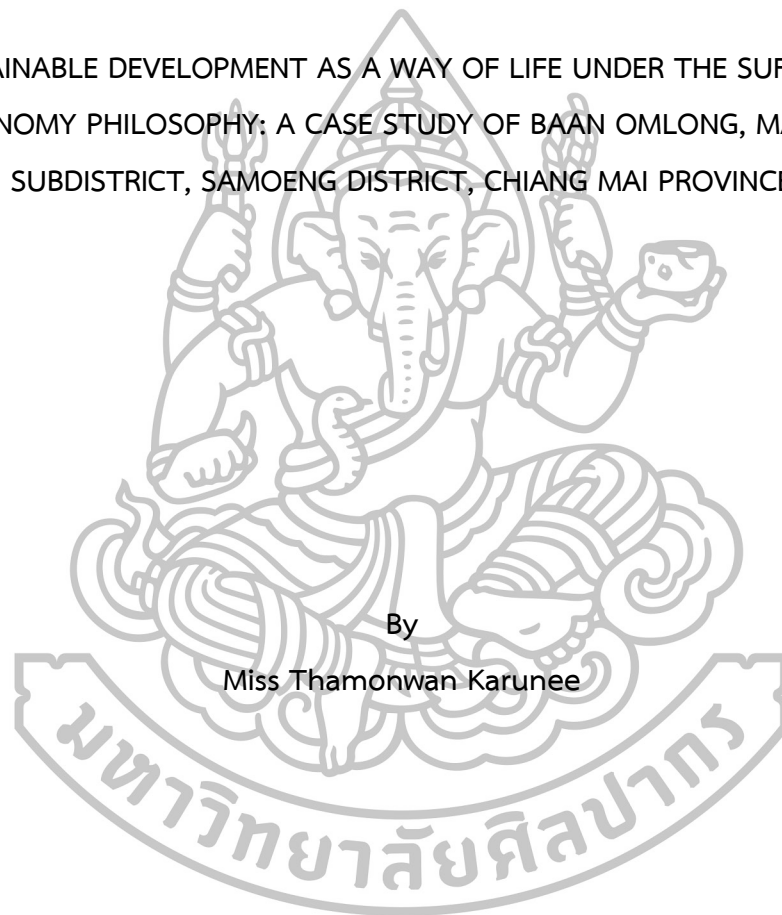




SUSTAINABLE DEVELOPMENT AS A WAY OF LIFE UNDER THE SUFFICIENCY
ECONOMY PHILOSOPHY: A CASE STUDY OF BAAN OMLONG, MAESAB
SUBDISTRICT, SAMOENG DISTRICT, CHIANG MAI PROVINCE



By
Miss Thamonwan Karunee

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree
Master of Business Administration Program in Hotel and Tourism Management

