



## WAYS TO DEVELOP CERTAIN OPTIONS OF SUBSTITUTING FOR TOBACCO PLANTATION FOR TOBACCO FARMERS BY COMMUNITY PARTICIPATION

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### Abstract

This research article aims to examine (1) the process of community participation in reflecting problems related to local tobacco cultivation and (2) approaches for determining alternative measures to substitute tobacco farming for tobacco farmers. A qualitative research methodology was employed. Data were collected through semi-structured in-depth interviews with key informants selected by using purposive sampling, including tobacco farmers, government officials, representatives from civil society, and community leaders. In addition, a participatory training workshop was organized to collaboratively develop alternative measures for substituting tobacco cultivation.

The research results were found as follows; (1) community members reflected several problems related to tobacco cultivation, including rising production costs, declining government quotas for tobacco production, the lack of formal farmer associations, and health problems among farmers resulting from exposure to agricultural chemicals. (2) The proposed alternative measures include promoting integrated organic farming and community enterprises based on the New Theory Agriculture and the Sufficiency Economy Philosophy. The study also encourages collaboration between farmers and private companies in the production and distribution of hemp and cannabis for medical purposes, following the decriminalization policy and the legalization of hemp and cannabis. In addition, community enterprises are encouraged to engage in processing and marketing products derived from hemp and cannabis, which are economically valuable crops with the potential to substitute tobacco cultivation. These approaches highlight the importance of community participation and legal policy reform in supporting sustainable agricultural transition and improving the livelihoods of tobacco farmers.

**Keywords:** tobacco substitution, community participation, tobacco farming, Hemp and Cannabis, decriminalization policy



## Introduction

Tobacco consumption continues to pose a significant global public health and development challenge. According to the World Health Organization (WHO), tobacco use remains responsible for more than 8 million deaths worldwide each year, including approximately 1.3 million deaths caused by exposure to second-hand smoke. Globally, there are about 1.3 billion tobacco users, the majority of whom live in low- and middle-income countries where the burden of tobacco-related diseases is particularly severe (WHO, 2023). Europe recorded the highest per capita consumption, with approximately one-third of men and one-fifth of women identified as smokers (Sirirawong, 2021). In Thailand, adult smoking prevalence in 2017 was 19.1%, and tobacco-related deaths reached about 50,000 in 2018, causing an economic loss of approximately 0.78% of the national GDP (United Nations Development Programme, 2018). In response, Thailand ratified the WHO Framework Convention on Tobacco Control (FCTC) and enacted the Tobacco Products Control Act B.E. 2560 (2017) to reduce consumption and regulate production. However, these measures, while effective in public health protection, have resulted in reduced production quotas and declining incomes among tobacco-growing households. This situation underscores the necessity to identify viable and sustainable livelihood alternatives through community participation and local development mechanisms.

Despite growing interest in alternative crops and enterprises, evidence on how community participation, market assurance, and local institutional support jointly enable farmers' transitions remains limited in Thailand. In Chiang Rai Province, there are 294 households engaged in tobacco farming, of which 262 households are located in Mae Lao District. This concentration makes Mae Lao District a particularly suitable area for examining community-based pathways for transitioning away from tobacco cultivation. This study therefore focuses on tobacco-growing communities in Mae Lao District, Chiang Rai Province (Dong Mada and Pa Ko Dam). Using qualitative methods—in-depth interviews with key stakeholders and field visits to role-model enterprises (e.g., Thai CBG; Doimaka Coffee)—the study explores constraints, incentives, and support mechanisms shaping the adoption of alternative livelihoods.

Accordingly, this article (i) contextualizes the policy and livelihood problem, (ii) analyzes community participation processes and feasible alternatives, and (iii) proposes actionable measures for state, private, and civil-society actors to support just and sustainable transitions for tobacco-growing communities.



## Research Objectives

1. To study process of the community participation in reflecting problems of tobacco plantation in areas of Dongmada sub-district and Pah-kor-dum sub-district, Mae Lao district, Chiangrai province and
2. To study ways of determining optional measures of substituting for tobacco plantation for tobacco farmers in compliance with context of Dongmada sub-district and Pah-kor-dum sub-district, Mae Lao district, Chiangrai province.

