the government for the farmers. The industry has been left to its own devices. The government has not yet come to the table to indicate its interest in assisting the farmers except for the subsidies they said are on the books now. There are still difficulties in obtaining

subsidies for the books. There is much talk, but nothing is happening for the farmers at this point from the government's side (Pintard, 2018).

The second question asked to the same group of participants relates to the challenges that they encountered in obtaining financial support from other government agencies for their agricultural production besides the local government unit (LGU). Based on the informants' narratives, one theme emanated from the responses during the personal interview.

No Sufficient Documents Means No Aid: Most of the farmers do not have enough documents evidencing the ownership of the land that they till. Monetary assistance from the government would be hard due to the lack of supporting documents.

Based on the experience, Informant 1 narrates that: *Again, as I have mentioned, asking for help or any assistance from the Local Government Unit (LGU) is very hard because not all farmers have the complete documents for their farming, how much more to other agencies. I do not know about the others, but that is my experience. We did not attempt to do so because we already knew the outcome.*

The needed documents for the needed assistance hinder the local farmers in Buenavista, Bohol, since the farmer's capacity to comply with the required documents would mean complex to them for they are situated in a 4thclass municipality. Therefore, Informant 2 elucidated that: *Again, all I can say is the documents and papers needed for the processing. Also, the endorsement coming from the LGU is very hard to obtain. It requires complex examination and processing of the requirements you must comply with, so it takes time to complete, and there is no assurance if it will be granted. Time is very important for us farmers to cope with the changing climate and the available resources and equipment.*

Like other farmers' experience, there is no assurance that they will be given the needed financial help. So, their time, effort, and money will be wasted. So, they look for other means to support the needed capital for their farming. Informant 3 uttered that: *As I have said, it takes time to process and ask for assistance, particularly the documents needed for approval. Whether we are into small or big scale farming, we sometimes no longer wait for it, for it is just a waste of time, and there is no assurance. Lastly, farmers hesitate to ask for help from other agencies because the assurance and the time wasted in the processing are not guaranteed, and it will be more productive if they find other ways to sustain financial support for their farming.*

A collaborative effort between agencies linked with the local farmers is essential to boost productivity. Eliminating the complex documents needed for approval provides a big leap for farmers in Buenavista. As what Informant 5 shared: *Financial support from other agencies is the same as acquiring support from the Local Government Unit (LGU); it is difficult. The common problem is processing the numerous documents that must be complied with. After this, the next question would be when it will be approved. The period in waiting is a waste of time for us farmers. For these reasons, instead of asking for assistance, we sacrifice our time in production; we intend to carry it in our own ways in finding financial support, such as acquiring loans, selling our other properties, or pawning them.*

The major problem in seeking assistance from other government agencies besides the Local Government Unit (LGU) was the complicated documentary requirements that must be complied with and followed for approval. Furthermore, time is a constraint for the farmers since if they process the documents, they will have to sacrifice the time that they could spend in farming. They will just be frustrated whether they can obtain the money or not. Moreover, time is essential for the farmers in Buenavista because of the weather conditions there, and the production cycle should not be prolonged.

Giving the agricultural industry access to financing has important economic ramifications, particularly for a developing nation like the Philippines where employment, food security, and poverty reduction are key concerns. In order to encourage rural development, the government planned to pursue equitable access to opportunities for fishers and farmers. The goal of the law is to make financial services and programs more accessible to the agricultural sector, with the goal of modernizing the agriculture sector and improving market efficiency (Cuaresma & Arcalas, 2019).

VI. THEMATIC CATEGORIES OF THE KEY INFORMANTS' RESPONSES

A. Common Themes Emanating from the Perception of Key Informants

This section presents the common themes expressed during personal interviews with the key informants. The first topic discussed in the interview concerns the challenges farmers face in seeking financial support from the Local Government Unit (LGU) for their agricultural production. The following theme emerged from their responses to this question:

1. Time Constraints in Processing: Time is critical in agricultural production, especially in rural areas. Farmers need prompt support from the government, as most lack a financial buffer to cover the costs of fertilizer, seedlings, labor, and other expenses for each planting cycle. Without timely assistance, they often rely on borrowing from loan sharks who charge exorbitant interest rates, which only exacerbates their financial difficulties. There are instances where the value of their harvest is insufficient to pay off their debt, forcing them to borrow again for the next planting cycle in hopes of recovering their losses.

