

# Evaluation of the “Grow Everything to Eat and Eat Everything to Cultivate” Project: A Case in Subsamortod Sub-District, Bung Samphan District, Phetchabun Province, Thailand

Sombut Boonleang<sup>1</sup>, Suchinchayan Phetnin<sup>1</sup>, Chayanun Natchaphakpathompob<sup>1</sup>, Nataporn Vichitnak<sup>1</sup>,  
Kanchana Chimma<sup>1</sup>, Thonphon Phomsakha Na Sakhonnakhon<sup>2</sup> & Patarapong Kroeksakul<sup>3</sup>

<sup>1</sup> Faculty of Humanities and Social Sciences, Phetchabun Rajabhat University, Thailand

<sup>2</sup> Institute for Peace Studies, Prince of Songkla University, Hat Yai Campus, Songkhla, Thailand

<sup>3</sup> Faculty of Environmental Culture and Ecotourism, Srinakharinwirot University, Bangkok, Thailand

Correspondence: Sombut Boonleang, Faculty of Humanities and Social Science, Phetchabun Rajabhat University, Phetchabun province, 67000, Thailand. E-mail: sombutdpa@gmail.com

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## Abstract

The “Grow everything to eat and eat everything to cultivate project” in the Subsamortod municipality occurred in 2012 and finished on 30 October 2013. This study attempts to answer the question, “Did the project succeed or not?” This study focuses on an effective way to grow everything one eats and eat everything one cultivates, and was conducted using a qualitative approach for collecting and analyzing data. The project had three criteria to be successful: 1) a villager must have a backyard garden, and in the garden, the plant diversity must be more than 5 species, 2) the village must continue the process, and 3) villagers’ food expenditures must decrease. After the project, we found that 1) the villager had produced enough in the backyard garden to support the family, 2) the village saved about 0.75 USD per day, or 276.5 USD per year, 3) villagers still have their backyard gardens, and 4) the average number of plant species in the backyard garden was 7.687 species per backyard garden. Therefore, the project is sufficient for extension in the village.

**Keywords:** evaluation, grow everything to eat and eat everything to cultivate project, Subsamortod municipal

## 1. Introduction

In 1974, His Majesty King Bhumibol Adulyadej presented the words “Por Yoo Por Kin”, meaning “sufficiency,” as an economic philosophy and guideline for the livelihoods of Thai people (Naipinit et al., 2014; Community Development Department, 2006; Eawsiwong, 2001). The philosophy of the sufficiency economy is an idea that His Majesty the King has presented for the past three decades. It is reflected in Thailand’s situation and livelihood; thus, the king communicates guidance on what is suitable for the Thai people. When Thailand experienced an economic crisis in 1997, His Majesty expanded on the philosophy in December 1997 and in 1998 (Suwanraks, 2000). The philosophy of the plan leads to balance and/or resilience through a sustainable economic system that meets the challenges of global technology changes, globalization, and the direction of world development. A study by Kroeksakul et al. (2012) examined a village that adapted the philosophy of a sufficiency economy to maintain its livelihood, including activities such as planting vegetables for domestic consumption and sale, domesticating animals, saving money through a cooperative society, protecting the environment, and living through moral principles and human ethics.

The “Grow Everything to Eat and Eat Everything to Cultivate” project was developed in the Subsamortod municipality. The concept of the project was to follow a retrospective way of life for a villager, with food production systems in which villagers plant diverse food products to support their family; however, this way of life has faded away. Villagers buy food from the market, and expenditures for food production have increased. Thus, the Subsamortod municipality implemented the project to test the philosophy and concept of the sufficiency economy.

The project occurred in 2012 within the Subsamortod municipality, and the target group of the project was a village’s 4,217 households in a Subsamortod sub-district. They were provided with vegetable seeds and trees to

grow in their backyard gardens. The aim of the project was to encourage the villagers to use their backyard gardens to produce food for their families and decrease food expenditures for the household. The project ran for 1 year and ended on 30 October 2013. We monitored the project until the end and afterwards sought to determine the effectiveness of the “Grow Everything to Eat and Eat Everything to Cultivate” project.

