

# Economic Contribution of the Department of Agriculture 4K Program of Local Government Unit in Southern Philippines: Basis for Program Enhancement

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**Abstract.** This study determines the economic contribution of the Department of Agriculture's 4K (Kabuhayan at Kaunlaran ng Kababayang Katutubo) program to beneficiaries of Local government unit in Southern Philippines, an Indigenous community. It also assesses the program's impact on beneficiaries' economic conditions before and after participation, including satisfaction of basic needs, support for education, access to credit, acquisition of assets and properties, rest and recreation, healthcare, life insurance, savings, and investments. The study employed quantitative research methods and utilized a survey questionnaire to evaluate beneficiaries' economic conditions before and after participating in the 4K program through simple random sampling. The findings reveal significant improvements in beneficiaries' economic conditions after participating in the Department of Agriculture's 4K program. Before participation, beneficiaries exhibited limited economic capacity, whereas post-program results indicate enhanced capacity to satisfy basic needs and support education. The study underscores the substantial contribution of the Department of Agriculture's 4K program to the economic well-being of beneficiaries. It recommends continuous support from the Department to identify areas for program enhancement, to provide communities with the tools they need to choose and create livelihood initiatives that fit their resources, abilities, and cultural values.

## 1 Introduction

The Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) is a special program of the Department of Agriculture (DA) mandated in response to the directives of former President Rodrigo Roa Duterte. It aims to provide more opportunities for livelihood in agriculture and fisheries, investments in production and post-harvest machinery and equipment, and a range of support services for Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) across the nation through targeted community needs assessments. With funding from the Department of Agriculture's Special Area for Agricultural Development (SAAD), the

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initiative was carried out under the Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) program. This initiative is part of the government's effort to empower indigenous peoples (IPs) and help them overcome poverty (DA-AFID | 28 March 2018).

The Kabuhayan at Kaunlaran ng Kababayang Katutubo (4K) Program seeks to enhance the productivity of the ICCs/IPs by cultivating sustainable agricultural enterprises and boosting their income while respecting their customs, traditions, values, beliefs, and interests. Respondents in this study are members of the Higaonon tribe, an indigenous group located in of selected Local government unit in Southern Philippines. Due to their distant location, lack of resources, and historical marginalization, indigenous populations frequently confront various difficulties. Despite their strong ties to the land and rich cultural history, these communities often face socioeconomic gaps that impede their growth and well-being. Customized livelihood programs tailored to their specific requirements are essential to promoting sustainable growth and empowering them.

The study examines the socioeconomic requirements of isolated indigenous groups and assesses how livelihood programs affect their general well-being. It sheds light on the significant obstacles these communities confront, such as restricted access to economic, healthcare, and educational opportunities, through an extensive examination of various livelihood projects (Johnson & Garcia, 2022).

Plagányi et al. (2013) suggest that assessing the effectiveness of natural resource management strategies necessitates measuring performance about biological, economic, social, and governance goals. While much fisheries research focuses on industrial sectors, it often undervalues the contributions of small-scale and indigenous hunters and anglers to the global resource economy.

The continuous support of the Department of Agriculture and the level of interest among the indigenous people. Local government unit in Southern Philippines are the primary reasons why this study was initiated to identify the economic contribution of the 4K program to beneficiaries. To address the gap in the findings, this study was conducted to determine the economic contribution before and after availing the Department of Agriculture's 4K program to beneficiaries in Local government unit in Southern Philippines. The investigation results may serve as the basis for program enhancement to address the challenges faced by beneficiaries in the livelihood program.

## **2 Statement of the Problem**

This study aims to assess the economic condition of the beneficiaries of selected Local government unit in Southern Philippines before they availed of the Department of Agriculture 4K program. To determine the extent of the economic contribution to the beneficiaries after they availed of the Department of Agriculture 4K program. To identify strategies to enhance the implementation of the Department of Agriculture 4K program of selected Local government unit in Southern Philippines. Additionally, this study seeks to answer the following research questions:

1. To determine the economic condition of the 4K beneficiaries before and after they availed of the program in terms of the following:
  - a. satisfaction of basic needs;
  - b. support to education;
  - c. access to credit;
  - d. acquisition of assets and properties;
  - e. rest and recreation;
  - f. health care and life insurance;
  - g. savings and investments?