Farmers should be organized into genuine self-help groups or cooperative societies. Managers of these groups and extension personnel should continuously build members' capacities through educational programs and encourage them to rely more on group savings. Any assistance outside of credit should be channeled through these groups to facilitate disbursement to members and ensure timely repayment. The government should identify implementation bottlenecks, review strategies, and increase its equity contribution to the fund. Additionally, the government should establish policies and action plans to ensure regular access to attractive market prices for agricultural produce. Such measures would encourage farmers to expand their holdings and significantly increase their output, ultimately improving their standard of living (Awotodunbo, 2008).

The next topic discussed during the interview focused on the farmers' challenges in obtaining financial support from government agencies other than the LGU.

2. No Sufficient Documents Means No Aid: Farmers are often required to submit necessary documents when seeking financial aid from the government, whether at the national or local level. For example, farmers may need assistance in procuring tractors and other implements that are too expensive for them. Many farmers also struggle to purchase the farm equipment needed to increase production capacity, especially during the planting-to-harvesting time gap. However, government agencies and financial institutions are often reluctant to provide aid due to the perceived risks and doubts about the farmers' ability to repay, especially given their vulnerability to the effects of climate change.

Government grants are available to help farmers seeking assistance, and some funds can be used to purchase farm equipment. However, to secure a government grant for farm equipment, farmers must understand the necessary steps. To apply for a grant, farmers must present a plan outlining how the equipment will be used, the amount of funding needed, and the reason for the grant application. It is advisable for farmers to prepare a business plan that clearly explains how the farming activities will benefit the farm, the types of crops to be grown, and the farming methods to be employed (White, 2019).

VII. RECOMMENDATIONS OF THE STUDY

To address the challenges faced by farmers in Boho, Philippines, particularly regarding climate change resilience and financial support, several comprehensive recommendations can be proposed:

A. Strengthening Financial Support Systems

1. Enhanced Access to Credit: Expand the number of low-interest loans available to smallholder farmers by utilizing government initiatives such as the Agri-Negosyo (ANYO) Loan Program and the Agricultural Credit Support Project (ACSP). To help farmers manage loans effectively, these initiatives should focus on streamlining the application process and offering financial literacy training.

2. Agricultural Insurance Reform: Improve agricultural insurance offerings to increase their relevance and accessibility for small farmers. This includes creating more accessible, all-inclusive insurance that covers various risks, including crop failures and natural disasters, and ensuring that benefits are substantial enough to offset losses.

3. Public-Private Partnerships: Encourage partnerships between the public and private sectors to improve financial services for farmers. This may involve collaborating with fintech businesses to offer digital banking solutions that facilitate easier access to credit and money management resources.

B. Promoting Climate Change Resilience

1. Investment in Sustainable Practices: Promote the adoption of climate-smart agricultural practices through educational initiatives and financial incentives. Mitigating the effects of climate change entails encouraging agricultural diversity, improving soil health, and implementing effective water management strategies.

2. Infrastructure Development: Invest in agricultural infrastructure, such as storage facilities and irrigation systems, to increase farmers' resilience to disruptions caused by climate change. Prioritize initiatives such as small-scale irrigation systems and irrigation canal restoration.

3. Research and Development: Encourage research projects to develop crop types and farming practices that are adaptable to climate change. Collaborations with agricultural universities and research centers can result in innovations that assist farmers in adapting to changing climate conditions.

These recommendations are further supported by Micabalo *et al.,* (2024), who state that sustainability and resilience depend on collaboration between farmers within the community and the support of both public and private sectors through adequate financial and agricultural mechanisms.

VIII. CONCLUSION

The challenges confronting commercial farmers in the Philippines regarding climate change resilience and adequate financial support are multifaceted and deeply intertwined. The study concluded that the experiences of farmers with challenges related to financial support and resilience to climate change affect the promotion of sustainable agricultural production. Modern farm machinery and equipment are essential, as is increased access to official loans from both the public and private sectors. By implementing these changes, farmers will be able to allocate

finances toward sustainable practices that mitigate future risks and aid in their recovery from climate-related disasters. To maintain the agricultural sector's viability and competitiveness amid persistent economic and environmental challenges, these issues must be addressed comprehensively.

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