## 2. Literature Reviews

### 2.1 The Concept of a Sufficiency Economy

The keys to development are changing, which has had positive and negative effects (Kroeksakul, 2013). Thailand’s development has impacted the aims of the country because Thailand is, in part, an agricultural country. We propose that the country has become a New Industrial Country (NIC), in which rural people have migrated to the big city, which has led to decreased labor in the agriculture sectors, the labor forces in industrial sectors increasing too fast, and the Thai economy growing too fast. However, in 1997, the country experienced an economic crisis that caused high unemployment (Chaipattana Foundation, 2014).

His Majesty King Bhumibol Adulyadej presented a new theory in 1994, under the philosophy of a sufficiency economy. The philosophy of the sufficiency economy framework (see Figure 1) is composed of three cycles and has two conditions. The three cycles include 1) moderation, 2) reasonableness, and 3) systems of self-immunity (i.e., the ability to cope with life’s uncertainties).

1. *Moderation*: People’s needs must be met by doing neither too little nor too much of something because moderation will cover people’s internal needs. For example, suppose that somebody wants something that is unimportant but costly-how will he afford it? He has many choices, such as taking out a loan or hard work. Yet, moderation will help him to determine whether something that a person wants is important. Moderation allows people to consider whether something is suitable or sufficient, as well as fill their internal personal feelings and plan for protection from inside and outside shocks (Naipinit et al., 2014; Isarangkun & Pootrakool, 2003)

2. *Reasonableness*: People must consider and compare their choices before making decisions. However, before a decision, people must consider information and analyze the factors, as well as carefully anticipate the outcome (The Department of Agriculture Extension, 2007).

3. *Risk Management and Self-Immunitization*: People must prepare for the impact of internal and external factors themselves; for example, they must save money and have insurance so that they can recover from natural disasters. Risk management covers planning and strategies for maintaining one’s life, as well as ensure environmental, cultural, social, and economic protection (Naipinit et al., 2014).

Preparing for the likely impact and changes from various emergencies involves considering the probability of future situations. Naipinit (2014) explains that “the concept of self-immunitization also emphasizes the importance of good risk management strategies in order to best adapt to the uncertainties of life. This advice applies equally to individuals, organizations, and nations. At the same time, these production and consumption processes should also cultivate an individual’s inner resilience toward life’s uncertainties. This process immunizes the consumer, the producer, the seller, and the exporting and importing firms from what Western economists call a ‘down-side risk.’”

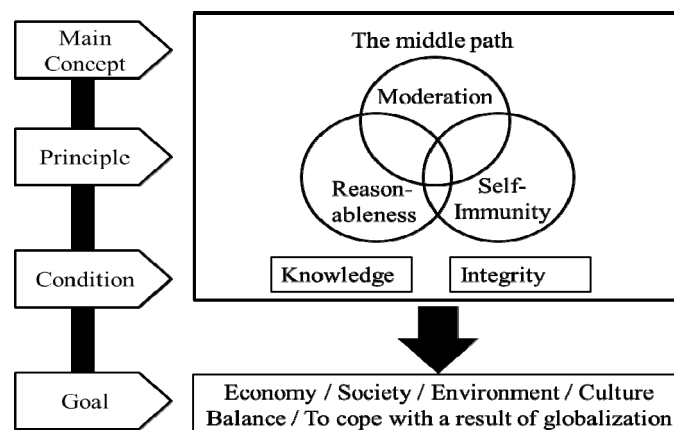


Figure 1. The conceptualization of sufficiency economy

Source: Nation Economics and Social Development Board (2007)

Additionally, the sufficiency economy has three principles for analyzing situations and setting up plans for development and decision making in a project. The principle is supported by two conditions of the philosophy of a sufficiency economy. Calkins (2006) and Wibulswasdi et al. (2010) detailed the two conditions as follows:

1. *Knowledge*: This represents all of the essential knowledge in a field, as well as the wisdom coming from this knowledge, in order to consider how to plan and strategize for life.

