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# How Agricultural Culture Change Affects the Lives of Indigenous People in Boeung Thom Community, Kampong Thom Province, Cambodia

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**Abstract:** This study aims to explore how changes in agricultural practices affect the livelihoods and cultural identity of the Kuy indigenous people in Boeung Thom, Kampong Thom province in Cambodia. Using a qualitative research design, data were collected through in-depth, semi-structured interviews from three participants, two of whom were Kuy and one was a Khmer farmer. The results show both positive and negative impacts of agricultural modernization. In addition, it has enhanced food production and availability, thus enhancing food security and economic stability. However, the use of chemicals has led to health problems, and the ever-increasing production costs put a lot of pressure on the financial situation. Cultural developments, for instance, the decline in the use of the Kuy language, show other social changes occurring even as major traditional events are maintained. All the participants of the survey highlighted the need for technical assistance and support to embrace and adapt to the current agricultural practices without compromising on cultural heritage. This study, therefore, provides an understanding of the interaction between modernity and tradition and thus highlights the need for culturally sensitive policies that can help in the promotion of agricultural development as well as the conservation of indigenous culture.

**Keywords:** Agricultural modernization, Indigenous livelihoods, Kuy culture, Food security, Cultural identity, Sustainable farming



## INTRODUCTION

Kampong Thom province has placed the Kuy indigenous people in Sandan district's Kbal Khla commune, where they live alongside forest land, which supports their subsistence economy. The Ministry of Agriculture, Forestry and Fisheries (MAFF) established the Kbal Khla Community Forest in Sandan commune within a 1,275.46-hectare protected area, according to Prakas No. 570. The community forest area existed for sustainable management and utilization along with conservation development preservation of community forests and biodiversity according to its establishing principles. The forest products serve spiritual purposes based on customs and way of life as specified by MAFF (2018). This establishment aligns with the Royal Government of Cambodia's policy to support poverty alleviation. Kuy's economic stability, cultural practices, and landscape have all been heavily impacted by recent shifts from traditional to modern practices.

The study focuses on the following research questions within its two main areas of study:

- This study investigates how alterations in farming practices influence the standard of living among members of the Kbal Khla Indigenous Community.
- The research looks into the effects of modifications on cultural patterns and social processes within the community.

It is crucial to comprehend these impacts on changing agricultural practices because promoting community needs in agricultural activities and developing balanced policies for agricultural probabilities and socio-cultural aspects is essential. Changes in the environment and society have created substantial challenges for all Indigenous people throughout the world; they now face threats to their culture, health, food security, and way of life (Norton-Smith *et al.*, 2016). Ford *et al.* (2020) emphasized the pivotal function of traditional ecological knowledge (TEK) in fortifying the resilience of indigenous communities to ecological shifts. They contended that the integration of TEK with scientific methodologies yielded more efficacious and culturally congruent adaptation strategies. Previous research has extensively investigated the general impacts of agricultural modernization and climate change in Cambodia (Ros *et al.*, 2011), but very little attention has been given to how these changes influence the cultural heritage and native speakers among Indigenous groups such as the Kuy.

This study adopts a qualitative design to explore the experiences and perceptions of indigenous communities regarding agricultural practices and sociocultural transformation. (Kalu, 2017). The primary focus of this qualitative study is the effects of agricultural culture transformation on indigenous people's lives in the Boeung Thom community of Kampong Thom province. Additionally, McGrath *et al.* (2019) explained that qualitative interviews enable researchers to gain detailed data from participants' perspectives and experiences, which helps advance the research. Dunwoodie *et al.* (2023) also found support for the study, which utilized qualitative interviews to gather participant thoughts,

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beliefs, knowledge, reasoning, motivations, and feelings about the topic.

This study made special use of semi-structured in-depth interviews to give the researchers more freedom to ask follow-up questions based on participants' answers in particular. In addition, semi-structured interviews enable both of the two participants to expand the topic area of the interview in greater detail and are structured through a list of open-ended questions of the topic areas the researcher is interested in (Tittle-Ind *et al.*, 2022). In the words of Dejonckheere and Vaughn (2019) the interviewer can also continue a line of questioning that was started or ask the interviewee to expand on their initial response during the semi-structured interview.