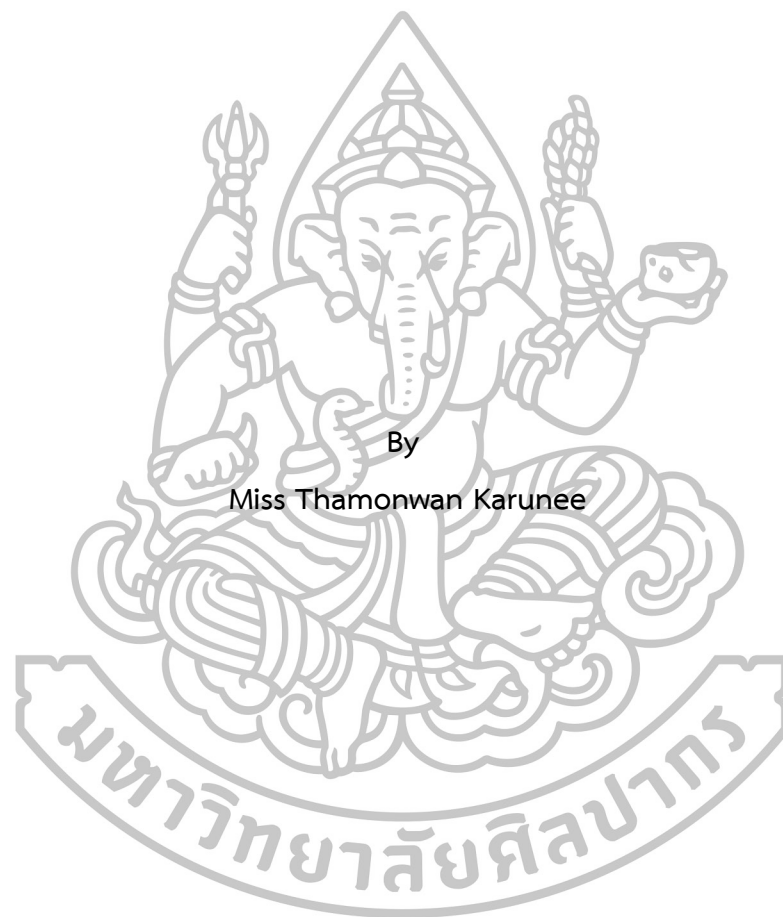
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The Graduate School, Silpakorn University has approved and accredited the Thesis title of “Sustainable Development As A Way Of Life Under The Sufficiency Economy Philosophy: A Case Study Of Baan Omlong, Maesab Subdistrict, Samoeng District, Chiang Mai Province” submitted by Miss Miss Thamonwan Karunee as a partial fulfillment of the requirements for the degree of Master of Business Administration in Hotel and Tourism Management (International Program)

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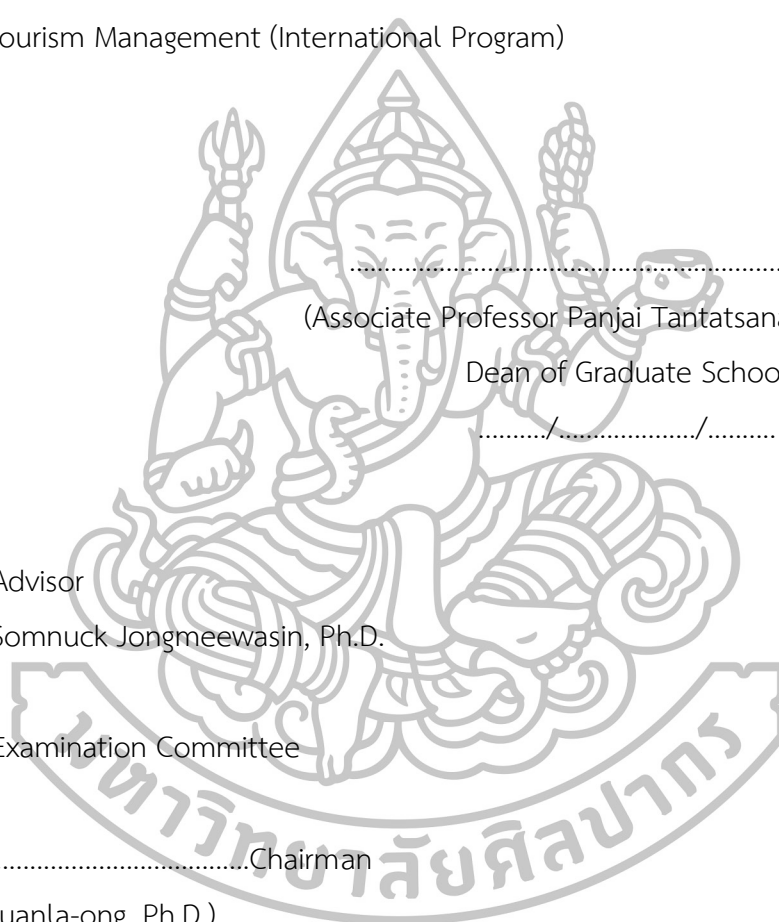
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THAMONWAN KARUNEE: SUSTAINABLE DEVELOPMENT AS A WAY OF LIFE UNDER THE SUFFICIENCY ECONOMY PHILOSOPHY: A CASE STUDY OF BAAN OMLONG, MAESAB SUBDISTRICT, SAMOENG DISTRICT, CHIANG MAI PROVINCE. THESIS ADVISOR : SOMNUCK JONGMEEWASIN, Ph.D. 172 pp.