2. *Virtue to be promoted*: This refers to one's awareness of honesty, patience, perseverance, and intelligence in leading one's life.

### 2.2 Applied Sufficiency Economy in Thailand

The Office of the National Economic and Social Development Board (2008) reported that the application of the sufficiency economy has 3 levels:

#### 2.2.1 Personal and Household Level

This level includes individuals and families, and covers tacit knowledge, local knowledge, and skills for people to maintain themselves amidst worldwide socioeconomic, cultural, and environmental changes. In particular, this level considers the personal, internal resources of households and explains basic needs at the household level; thus, it involves moderation and self-immunization, as in the conceptualization of the sufficiency economy philosophy.

#### 2.2.2 Community Level

This level is impacted by the personal and household level but increases the distribution to neighbors in the community. Sharing is the idea of caring and production in household level, as well as the protection of public resources. However, the level of self-immunization increases at the community level and empowers members of the community to promote harmony and unity.

#### 2.2.3 National Level

This level consists of strategies from the national government arising from the local to national government. Under the philosophy of a sufficiency economy, planning for development may be impacted and slowed, but the basis of the policy strongly and greatly benefits the livelihood of the villagers, including their natural resources and socioeconomic status.

The “growing everything to eat and eat everything to cultivate” project concentrated on the individual level. The first step of sufficiency economy philosophy is this level, because if a person has enough food or more than enough, there will be sharing and selling in the community market. The research focuses on perception of developer projects and project implementation, so we can present our conclusions with Figure 2.

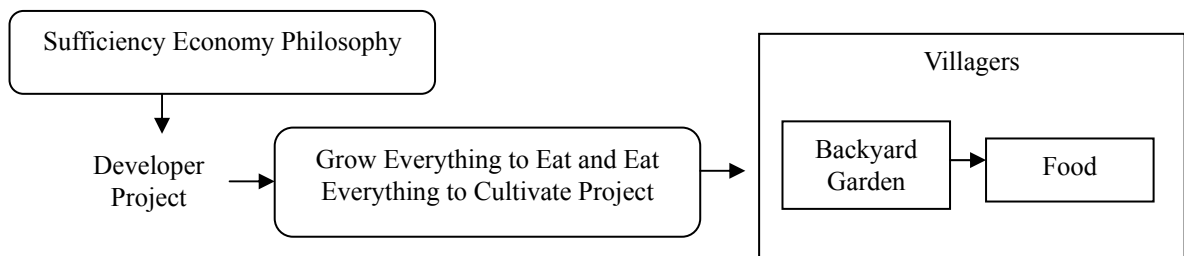


Figure 2. Conceptual framework

### 3. Methodology

This study focuses on the effectiveness of the “grow everything to eat and eat everything to cultivate” project. It was conducted using a qualitative approach method for collecting data and analyzing data.

#### 3.1 Study Site

Subsamortod sub-district is about 85 kilometers away from the central Pechabun province and 100 meters above sea level. The sub-district has an area of about 7.68 square kilometers, is flat land, and almost villagers work a paddy field (present in Figure 1). There are 12 communities: Kor Keaw Samakee, Kor Keaw, Namsubjarean, Doawnimit, Sarnjorw, Subphu, Samortod Nour, Samortod Nour, Bungsampan, Bungsampan, Taladsampan, and Klonyouw.