2. What are the differences in the economic conditions of the beneficiaries before and after they took advantage of the 4K Program?
3. What strategies could be proposed to enhance the 4K Livelihood Program?

### **3 Research Methods**

In this study, the researchers utilized a quantitative design, employing a survey questionnaire to explore the economic condition of beneficiaries before and after participating in the Department of Agriculture's 4K program beneficiaries of selected Local government unit in Southern Philippines. The study also assesses the extent of the program's contribution to their economic conditions. Probability sampling with random selection enabled strong statistical inferences about the entire group. This research design aims to comprehensively understand the program's impact by collecting and analyzing quantitative data.

#### **3.1 Research Locale**

The study was conducted of selected Local government unit in Southern Philippines. The locale of the study focuses only on the area of that selected LGU, which is the smallest and most distant place, where all people reside and are Higaonon tribes. The research locale is a rural community in Southern Philippines. This community speaks the Higaonon dialect, which is their native language. As the only place where Higaonon customs are still practiced and have strong ties to the community, This locality has been visited by numerous researchers from various agencies to study the history and cultural preservation of the area. The place has very few service facilities: an elementary school, a health center, a small Roman Catholic Church, and a small display center for the women's group known as Kalandang Weavers. The main sources of income for the families in this remote area are women's hinabol weaving and farming. The selected Local government unit in Southern Philippines is the focus of the research locale of the study because it has strong ties with the community in terms of traditional customs, conservation of the environment that signifies the sustenance of their tribe and culture, and the place where the beneficiaries of the 4K program are located. Due to the current economic conditions in the area, the community has limited access to markets, insufficient education and training, this study was conducted

#### **3.2 Research Participants**

The study participants were the Department of Agriculture 4K of selected Local government unit in Southern Philippines. Currently, there are 35 beneficiaries and members of the Kahugpungan Association. Out of the 35 participants who answered the survey, the researchers randomly selected five beneficiaries according to specific fields, such as weavers, corn farmers, and aquaculture, as the qualitative participants to obtain in-depth information about the benefits of the 4K program in their lives. The 35 members were purposively selected. The researcher obtained informed consent from the participants to participate in the study voluntarily.

During the study, the participants were engaged in everyday activities such as household chores, farming, weaving, and fishing. Although most participants were willing to participate in the survey, a few were shy due to their lack of writing or reading skills. In response, the researchers offered assistance and explained the survey's purpose. The participants are eager to contribute to the survey and hopeful that the study will bring opportunities for new projects to support their livelihoods.

The researchers sought participants who were willing to participate in the survey. Additionally, the researchers could only survey the beneficiaries of the 4K program, and these beneficiaries formed a group named the Kahugpungan Association. This association represents the Higaonon tribe of selected Local government unit in Southern Philippines.

### 3.3 Scoring Procedure

The researchers utilized a checklist survey questionnaire since the study aims to determine the contribution of livelihood projects among beneficiaries before and after availing of the Department of Agriculture's 4K program, using a Likert scale ranging from 1 to 5. This numerical examination assesses the contributions of beneficiaries before and after they availed themselves of the 4K livelihood projects to determine the Department of Agriculture's capacity: very high capacity (5), high capacity (4), average capacity (3), low capacity (2), or no capacity (1).

The questionnaire included the respondent's socio-economic profile, such as name (optional), age, and sex. To ensure that the study participants had consented, the researchers requested that the participants sign the consent forms to validate them.

**Table 1.** Scoring guideline on the economic condition of the beneficiaries before they availed the department of agriculture 4K program.

Range	Scale	Interpretation	Meaning
4.21-5.00	5	Very High Capacity	The economic condition of beneficiaries is very much stable.
3.41-4.20	4	High Capacity	The economic condition of the beneficiaries is much stable.
2.61-3.40	3	Average Capacity	The economic condition of the beneficiaries is stable.
1.81-2.60	2	Low Capacity	The economic condition of the beneficiaries is moderately stable.
1.00-1.80	1	No Capacity	The economic condition of the beneficiaries not stable.

**Table 2.** Scoring guidelines on the extent of contribution to the economic condition of beneficiaries after availing of the Department of Agriculture 4K program.