## Literature Review

This study draws upon interdisciplinary concepts related to community-based agricultural transition and justice-oriented development. Community-led development theory emphasizes participatory processes that enable local communities to build knowledge, strengthen self-reliance, and collectively address socio-economic challenges (Goodman, 2022). Complementing this perspective, New Theory Agriculture, the Philosophy of Sufficiency Economy, and the integrated farming system provide practical models for sustainable agricultural diversification, efficient resource management, and resilience in rural livelihoods (Taidong Municipal District, 2021; Singh, 2024).

At the economic and institutional level, the Community Enterprise concept highlights cooperative economic activities that enhance local income generation, value-added production, and market access (Mettathamrong et al., 2023). Farmers' adoption of alternative livelihoods can also be explained through Rational Choice Theory, which suggests that individuals select options based on perceived costs and benefits (Fongtanakit, 2022). In addition, SWOT Analysis serves as a strategic tool for identifying internal capacities and external opportunities that influence decision-making and policy planning (Benzaghta, M., 2021).

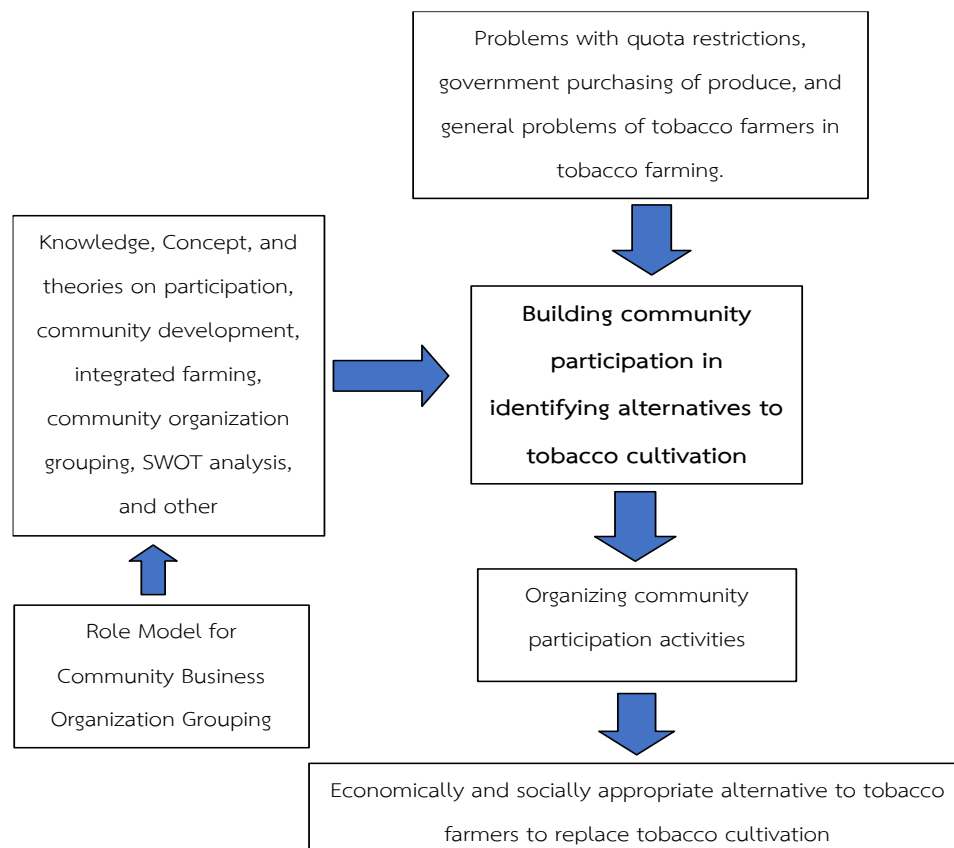
Finally, the Decriminalization concept introduces a legal and policy dimension to agricultural transition. Following Thailand's regulatory reform that removed hemp and cannabis from the narcotics list under controlled conditions (Ministry of Public Health, 2022), these plants have emerged as potential alternative economic crops.