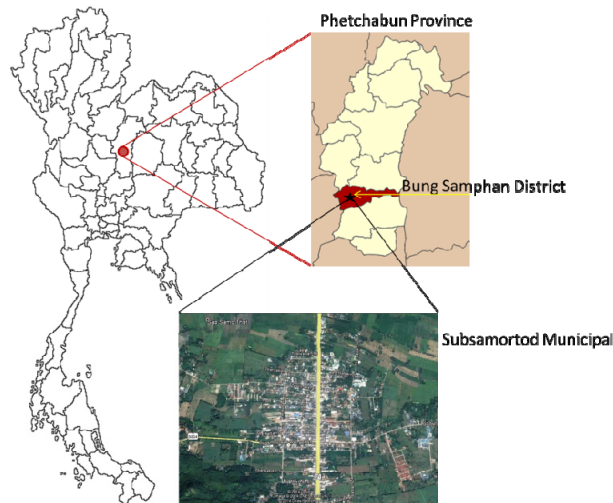


Figure 3. Study Site

### 3.2 Key Informants

In evaluation, the project focuses on 4 groups of key informants; 1) Head of local governance and local officers, because this group is a planner and a worker in the project, 2) Five seniors were key informants in the history of the area and livelihood of villagers in the past, 3) Village headman, who has key information in context of the community and community's situation, and 4) Sixty villagers in 10 communities participating in the project.

### 3.3 Tools for Collecting Data

This study used in-depth interview as the main technique for collecting data. The tools were semi-structured interviews (SSI) (Simaraks & Suphatera, 1987) and plant check-list inventories.

### 3.4 Data Analysis

When the researcher collected data from fieldwork or will be pre-analyzed from interviewee for checking data for cross check information, if information incomplete and/or conflicting were interviewed again before concluding the data. However, when collected data the researcher will be separated topic and classify data for the analysis the content was used triangulation technique for re-check the data with literature reviews.

## 4. Result and Discussion

### 4.1 Perception of Developer Project with the "Growing Everything to Eat and Eat Everything to Cultivate" Project

The project took three years of planning, and it sought to increase the quality of life within the Subsamortod sub-district. The head of the municipality's first aim for the project was to decrease the food expenditure, as the main expenditures of the village were for investments of occupations (40%), food (about 37%), education (20%), and other expenditure such as entertainment (13%).

About 30% villagers spend money on vegetables, and since all villagers are producing it, this inspired the project developers to use this issue for the development of the project. The logic of the project was that "if the village grows plants or has backyard gardens, they will decrease food expenses." The budget was 4,848 USD (approximately 33 Thai Baht per USD).

### 4.2 Purpose of the Project

The project had the 3 objectives:

1. Villagers must have backyard gardens, and in the garden, there must be more than 5 plant species. However, the essential 5 plants must be chili, lemon, holy basil (*Ocimum sanctum* L.), papaya, and local vegetables, because these plants are basic for consumption by villager families. Villagers in the community will like natural food and diversify food consumption (Srichaiwong et al., 2013); therefore, the project encourages plant diversity.
2. The villager should ensure the process continues. The project planned for growing 3 types of plants: vegetables, shrubs, and trees. Nevertheless, because the first type's use is short but types two and three will

require more than 6 months, Srichaiwong et al. (2014) reported to villagers in the community that it will be natural growth and/or local vegetable production.

3. Food expenditure must decrease. Data showed that villagers lost money for food. Simaraks et al. (2006) showed that villagers spend about USD \$7.30 per day and \$227 per month-or about \$2,724 per year-on food. The village will save money if it can produce the food itself. However, the purpose of the project is similar to that of a report from North Carolina State University (1994), which presented a backyard garden as a space overlaying a house that can provide food support for a family. The project is also similar to that of Hunsen and Long (2011), who wrote about villagers in Canada growing organic plants in backyard gardens.

#### 4.3 Operation

Statement of the project;

1. The project was promoted by local owners and members of the municipality in every village in the sub-district, and the village headman.
2. Meetings were held by the villagers and the headman for explaining the aim of the project and gaining consent of the villagers to join the project
3. There was training for the villagers joining the project
4. Plant and vegetable seeds were distributed to villager members' backyard gardens.

#### 4.4 Indicators of the Efficiency of the Project

1. The villagers produced plants for household consumption.
2. Food expenditure was reduced to about 0.5 USD per day or 182.5 USD per year.
3. The villagers had backyard gardens in their households.
4. The backyard gardens had more than 5 plant species in their gardens.