Range	Scale	Interpretation	Meaning
4.21-5.00	5	Very High Capacity	The Department of Agriculture 4K program is very capable of an economic contribution to their beneficiaries.
3.41-4.20	4	High Capacity	The Department of Agriculture 4K program is highly capable of an economic contribution to their beneficiaries
2.61-3.40	3	Average Capacity	The Department of Agriculture 4K program is capable of an economic contribution to their beneficiaries
1.81-2.60	2	Low Capacity	The Department of Agriculture 4K program has limited capacity for an economic contribution to their beneficiaries
1.00-1.80	1	No Capacity	The Department of Agriculture 4K program is incapable of an economic contribution to its beneficiaries

## 4 Results and Discussion

### 4.1 Problem 1. To determine the economic condition of the 4K beneficiaries before and after they availed the program

The table displays the findings concerning the economic condition of the respondents both before and after participating in the 4K program. Before engaging in the livelihood program, the beneficiaries exhibited no capacity, indicating an unstable economic condition in the area. However, post-implementation of the program, most beneficiaries demonstrated an average capacity to meet essential needs, including support for education, access to credit, acquisition of assets and properties, rest and Recreation, healthcare, life insurance, and savings and investments. This suggests that the 4K livelihood program is effective in making a positive economic impact on its beneficiaries.

Moreover, the findings before the implementation of the 4K program indicate that the inhabitants of this area, a marginalized group, need initiatives to enhance their economic situation, necessitating government intervention to bolster their livelihoods. This marginalized community maintains strong ties to its traditions, cultural practices, and environmental preservation efforts, which serve as vital resources for survival.

The results obtained from the beneficiaries regarding the satisfaction of basic

**Table 3.** Summary Table of the Contribution to the Economic Condition of 4K Beneficiaries Before and After They Availed the Program

Before		Economic Condition	After	
Mean	Interpretation	Indicators	Mean	Interpretation
1.74	No Capacity	Satisfaction of basic needs	3.79	High Capacity
1.63	No Capacity	Support For Education	3.46	High Capacity
1.28	No Capacity	Access to Credit	3.41	High Capacity
1.32	No Capacity	Acquisition of Assets and Properties	3.07	Average Capacity
1.22	No Capacity	Rest and Recreation	3.26	Average Capacity
1.54	No Capacity	Healthcare and Life Insurance	2.93	Average Capacity
1.24	No Capacity	Savings and Investments	2.79	Average Capacity
1.43	No Capacity	Average Weighted Mean	3.24	Average Capacity

needs, support for education, and access to credit indicate a high capacity, suggesting notable improvements in beneficiaries' lives attributable to the Department of Agriculture's 4K program. Additionally, during the data collection process, respondents were willing to participate in the study, as evidenced by their responses to survey questions and eagerness to provide further information through questionnaires. Mendoza's research (2018) underscores the importance of inclusive development initiatives and emphasizes the pivotal role that community engagement and participation play in enhancing the sustainability of livelihood projects.

The table also highlights that savings and investments received the lowest mean score, indicating room for improvement. However, it suggests that beneficiaries do have the

capability to save and invest. For instance, if they generate extra income from products harvested on the farm, they may opt to sell these surplus goods to bolster their investment funds. According to the beneficiaries, while their savings and investments may not be substantial, they can set aside enough to build a safety net for future emergencies. The assistance provided by the 4K program has notably enhanced beneficiaries' economic conditions, enabling them to weather crises with more stability than before, as they now have a reliable source of income.

#### **4.2 Problem 2. What are the differences in the economic condition of the beneficiaries before and after they availed of the 4K Program?**

This is the frequency of the study focused on five beneficiaries, comprising farmers and weavers, who were selected as respondents. The researchers conducted in-depth interviews with these individuals to gather raw and comprehensive data. The chosen respondents included the president of the 4K beneficiaries (a farmer), the president of the Kalandang weavers, the chairman (also a farmer), and two additional beneficiaries—one farmer and one weaver—who have all benefited from the 4K program. The aim was to explore the disparities in the economic conditions of the beneficiaries before and after their participation in the 4K Program.