The purpose of this research is to study about sustainable development under the philosophy of sufficient economy. The boundary of study focuses on Baan Omlong community under Samoeng District in Chiang Mai, as the outstanding area being approached by H.M. King Bhumibol's theory, so-called "BORWORN", a part of the sufficient economy. The research is mainly to find key components of the sustainable development in the community while understanding factors affecting the community achievement in the sustainable way. In addition, the research shall discover factors obstructing the community development at the same time. The research methodology was involved by qualitative research. It was conducted through in-depth interviews using unstructured interviews, including the participant observation, for a period of two months in order to gather efficient insight data.

The review found that home ("Baan" in Thai), temple ("Wat" in Thai), and school ("Rong Rean" in Thai) were three major pillars driving overall Thai society, more or less, to move on. The research discovered that the sufficient economy initiated by H.M. King Bhumibol was able to minimize Baan Omlong's problem in terms of economic, social, and environmental dimensions simultaneously, and create the sustainability to the community in the long run.

The research finally realized that the community should have the guidelines of conservation or tourism management plans which were also formed and presented to the community for lifelong development.

Program of Hotel and Tourism Management Graduate School, Silpakorn University

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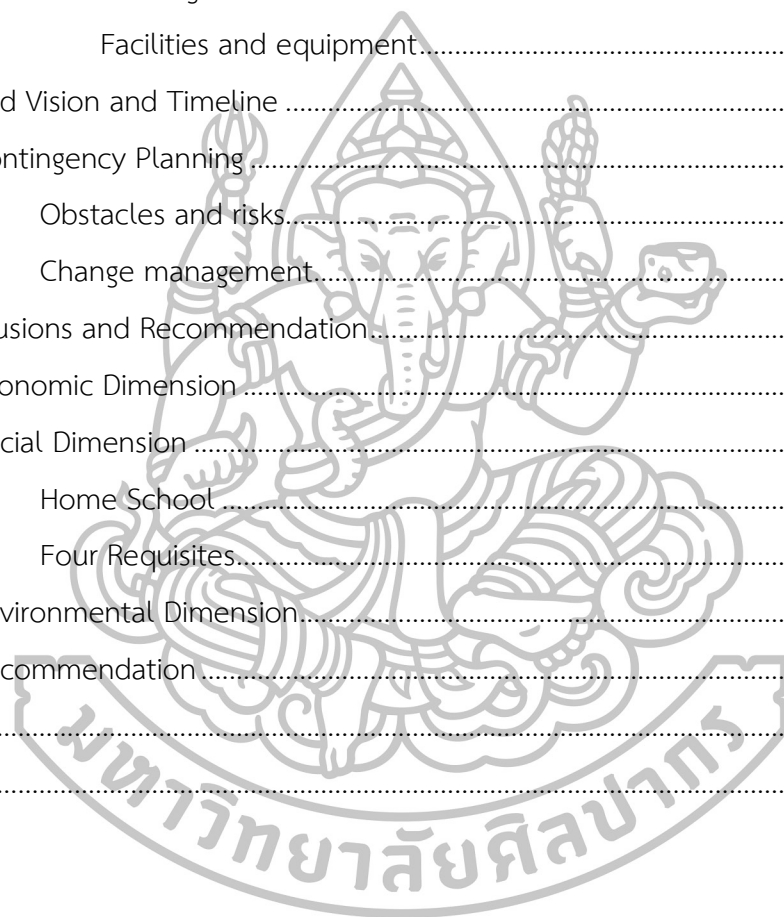
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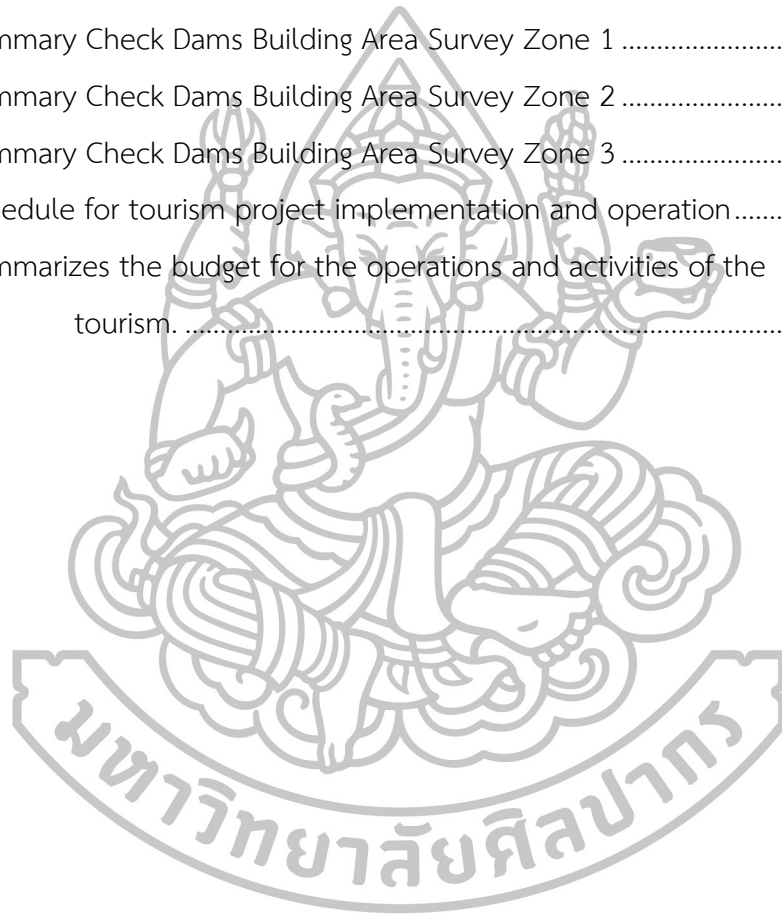
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Chapter 1