#### 4.5 Content of the Villagers in the Project

Villagers in the Subsamortod sub-district are from 4,217 households, and the main commercial occupations are held by about 70%, about 20% are employees, and the agriculture sector has about 10% of the population. They have an income average of 606 USD per year.

*General backyard garden:* The villagers grew chili, ocimum, banana, papaya, and mango.

*Objective of growing plants in a backyard garden:* Produce was to be for household consumption and sharing with neighbors.

*Sources of seeding:* The villager bought seeds from an agricultural shop in multiple markets.

The backyard garden of the villager is full of organic plants; they were not to use chemical fertilizers or pesticide control, so villagers used manure for soil supplements. Hansen & Long (2011) explain the backyard garden will require the time and labor of the household, and Kroeksakul (2011) reported villagers could produce cleaner food in their farmlands because they were producing for themselves. The project contributed two things to the villages: 1) the backyard gardens increased the diversity of the species of plants (70%), and 2) the villagers have new backyard gardens (30%).

In data collected by the head of the community, which was collected via a checklist sampling 188 members of the project, it was found that the backyard gardens grew an average of 7.697 species of plants. The results of the data collected are presented in Table 1.

The value of the plants in the backyard gardens averaged about USD \$0.75 per day, or \$276.50 per year. However, considering that the goal of the project was to establish a sufficiency economy, the results can only be presented when the villagers consume the products as a family and save money, thus having cleaner food with which to nourish themselves (Office of the National Economic and Social Development Board, 2008). The practice of villagers producing food in backyard gardens will diversify local agriculture (Kroeksakul & Simaraks, 2013). However, the economic benefit of the backyard gardens include decreased food expenditures as well as improved health from growing and eating the products from the backyard garden because all of the products are organic. These gardens also have a positive impact on the environment, which is an indirect impact value of the gardens (Wise, 2014).

Table 1. Results of the project

Community	No. of Backyard gardens	Average species in plot	Time of collection (day/time)					Sampling
			Every Day	2 Day	3 Day	4 Day	Never	
Kor Keaw Samakee	17	7.25	9	4	4	0	0	17
Kor Keaw	15	8	12	2	1	0	0	15
Namsubjarean	13	7	11	2	0	0	0	13
Doawnimit	12	8.5	9	3	0	0	0	12
Sarnjorw	20	7	14	3	3	0	0	20
Subphu	16	7.5	8	7	1	0	0	16
Samortod Nour1	12	8.25	9	3	0	0	0	12
Samortod Nour2	19	7	13	4	1	1	0	19
Bungsampan1	21	8	13	8	0	0	0	21
Bungsampan2	13	8	7	6	0	0	0	13
Taladsampan	16	8.25	8	6	2	0	0	16
Klongyouw	14	7.5	11	1	1	1	0	14
Total	188	92.25	124	49	13	2	0	188
Average	15.666	7.687	10.333	4.083	1.083	0.166	0	15.666

## 5. Conclusion

Evaluating the “Grow everything to eat and eat everything to cultivate” project in the Subsamortod municipality, it is seen that the project has the potential to support the general livelihood of villagers using the sufficiency economy concept. The project distributed seeds and plants to villagers who had joined the project. The result of the project is that 1) the villagers have produced food in their backyard gardens to support their families, 2) they save about 0.75 USD per day, or about 276.5 USD per year, with an over-producing rate of 0.5 USD per day or 182.5 USD per year, 3) villagers still have backyard gardens in their households, and 4) the average backyard garden has 7.687 species per backyard garden. The project related with the sufficiency economy philosophy has impacted the village in that villagers can decrease food expenditure and have clean food for household consumption. Possibly, the municipality has much to do to create a development project for the villagers to increase income from the backyard garden. For example, first step could be made to establish a local market for sharing or exchanging produce from the backyard gardens of villagers, and second step would be making a group for selling over-produced foods cooperatively in the future.

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