**Table 4** The Economic condition of the beneficiaries before they availed the 4K Livelihood program

Indicators	Number of responses	Percentage	Rank
The livelihood in farm was planting only small abaca, sweet potato, cassava, taro and etc. Our livelihood was not enough for my family's needs	5	20.83%	1
Working on other people's farms to earn money; we can call it "inadlaw." I can put it in my mind that if I work now for my own farm, I still can't afford fertilizer or medicine to spray. I'll just be there every day because I'm sure I'll get money.	5	20.83%	2
Our corn and rice fields are very small; we can eat rice if we can harvest our corn, and it is only yearly.	5	20.83%	3
As Indigenous people, our livelihood depends on the forest and on the water but now that we are increasing, it is not enough to rely on the foods in the forest and water because they can no longer support us.	4	16.66%	4
We didn't have materials and equipment like the plow, and if we needed them, we needed to go to other places to borrow them.	4	16.66%	5
Before, we wanted to taste salt, but we didn't have money to buy it and couldn't buy it easily	1	4.16%	6
Overall Total	24	99.97%	

The table depicts the frequency of results regarding the economic condition of the beneficiaries before their enrollment in the Department of Agriculture's 4K program, along with the identified challenges they encountered before participating in the program. These

findings underscore the significant difficulties beneficiaries face before the program's implementation, characterized by shortages in equipment, fertilizers, training, and seedlings, particularly in the realm of farming tools and equipment. The table delineates the economic condition of beneficiaries before the 4K Livelihood Program, followed a breakdown of challenges experienced by these beneficiaries before enrolling in the program. Each challenge is accompanied by the total number of responses, expressed as a percentage, and ranked accordingly.

The overall findings presented in the table indicate that all participants shared a similar livelihood, primarily centered around farming activities such as cultivating small plots of land with crops like abaca, sweet potato, cassava, taro, etc. However, despite their efforts, their income from these activities needed to be increased to meet their families' needs. They possessed small corn and rice fields, but their yield was limited due to the lack of fertilizers and medicines for their crops. Consequently, they could only harvest rice when they managed to yield corn, and even this was an annual occurrence. Overall, the indigenous community members faced significant challenges before availing of the program, relying on dwindling natural resources and needing access to essential farming equipment.

**Table 5.** The economic condition of the 4K beneficiaries after they availed the 4K livelihood program

Indicator	Total number of responses	Percentage	Rank
The 4Ks program really did give a big help; that is what improved our livelihood here. I am very thankful to the government, and I hope they will continue to support us Indigenous people.	5	20%	1
Thank you so much, especially for 4Ks, because you really focused on Indigenous people and educated us on livelihoods to sustain our daily needs. It helped a lot for the livelihood of Higaonon, us the indigenous people.	5	20%	2
When it came to 4Ks, there were buffaloes, materials and equipment such as plows, sprayers, horses, then seeds and fertilizers and garden tools.	5	20%	3
The 4Ks program helped me a lot to develop my knowledge who teaches me how to plan corn and how to take care of it. They also teach me how to apply fertilizer, The Farmer Field School (FFS) educates me on the right method for the crops to grow well.	4	16%	4
The products produced on the farm are not just for consumption but also to be able to sell as long as the farm is doing well.	4	16%	5
The livelihood that I got from the 4Ks program is the machine for fiber, if we use it for commercial purposes it is okay, but it is still expensive If we used it in weaving because it uses crude oil, but it helped to make it easier for us to get the fiber	2	8%	6
Overall total	25	100%	

The overall findings from the table indicate a high level of satisfaction among beneficiaries with the 4K program, with many expressing gratitude for its positive impact on their livelihoods. Beneficiaries noted significant improvements in their economic

conditions after they availed the 4K program and appreciated the government's efforts to alleviate poverty in their communities. The program provided them with a range of essential resources, including livestock such as buffaloes, horses, cows, and chickens, as well as materials and equipment like plows, sprayers, seeds, fertilizers, and garden tools.

Jones and Brown's study (2020) underscores the importance of community capacity building in ensuring livelihood projects' long-term sustainability and resilience. This highlights the significance of empowering communities to effectively manage and maintain the benefits of programs like the 4K initiative, ultimately contributing to their continued economic development and well-being. The products cultivated or grown on the farm serve dual purposes: they are sold and used for personal consumption. According to respondents, the farm is a crucial tool for achieving economic sustainability and expanding product lines to include items for consumption and sale. This diversification of products can lead to economic prosperity within the community and higher incomes for farmers.