Introduction

Statement and Significance of the Problems

The term “sustainable development” was popularized in Our Common Future, a report published by the World Commission on Environment and Development in 1987. Also known as the Brundtland report, Our Common Future included the “classic” definition of sustainable development: “which meets the needs of the present without compromising the ability of future generations to meet their own needs”. Acceptance of the report by the United Nations General Assembly gave the term political salience; and in 1992, leaders set out the principles of sustainable development at the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil. It is generally accepted that sustainable development calls for a convergence between the three pillars of economic development, social equity, and environmental protection. Sustainable development is a visionary development paradigm; and over the past twenty years governments, businesses, and civil society have accepted sustainable development as a guiding principle, made progress on sustainable development metrics, and improved business and NGO participation in the sustainable development process. Yet the concept remains elusive and implementation has proven difficult. Unsustainable trends continue and sustainable development still does not find the political entry points to make the real progress (Drexhage and Murphy, 2012: 2-9).

The sustainable development is intended to emphasize to balance all of three dimensions that are economic growth, social cohesion and environmental sustainability. In common practice in this period, most developed countries remain focused on the economic growth as the primary point with the increasing of manufactures and other industrial processes to enhance productivity, stimulate economic growth and generate associated increases in incomes and employment in order to develop the potential of economic prosperity. But at the same time, there

are a number of environmental issues on industrial development from all of this progress such as water and air pollutants, global climate change, greenhouse effect, etc. In the meantime, most developing countries are also influenced from developed countries in terms of industrial development due to the fact that nowadays, the current societies from various fields all over the world are linked together in order to step into a unity through a system called "Capitalism", which is an economic system characterized by private or corporate ownership of capital goods, by investments that are determined by private decision, and by prices, production, and the distribution of goods which are determined mainly by competition in a free market. This lead economy and technology to make remarkable progress rapidly and consistently. On the other hand, this can lead to excessive consumption requirement and civilization building under the base of capitalism regardless of the environmental consequences that would occur.