Together, these perspectives inform the study's conceptual framework, which integrates community participation, sustainable agriculture, and legal policy reform. This framework contributes to the body of knowledge by advancing the concept of community-based justice in agricultural transition, explaining how participatory decision-making and regulatory change can support the transition from tobacco cultivation toward more sustainable and equitable rural livelihoods.



## Conceptual Framework

This research is a qualitative research. The researchers have defined the conceptual framework as follows:



**Figure 1** The conceptual framework of the research

## Research Methodology

This study employed a qualitative research design to examine community participation and alternative livelihood options for tobacco farmers. Data were collected through semi-structured in-depth interviews with 25 key informants selected using purposive sampling. The informants comprised three groups: (1) ten tobacco farmers from Dongmada and Pah-kor-dum sub-districts who had cultivated tobacco for at least three years and expressed an interest in transitioning to other livelihoods; (2) five government officials involved in tobacco control policy and implementation with at least three years of relevant experience; and (3) ten civil society representatives or community leaders supporting alternative occupations, including successful local entrepreneurs or former tobacco farmers who had shifted to other livelihoods.



The interview guide was developed from relevant literature and theoretical frameworks. Content validity was assessed by three experts using the Index of Item–Objective Congruence (IOC), and the instrument was revised accordingly. Data credibility was ensured through triangulation by comparing information from multiple sources and methods. The collected data were transcribed, categorized according to research objectives, and analyzed using content analysis with descriptive interpretation.

## Results

### 1. Community Participation in Identifying Problems of Tobacco Cultivation

The findings indicated that community participation played an important role in identifying key challenges affecting tobacco cultivation in Dongmada and Pah-kor-dum sub-districts, Mae Lao district, Chiang Rai province. Through in-depth interviews with stakeholders, farmers and community representatives collectively reflected structural, economic, institutional, and health-related factors contributing to the decline of tobacco farming in the area.

The major problems identified are summarized as follows:

1.1 Rising production costs. Tobacco cultivation requires increasing expenditures for labor, fertilizers, and production equipment, resulting in reduced profitability for farmers.

1.2 Government tobacco control policies. The annual reduction of tobacco planting quotas has significantly decreased farmers' income and made tobacco cultivation less economically viable.

1.3 Strict quality standards from purchasing stations. Farmers must comply with strict production standards set by tobacco leaf purchasing stations. Failure to meet these standards results in lower selling prices.

1.4 Weak local farmer organization. The absence of regular meetings or formal farmer groups limits opportunities for collective problem-solving and knowledge sharing.

1.5 Health and environmental risks. Extensive use of chemical inputs in tobacco cultivation poses significant health risks to farmers and environmental impacts on the community.

In addition, the SWOT analysis revealed internal and external factors influencing farmers' decisions to adopt alternative livelihood options. Internal factors include farmers' limited skills for other occupations and long-term dependence on tobacco farming, while external factors include changing tobacco policies, market conditions, and



increasing support from government agencies and private sectors for alternative agriculture. These factors are summarized in Table 1.

**Table 1** summarizing SWOT analysis in relation to factors influencing the farmers' decisions by taking other optional measures substituting for tobacco plantation

|                             | Positive side                                                                                                                                                                                                                                                                                                                                                                  | Negative side                                                                                                                                                                                                                                                                                    |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <b>S: Strengths</b>                                                                                                                                                                                                                                                                                                                                                            | <b>W: Weaknesses</b>                                                                                                                                                                                                                                                                             |
| <b>Internal environment</b> | <p><b>S.1</b> Farmers possess long-term agricultural experience and available farmland adaptable to alternative crops.</p> <p><b>S.2</b> Some farmers show willingness to shift to alternative livelihoods with potentially higher income.</p> <p><b>S.3</b> Community relationships support cooperation and potential formation of community enterprises.</p>                 | <p><b>W.1</b> Limited knowledge and technical skills for alternative agriculture.</p> <p><b>W.2</b> Long-term dependence on tobacco cultivation reduces motivation to change livelihoods.</p> <p><b>W.3</b> Previous investments in tobacco production equipment discourage crop transition.</p> |
|                             | <b>O: Opportunities</b>                                                                                                                                                                                                                                                                                                                                                        | <b>T: Threats</b>                                                                                                                                                                                                                                                                                |
| <b>External environment</b> | <p><b>O.1</b> Government tobacco control policies and declining profitability of tobacco encourage agricultural transition.</p> <p><b>O.2</b> Government and private sectors provide training and support for integrated farming and hemp and cannabis cultivation.</p> <p><b>O.3</b> Community enterprise promotion policies support value-added agricultural production.</p> | <p><b>T.1</b> Guaranteed purchasing systems and price support for tobacco reduce incentives to switch crops.</p> <p><b>T.2</b> Market uncertainty and initial investment costs for alternative crops.</p> <p><b>T.3</b> Continued demand for tobacco products in the market.</p>                 |