The key informants of the study are Kuy people, who identified the participants as Kuy family based on their ancestry, beliefs, and way of life from the past to the present. From among them, the researchers picked three people based on their age and their willingness to respond. Rutakumwa *et al.* (2020) pointed out that participation was voluntary, and respondents allowed the audio recording to be used to help the researcher recall all important points needed for the study.

**Table 1: Participant Demographics**

| Participant code | Gender | Age | Ethnicity | Occupation | Role in community |
|---|---|---|---|---|---|
| P1 | Male | 55 | Kuy | Farmer | Chief of Kbal Khla Forest Community |
| P2 | Male | 49 | Kuy | Farmer | Member of Kbal Khla Forest Community |
| P3 | Male | 73 | Khmer | Farmer | Community member |

With in-person interviews conducted comprehensively in Prey Lang Forest, qualitative research methodologies formed the data collection method of the study. The interviews took place in Khmer because it is the primary language that both researchers and participants use. The results could be inaccurate because qualitative research in multiple languages contains inherent methodological challenges related to translation challenges and data interpretation issues. Through a careful examination of cultural patterns and data interpretation, translation issues remain prominent challenges, according to Squires (2009), for ensuring participants' experiences are accurately depicted. Audio-recorded exchanges became English transcripts and Khmer translations through the expert team members who mastered both English and Khmer languages.

**Table 2: Respondents' views on agriculture changes**

| Themes/Patterns | P1 (55, Kuy) | P2 (49, Kuy) | P3 (73, Khmer) |
|---|---|---|---|
| Positive Changes | - Double-rice crop<br>- More food access<br>- Time for non-agriculture work | - Increased productivity<br>- More food access | - Access to more food (previously only cassava) |
| Negative Changes | - Health impacted by chemicals<br>- Increased costs (labor, machines)<br>- Reduced social cohesion | - Health impact from chemicals<br>- Increased production costs | - Health issues<br>- Increased costs for inputs |
| Social/Cultural Changes | - Loss of Kuy language, Khmer now dominant<br>- Traditional ceremonies still intact | - Loss of language, but traditions like weddings remain | - Loss of language<br>- Still practicing traditions (e.g., Sen Preng, weddings) |
| Agricultural Practices | - Shift from slash-and-burn to other methods due to forest laws.<br>- Experiences with broadcasting rice | - Shift from transplanting to broadcasting<br>- Challenges with irrigation and seeds | - Emphasis on the need for training<br>- Shift from traditional methods |
| Suggestions | - Needs technical training for higher productivity<br>- Wants better input management | - Suggests more training in agriculture<br>- Need help with production inputs | - Suggests technical training<br>- Needs support with input costs |

# RESULTS

The findings of this study indicate that there are similarities and differences in the three participants' perceptions of the impacts of agricultural cultural change on the livelihoods and social relations of the Kuy people in Boeung Thom. The responses were categorized into five primary themes: good changes, negative changes, social and cultural changes, agricultural practices, and suggestions for improvement.

**Positive Changes**

Three participants, P1, P2, and P3, state that changes in agricultural practices have improved people's access to food. P1 noted that the ability to grow rice twice

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a year has greatly improved food availability for the community. It has provided more opportunities to seek employment in sectors away from farming because it can be cultivated twice a year. P2 also supported these points and added that there was an increase in production and more food for his family. While P3 noted the improved food supply, he did not address the shift to non-farm income; rather, he focused on the quality of diet at home, especially when compared to the past when cassava was the main food source. Although the participants did not give priority to non-agricultural economic diversification to the same extent, the observed improvements in productivity suggest that more diverse agricultural practices are developing. Food accessibility is one of the benefits of the change.

**Negative Changes**

The group members expressed universal concern about the side effects of change. All their responses showed that the major issue was the health implications of chemical pesticides and fertilizers. P1, P2, and P3 all noted that the high levels of pesticides and fertilizers have negatively affected their health. P1 pointed out that the effects of chemicals on the health of his community were increasing, while P3 and P2 also agreed with this but did not elaborate much on the long-term effects. Besides health issues, all three participants agreed on the problem of growing production costs. P1 stated that production costs have risen steeply due to the need for machinery to harvest crops, higher labor costs, and the need for more fertilizer. P2 had the same view, stating that the current challenges in agriculture are becoming increasingly complicated to tackle. P3 identified the costs as increasing, noting that although the community had moved away from slash-and-burn farming, the introduction of new technologies such as harvesting machinery and the need for more labor had created a great deal of cost pressure. P1 and P3 also identified a third negative change: the breakdown of social relationships in the community. He pointed out that more people engaged in farming for market exchange decreased the practice of helping one another in the community, as they used to help each other in planting and harvesting.