In recent years, the word of "Development" has been used extensively; a developing country or less-developed country is a nation with a lower standard of living or underdeveloped industrial base related to other countries (Wikipedia, 2015a). A developed country or industrialized country called for the country has a highly developed economy and advance technological infrastructure relative to other less industrialized nations (Wikipedia, 2015). According to the defined terms, it has commonly been assumed that the development standard is measured from economic growth indicators such as Gross National Product (GNP, Gross Domestic Product (GDP), Real National Income Per Capita, etc. including the industrial development. However, these indicators are not able to entirely indicate the quality of life. Wisanu Ploysri (2004: 7-9) is critical of the standard of development indicator that it is such feasibility of what is known as "development" in the world which is on human being paradigm that has a common belief currently. However, average income indicator and development classification by economic growth are not the key aspects of sustainable development. In fact, sustainable development does not primarily consider the economy but focused on balancing the economy, society and environment along with humans to be core principles of sustainable development.

The economic development in the globalization era is focused on maximizing profits, taking advantages, accelerating economic growth and building the bargaining power of business and politics. Although Thailand is an agricultural country and developing country for a long time, but Thailand has currently also paid attention to the industrial development. At the present time, the government has created a trust of the country by taking a loan from overseas to be used as the capital for country development to cover all of project development, especially infrastructure investment to comply with the world economic situation without boundaries and prepare itself for regional economic integration of ASEAN Economic Community (AEC) by 2015. As the technology is progressing and the market mechanism has grown rapidly both in terms of production and consumption, the structure of society has also been changed. Agricultural society is replaced by the growth of industrial society, while the industrial society has been growing, the agricultural society has been overlooked. The competition in the capitalism causes most farmers to use the modern way of farming which relies on chemicals, pesticides, fertilizers and technological improvements in order to accomplish the maximum productivity with their belief that it would increase more income in accordance with the present economic system. Therefore, the farmers find monoculture and economic crops interesting, but, finally, the farmers must be more responsible about the higher expenses such as labor costs, fertilizer and chemical costs, seeds and shipping costs, as well as, facing the state of expenditure over income, whilst the interest from the massive debt from agriculture investment has increased continuously. Moreover, the aggressive agricultural practices which were previously cleared disturb land and deteriorate soil quality, meanwhile, it causes the ecological damage and negative human health effects due to using of chemicals for production for a long time.

The current economic development in Thailand led to the Thai social change, as a result of debt problems as mentioned above, this causes the collective migration of the farmers or local people to the city to work to earn money in order to redeem their liabilities. In the meantime, the children are supported to study in the city as well to get higher education as their parents do not want them to get the

same problems as they do. However, following problems occurred, for example, some children got a job with the minimum wage from employer's exploitation after graduation, likewise, some graduates did not get a job. The growth of the industrial and technological society causes the people to give undue importance to material interests which are contrary to spiritual concerns. The lifestyle had been changed, the leaving of hometown and desertion of local wisdom seem to be normal issues. The local traditions, cultures and identity began to disappear and be replaced by materialism and consumerism lifestyle. This form of living will raise the capitalism to be more extensive continuously, these effects can result in the same social value creation and ignore the impact or numerous problems that will occur in the long term.

Thoedsak Chaisomporn (2010) commented that currently, Thailand is a centralism country and the decentralization is not distributed explicitly. Therefore, it is quite difficult for each province or community to have its own guidelines to manage themselves as it must be conformed to the primary objective of the country. This is certainly true in the case of education system which is one of the most important issues in Thailand, for example how could we develop the education system management clearly and appropriately with each community? Education management is currently a centralized administration. There is a lack of opportunity for all sectors to involve, consecutive education development, information technology infrastructures to access learning resources. Besides, there are also redundant organizations and lack of coherence with governments and local communities. The curriculum and assessment of learners focused on subjects and teachers as the centre, not learners. Teaching is not linked to real life as it emphasizes on recitation instead of critical thinking, synthetic thinking, and creativity. At the present time, Thai education system is a reductionistic learning which is not complied with current living in the society. Moreover, there is a lack of integration associated with the religion, arts and cultures into the learning process appropriately which can result in low quality of learners, lack of ethics, pride in the arts and Thai wisdom that is particularly affected on existence as well as stability of Thailand. In addition, the budget which is spent on education part is also very high but the

management is not well enough. There is still a social non-equivalence between rich and poor people which can lead to unbalanced and unfair education.