### 4.3 Problem 3. What strategies could be proposed to enhance the 4K Livelihood Program?

The 4K Livelihood Program holds promise for significantly improving the quality of life for indigenous communities. However, maximizing its effectiveness for indigenous beneficiaries necessitates a nuanced understanding of their needs and challenges. The program aims to empower marginalized groups to achieve financial stability, emphasizing approaches that equip participants with the knowledge, tools and support systems essential for sustainable long-term success rather than simply providing financial assistance.

Based on the information gathered during the data collection process, the researchers identified potential strategies to improvement strategies for the 4K livelihood program. These strategies are tailored to address indigenous communities' unique circumstances and requirements. By implementing these targeted strategies, the program can better meet the diverse needs of its beneficiaries and foster lasting positive impacts on their livelihoods.

**Table 6** *Table for the Propose strategies*

Identified problem	Proposed Strategies	Activity	Office/ Person Responsible	Expected Output
The livelihood equipment provided by the Department of Agriculture, the machine for fiber, still uses expensive crude oil; they still have to expense money to buy crude oil.	The Department of Agriculture should Provide mechanics on the giving financial assistance during first year of operation	Provide communities the tools they need to choose and create livelihood initiatives that fit their resources, abilities, cultural values and provide mechanics on the giving financial assistance.	Department of agriculture	As a result, beneficiaries will not have a hard time operating the livelihood projects provided to them, as they are being offered financial assistance to cover miscellaneous expenses.

Beneficiaries lack access to the market to attract buyers of local products.	The Department of Agriculture should prioritize capacitating the beneficiaries with skills in marketing their agricultural products.	By providing training and support in marketing strategies, beneficiaries can effectively promote and sell their produce.	Department of Agriculture NGOs, Business sector	Beneficiaries have the opportunity to sell their products in the market, attract more buyers, and increase income.
Due to a lack of money, the beneficiaries lack a savings plan.	Promotion of Financial Literacy	Provide workshops, seminars, or community-based initiatives focused on budgeting, debt management, and the benefits of saving and investing for the future.	Department of Agriculture, financial institution	To enhance beneficiaries' understanding and educate them about the importance of managing their financial resources.
The beneficiaries don't have bank accounts to secure their money.	Tailored Savings Plans	Provide seminars and trainings in the community for beneficiaries to develop tailored savings plans based on their financial goals, income levels, and risk tolerance.	Department of Agriculture	This will enable them to build savings in the bank, ensuring a secure source of income for their families. With these savings, they can prioritize important expenses such as education.

## Conclusion

Based on the results and findings of the study, the researchers have the following conclusion. The Department of Agriculture 4K Program made a significant impact in the lives of indigenous people of selected Local government unit in Southern Philippines. It aids in alleviating poverty thereby helping address the attainment of Sustainable Development Goal No.1: No Poverty. The program helps address SDG number 2: Zero Hunger through satisfaction of the Indigenous people’s basic needs through educating them on proper farming procedures, such as those for cornfields, enabling them to yield more.

The Department of Agriculture's 4K program also helps achieve the third Sustainable Development Goal, which is good health and well-being. Because of the assistance from the 4K program, the program's beneficiaries are able to purchase medication for their

families. These recipients, who are members of Indigenous communities, have particular difficulties in reaching optimal health and wellbeing. Their remote location and limited access to medical resources present challenges. But government programs like the 4K program are essential to closing this gap and enhancing the lives of indigenous peoples.

Through governmental support, indigenous communities can be motivated to work diligently, knowing that their needs, particularly in terms of livelihood, are being addressed. The government must continue providing support and livelihood opportunities to indigenous communities, fostering active participation and social interaction within the Indigenous Peoples (IP) community. The findings of this study assist the government and the Department of Agriculture in evaluating the effectiveness of the programs implemented for the of selected Local government unit in Southern Philippines, and enable them to identify areas for improvement in future programs, not only in specific Local government unit but also in other areas where similar services are provided.

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