## 2. Alternative Measures for Substituting Tobacco Cultivation

Based on participatory training workshops, field observations, and policy analysis, the study identified four feasible pathways for supporting tobacco farmers in transitioning toward alternative livelihoods.

### 2.1 Integrated Organic Farming

Integrated organic farming was identified as a viable alternative to tobacco cultivation. This approach combines multiple agricultural activities such as crops, livestock, and aquaculture within the same farming system. The integration of these activities improves soil fertility, reduces dependence on chemical inputs, lowers production costs, and increases farmers' income through diversified agricultural outputs. In addition, organic products can achieve higher market value and improve long-term environmental sustainability.

### 2.2 Community Enterprises Based on the Sufficiency Economy

Another important pathway is the establishment of community enterprises in accordance with the Community Enterprise Promotion Act B.E. 2548 (2005). Under this framework, farmer groups can register with the District Agriculture Office to receive training, technological support, financial assistance, and tax privileges. Community enterprises encourage collective resource management, value-added production, and stronger market access while supporting the principles of the New Theory Agriculture and the Sufficiency Economy Philosophy, which emphasize self-reliance and resilience.

### 2.3 Private Sector Partnerships in Hemp and Cannabis Production

Collaboration between farmers and private companies represents another opportunity for livelihood diversification. The study found that companies such as Thai CBG Co., Ltd. provide technical training covering the entire cultivation process from seedling to harvest. Farmers may participate as contract growers or operate independently while selling outputs to the company. This partnership facilitates knowledge transfer, employment opportunities, and investment support. Moreover, Thailand's policy on the decriminalization of hemp and cannabis has reclassified these plants as regulated economic crops under state oversight, thereby creating new agricultural opportunities for rural communities.

### 2.4 Community-Based Processing and Product Development

The study also highlights the importance of expanding into processing and product development through community enterprises. Farmers' groups can produce value-added products derived from hemp and cannabis, such as herbal supplements, food products, cosmetics, and textile materials. By strengthening local supply chains and supporting small-scale rural industries, these initiatives can generate higher and more sustainable income for farmers while contributing to local economic development.



## Discussion

From the research result, the researchers provide discussion in the following two issues:

### 1. Community Participation and Problems of Tobacco Plantation

that institutional support and value chain development are available. This comparison the findings showed that the decline in tobacco cultivation in Dongmada and Pah-kor-dum sub-districts is driven by both internal and external structural factors. Internally, farmers face high production costs, health risks from chemical exposure, and limited collective organization for knowledge exchange and problem-solving. These findings are consistent with Petchphoom et al. (2022), who reported similar economic and health-related pressures among tobacco farmers in northern Thailand and emphasized the importance of knowledge dissemination and collective action in supporting livelihood transition.

From an analytical perspective, the absence of strong farmer organizations reduces opportunities for shared learning and coordinated adaptation to changing market conditions. This supports the concept of community-led development Goodman (2022), which suggests that participatory collaboration enhances local capacity to address structural economic challenges. Without such mechanisms, farmers tend to rely on traditional production systems even when they become economically inefficient.

The findings also align with Nakamatte et al. (2025), who found that alternative crops such as cassava, maize, and rice can generate higher economic returns than tobacco, provided highlights that economic incentives alone are insufficient; institutional arrangements and market access are critical factors enabling successful agricultural transition.

Externally, government tobacco-control policies and declining profitability further contribute to the reduction of tobacco cultivation. Similar patterns were identified by Siripatthanakosol and Rattanarat (2021), who argued that policy changes and market shifts significantly influence farmers' livelihood decisions. These results indicated that agricultural transition occurs not only at the individual level but also within broader policy and economic contexts.