In term of the environmental issue, when capitalism has developed technology more and been used to produce in a large industrial (mass production) that makes use of natural resources continue to make products for many industries in order to meet human needs such as cars, electric appliances, or even clothings, etc. The enormous natural resources and energy have been used in these industries and the development of capitalism in the tremendous growth after World War 2 which are focused on the growth of GDP (Gross Domestic Product) and high profit regardless of the amount of limited natural resources, natural balance and insatiable consumption. As a result, the natural resources and environment were destroyed and could not be restored or operated to be balanced in a short term. This will result in variability of climate and natural disasters like never before such as global warming, the polar ice melted which causes water from the oceans to rise. There are also higher temperatures and epidemics which are more severe in the community. For the agricultural sector, most farmers who rely on the modern way of farming will face various problems, for instance, strawberry cultivation which requires huge areas and use of water for cultivation in large quantities. When the market offers the high price, the farmers will be very interested, therefore, the demand of water causes many communities to face water supply shortage which leads to the conflict in community. Besides, the processes of growing strawberries are using chemicals, fertilizers and pesticides to increase the quality and quantity. As a result, the accumulation of chemical residues in the soil, cause soil erosion through the chemicals flowing into the upstream area.

The researcher is aware of the problems as already mentioned above. Therefore, the researcher is interested in studying the way of life in the community that has special attributes and seems to have the potential to develop to be sustainable in every aspect including their problems solutions and obstacles occurred. The researcher wants to find the answer and focuses on the holistic development process, which covers all aspects of the economy, society and environment of the community which will lead to sustainable development. Baan

Omlong, Moo 2, Maesab Subdistrict, Samoeng District, Chiang Mai Province is the area to do this research. Initially, a majority of people are farmers who rely on the modern way for agriculture which causes them to face many problems that cannot fix at all. Phra Borommathat Doi Pha Som Temple which is close to the locals is aware of the community problems from empirical data collection. Therefore, the prelate has brought the BORWORN or HTS organization (House, Temple, School) principle to use as a form of living. While the community is facing the crisis, the philosophy of sufficiency economy has been used to help the community solve the complex problems and drive community in holistic development. Temple is the community's leader, coordinator and director to support and encourage the community to build a concrete practice to be the empirical results and change the life path by using of decent procedures and tools with their lifestyle and natural balance. The solution needs to be considered with the coherence of each cause of the problem as well as an overview of all dimensions, because these will lead to the problem solution for sustainable development in the future. The researcher also wants to realize the factors which influence the community achievement and obstruct the community development in order to create the community management plans for lifelong development and management.

“Sufficiency Economy” is a philosophy initiated by His Majesty King Bhumibol Adulyadej. Although His Majesty has been promoting self-reliant or sustainable farming since the 1950s, it is generally accepted that the idea of Sufficiency Economy had been brought up in the 1970s during in His Majesty's speeches. Sufficiency Economy is a philosophy based on the fundamental principle of Thai culture. It is a method of development based on moderation, prudence, and social immunity, one that uses knowledge and virtue as guidelines in living. Significantly, there must be intelligence and perseverance which will lead to real happiness in leading one's life (The Chaipattana Foundation, 2015). The concept is based on the Thai culture, life being in moderation, and vigilance which are focused on adequate practice, in order to build their immunity and communities to live constantly under the current globalization and many changes which occur rapidly. But these values have not been continued or applied to use as it should be

because some groups of people who have the power for country administration or can determine management policy still manage the line of capitalism. This causes the driving philosophy of sufficiency economy has succeeded just for some groups in the country, not all. Actually, this philosophy is not against the concept of capitalism, but it is important to understand that the Thailand's topography and society are suitable with this concept or not. More than 4,000 royal-initiated projects have since been launched (Modern Thai Monarchy, 2011) can show that the core philosophy can be achieved, communities can be self-reliant even in times of crisis. Therefore, learning to be self-sufficient will be able to help people to step into the process of creating self-reliance to support themselves and communities in the future. Learning process, ethics and morality can lead to creating partnerships or networks both in and out of community throughout sustainable community development.