> *"When we had meat, we ate it and shared it with our neighbors, but now everyone has to weigh his meat to get it," said P3.*

**Social and Cultural Changes**

Social and cultural changes within the community became significant. The three participants observed a significant cultural change, that is, a gradual decrease in the use of the Kuy language, particularly among the elderly. P1 and P2 stated that the Kuy language, which used to be commonly used in the community, is now hardly spoken. P1 remarks that the young people now prefer to use Khmer when communicating with their peers. P3 observed the shift towards Khmer but noted that the community still retains pre-wedding and post-wedding rituals like Sen Preng and Joan Areak.

Although a language shift has occurred, people believe that many cultural traditions have been maintained, thus indicating that even though the language shift is important, the community has been able to keep important cultural rituals alive. This shows that the Kuy people can maintain their cultural identity through adherence to these traditions even with a language change.

**Agricultural Practices**

All participants saw the community shift from traditional farming systems to high-technology farming. The transition was mainly caused by external factors, including the enforcement of the Forestry Law by the Royal Government of Cambodia. P1 and P2 noted the shift from transplanting rice to broadcasting, where seeds are planted directly into the soil without previous seedling cultivation, as a major change in agricultural practices. This change, according to P1, was due to government regulations, environmental changes, and increased market requirements.

This shift, according to P3, is that the community has been doing yearly experimentation with new farming techniques but has struggled to come up with solutions that work at all times due to the issue of seeds and adequate water supply. He also stressed the importance of education and training towards the improvement of farmers' agricultural practices.

All the participants agreed that, although there were difficulties, the community still holds traditional knowledge highly and that it is common for neighbors to help one another with farming. It is generally understood that current agricultural knowledge, especially concerning new seed varieties and farming technologies, is limited by language. All three participants stated that even though there were educational programs, language was a barrier to learning and that there was a need for more training in the Khmer language.

## SUGGESTIONS

To help the community adapt to the changing agricultural environment, the participants collectively recommended enhanced technical training. P1, P2, and P3 agreed that more access to technical information, including information on new farming technologies and better use of inputs, would greatly increase productivity and open up the market to the community. P1 noted that technical training could increase farmers' yields, while P2 suggested the inclusion of more practical courses to increase the community's ability to meet market requirements. P3 also stressed the need for better information on production inputs, especially with the increasing costs.

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## DISCUSSION

The results indicate that the Kuy community has experienced increased productivity and food availability; nevertheless, these benefits are offset by negative impacts of contemporary agricultural systems, including health problems, escalating production expenses, and social disintegration. The evolution away from conventional farming methods within the broader context of external influences such as government guidelines suggests a larger wave of modernization affecting rural areas of Cambodia. The Kuy people show strong commitment to their heritage because several traditional cultural practices were found to still exist among participants.

## CONCLUSION

This paper explores the impacts that changing agricultural practices have on the lives of the Kuy indigenous people in Boeung Thom commune, Kampong Thom province. Current agricultural practices have improved production and food availability; however, they have also brought about several issues, including health problems from the use of chemicals, high production costs, and decreased social interaction. The changes mark the struggle between the processes of modernization and the maintenance of traditional ways of life. These changes include the decrease in usage of the Kuy language, which is in line with other social changes that have taken place in the community.

The results indicate that there is a need to come up with targeted interventions for this community to help it cope with the current agricultural and social transformations. It is important to improve the availability of technical knowledge, practical skills in agriculture, and financial assistance towards inputs to enhance production and resilience. Cultural sensitivity should be practiced in the initiatives to ensure that the process of modernization does not contradict the beliefs of the community. Future work should include extending the research to the observed changes and assessing the impact of policies that aim to ensure the sustainability of agriculture and preserve the indigenous cultural heritage.

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