### 2. Optional Measures for Substituting Tobacco Plantation

The study identified four major pathways for supporting farmers' transition to alternative livelihoods: integrated organic farming, community enterprises based on the Sufficiency Economy framework, private sector partnerships in hemp and cannabis production, and community-based product development.



The promotion of integrated organic farming reflects the principles of the **Integrated Farming System** (Singh, 2024), which emphasizes diversified agricultural production to enhance ecological balance and reduce economic risk. In this study, farmers recognized that diversified production systems can reduce dependence on a single commodity crop such as tobacco and increase long-term income stability.

Similarly, the establishment of community enterprises aligns with the **New Theory Agriculture** and the **Sufficiency Economy Philosophy**, which emphasize self-reliance and community resilience. Previous research by Mettathamrong et al. (2023) demonstrates that community enterprises improve local value-added production and strengthen market access. The findings of this study further confirmed that collective organization enables farmers to share resources, develop new skills, and enhance economic resilience.

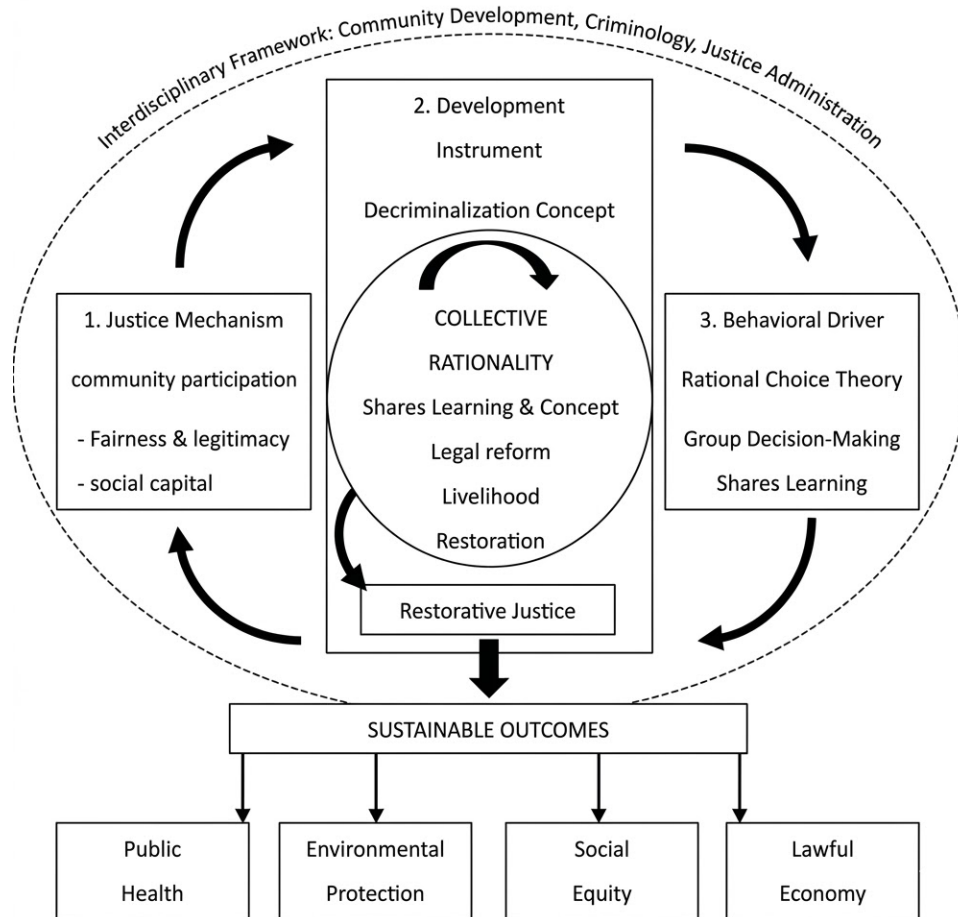
Another important finding concerns partnerships with private companies in hemp and cannabis cultivation. This development reflects Thailand's policy shift under the **Decriminalization Concept** (UNODC, 2007), which reframes previously restricted crops as regulated economic resources. From a theoretical perspective, this institutional change expands farmers' available livelihood options and influences their decision-making processes, consistent with **Rational Choice Theory** (Fongtanakit, 2022). Farmers are more likely to adopt alternative crops when expected economic benefits exceed perceived risks.