Goals and Objectives

1. To study the way of life under the philosophy of sufficiency economy of community.
2. To study the key components of sustainable development in the community.
3. To study the factors influence the community's achievement.
4. To study the factors obstruct the community's development.

Research Questions

This study aims to address the following research questions:

1. What is the way of life under the philosophy of sufficiency economy of community?
2. What are the key components of sustainable development in community?
3. What are the factors influence the community's achievement?
4. What are the factors obstruct the community's development?

Research Methodology

The research methodology was involved by qualitative research. It was conducted through in-depth interviews using unstructured interviews, including the participant observation, for a period of two months in order to gather efficient insight data.

Scope of the Study

1. Scope of geographical study area

Baan Omlong, Moo 2, Maesab Subdistrict, Samoeng District, and Chiang Mai Province.

2. Scope of study context

2.1 To study the general conditions, including the location, the territory and the population.

2.2 To study the way of life under the principle of “BOR WORN” by using of the philosophy of sufficiency economy to drive in sustainable development of community.

2.3 To study the factors influence the community’s achievement and obstruct the community’s development.

3. Scope of data collection and target group

3.1 Community leaders, students in home school and villagers through unstructured interviews.

3.2 Qualitative observation by using the complete participant technique.

Limitations of the Study

It is quite difficult to reach some people who are against the model of sustainable development of community because of their perceptions and bias. Therefore, there are no informants to give information about the reason why they do not want to join in the project.

Hypothesis

The following hypotheses are tested:

1. The components of BOR WORN are key components in terms of community participation.
2. The philosophy of sufficiency economy is the key components to drive the sustainable development of community.

Expected Benefits

1. It can identify the key components of sustainable development of community.
2. To initiate understanding of each component of BOR WORN in terms of sustainable development.
3. To understand the principles of self-reliance in the community efficiently.
4. The model of sustainable development of Baan Omlong community can be applied using as a guideline for management plan in other local communities' development.

Definition of Terms Used in the Research

1. BORWORN

A consistent feature of Thai society has been an organization called "BORWORN" which is an abbreviation of three words; Ban (Home), Wat (Buddhist Temple) and Rongrian (School), and means the collaboration between the three main institutions of Thai society which occurs when people participate together in all the communities' activities to achieve the community's purposes (Ariya Brahmasubha, 2012a: 1-2).

2. Sufficient Economy

The principles of economic development are based on the middle way and vigilance regarding moderation, reasonableness and immunity building including the knowledge using, caution and virtue in planning, decision and any actions. Moderation is sufficiency, not much and not too little and not exploit ourselves and

the others. Reasonableness refers to the rational decision made by considering the factors involved as well as the expected results carefully. Well immune means preparing ourselves to be ready to cope with the effects which may happen from any changes. All these factors could not happen without the knowledge and virtue (Chirayu Issarangkul Na Ayuthaya, 2008).

3. Sustainable Development

This is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987).

4. Local Community

Local community is a group of interacting people sharing an environment. In human communities, intent, belief, resources, preferences, needs, risks, and a number of other conditions may be present and common, affecting the identity of the participants and their degree of cohesiveness (Wikipedia, 2015b).