Finally, community-based processing and product development illustrate how rural communities can move beyond primary agricultural production toward value-added economic activities. By strengthening local supply chains and promoting small-scale rural industries, these initiatives contribute to sustainable rural development and reduce dependence on traditional tobacco markets.



## Body of Knowledge

### The Paradigm of Community-Based Justice in Agricultural Transition



**Figure 2** The interdisciplinary framework of Community-based Justice in Agricultural Transition and its potential applicability to similar rural transformation contexts

This study advances new interdisciplinary knowledge by merging *community development*, *criminology*, and *justice administration* into a coherent framework of agricultural reform. The first contribution lies in conceptualizing **community participation as a mechanism of justice**, transforming local cooperation into a means of achieving fairness, legitimacy, and social capital. Second, it introduces the **application of the Decriminalization Concept** as a developmental instrument linking legal reform with livelihood restoration. Decriminalization of hemp and cannabis is reframed as a policy of restorative justice that transitions farmers from informal to lawful economies. Third, the study extends *Rational Choice Theory* into a **collective rationality context**, showing that decisions emerge from shared learning and mutual trust rather than isolated economic



calculus. Collectively, these insights establish a new paradigm of **community-based justice in agricultural transition**, integrating public health, environmental protection, and social equity into Thailand's sustainable rural development agenda.

This framework is primarily applicable to rural communities undergoing agricultural transition from traditional cash crops to alternative livelihoods. While derived from tobacco farming communities in Mae Lao District, the framework may be transferable to similar contexts in Thailand or other developing regions with comparable socio-economic and policy conditions.

## Conclusion

This research aimed to develop community-based alternatives for tobacco farmers in Dongmada and Pah-kor-dum sub-districts, Mae Lao District, Chiang Rai Province, through participatory processes that integrate justice, development, and sustainability perspectives. The findings highlight that sustainable agricultural reform requires not only economic measures but also legal and social restructuring through the *Decriminalization Concept*, empowering farmers to shift toward lawful, health-oriented, and environmentally responsible livelihoods aligned with Thailand's rural justice and development policies.

If these policy recommendations are implemented by government agencies in collaboration with local communities and private sector partners, they could strengthen Thailand's grassroots economy over the next 5–10 years. Diversified agriculture and value-added local enterprises may increase farmers' income stability, create rural employment, reduce dependence on tobacco markets, and promote sustainable and inclusive rural development.

## Suggestion

From the results of the research, the researchers has the suggestions as follows:

### 1. Suggestions from the Research

1.1 State agencies should support carrying on occupation in the form of grouping as community enterprise in processing and sale of various products derived from activities e.g., apiculture, coffee plantation, plantation of pesticide-free vegetables, plantation of hemp and cannabis and cooking food by granting privileges to the farmers in various facets.

1.2 State agencies should seek for external private entrepreneur engaging in operation of factory or other optional economic-value plantation e.g., hemp and cannabis, organic farming and integrated agriculture to address the farmers for



employment in the area or support various means for more occupational options to the farmers.

1.3 State agencies should access to study, research and counsel to the farmers in relation to the area context, what area is suitable place for which plantation having economic value substituting for the tobacco plantation.

## 2. The suggestions for future research

This research generated new interdisciplinary knowledge linking *community participation*, *justice-based development*, and *sustainable agricultural transformation*. The key finding is that the transition from tobacco farming to alternative livelihoods can succeed through participatory and restorative justice processes supported by legal reform under the *Decriminalization Concept*. This approach reframes decriminalization as a developmental mechanism that legitimizes new economic activities—such as hemp and cannabis cultivation—while enhancing community empowerment and public health. The results can inform national and local policies promoting fair, sustainable, and lawful agricultural transitions. Future research should assess long-term economic, social, and environmental impacts of decriminalization and justice-oriented agricultural policies to strengthen Thailand's framework for equitable and sustainable rural development.

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