Chapter 2

Literature Review

This chapter presents the theoretical concepts and related literature. The researcher applies the knowledge gained from the literature review, theory and synthesized them to create a conceptual framework that will be used to study at the end of the chapter. In this study, the researcher has reviewed the literature on various issues as follows:

BORWORN Theory

BORWORN or HTS Organization means the process of collaboration between Home, Temple and School as a community center to manage and create strategic community plans, develop the community, make decisions, solve both individual and social problems and achieve goals for social strengthening. The meaning of “BORWORN” is the same as ‘HTS’: it is an abbreviation from Ban (Home), Wat (Buddhist Temple) and Rongrian (School). The word “BORWORN” in Thai literally means sublime, glorious, superb, exalted, top, best. Thus, BORWORN or HTS Organization is the superb relationship between HTS based spiritual capital and cultural capital which has continued in Thai society from the past to present. BORWORN played an important role in Thai society between the Sukhothai period and the early Chakri dynasty (1782 A.D.). At that time, home, temple and the palace provided education, religion, tradition and culture to the people. Home was the first school for children; they were taught about the people’s way of life, social values, and tradition by parents or other family members. Before the first school was established, the palace acted as a school to provide knowledge and education for children. The Buddhist temple (Wat) was the heart of the community; not only did it gather people together to be engaged in Buddhist activities but all fields of knowledge were provided as well as Thai traditions and culture were sustained during the participation. This means that the good relationship between temple and

community was a source of spiritual capital and this has been the case in Thai society from the past to present. Each institution, home, temple and school, has played a significant role in the community, when they are connected as BORWORN, it represents the socio-economic and cultural dimensions of the community. In addition, it is the principal organization that serves as the community's core to develop social networks, solve the community's problems, create and manage community schemes to achieve the aims of strengthening community. As it has been shown, when all the community's people come and join together to make the BORWORN happen, they do not only perform the activities and achieve their aims but are also willing to be engaged in a learning process which is the result of human behavior (Ariya Brahmasubha, 2012b: 1-2).

The Philosophy of Sufficiency Economy (The Chaipattana Foundation, 2015a)

Although His Majesty King Bhumibol has been promoting self-reliant or sustainable farming since the 1950s, it is generally accepted that the idea of Sufficiency Economy had been brought up in the 1970s during His Majesty's speeches. Sufficiency Economy is a philosophy based on a fundamental principle of Thai culture. It describes a method of the sustainable development by conducting moderation, prudence, and social immunity and by integrating knowledge and virtue as guidelines in living. Significantly, there must be intelligence and perseverance which will lead to finding real happiness in guiding one's life.

His Majesty concerned that modern development which emphasizes only the economic expansion might eventually lead the country into crisis. Therefore, he focuses on the importance of building a 'good and stable foundation' before rushing further progress. This means that instead of putting the emphasis on the expansion of the industrial sector prior to development, the stability of the basic economy should be established first, that is, assuring that the majority of rural people have enough to subsist first. This is a method of the development that stresses the income distribution to build the overall economic foundation and stability of the country before going on to a higher level of development.

On a personal level, the philosophy of sufficiency economy can be adopted to everyone simply by adhering to the middle path. The awareness of virtue and honesty is also essential for people as well as public officials.

The Philosophy of Sufficiency Economy and its Three Pillars (The Chaipattana Foundation, 2015a)

1. Moderation: Sufficiency at a level of not doing something too little or too much at the affordability of oneself or others, for example, producing and consuming at a moderate level.

2. Reasonableness: The appropriate decision which must be made rationally with consideration of the factors involved and careful anticipation of the outcomes that may be occurred from such action.

3. Risk Management: The preparation to cope with the possible impact and changes in various aspects by considering the probability of future situations.

Decisions and activities must be carried out at a sufficient level depending on two conditions:

1. Knowledge, comprising all-round knowledge in the relevant fields and prudence in bringing this knowledge into consideration to understand the relationship among the fields as to integrate them to aid in the planning and ensure carefulness in the operation.

2. Virtue to be highly promoted, as well as comprising the awareness of honesty, patience, perseverance, and intelligence in leading one's life.

The Philosophy of Sufficiency Economy and National Development (The Chaipattana Foundation, 2015a)

His Majesty's Philosophy of Sufficiency Economy emphasizes that the producers and consumers should try to produce or consume within the limit of existing income or resources first. This is the principle in decreasing the dependence and increasing the ability to control the production themselves, thus decreasing the risk from not being able to efficiently control the market system.

Sufficiency Economy does not mean that one must constantly be frugal. A person can indulge himself in luxury once in a while, provided that it works within his capacity to do so. But the majority of the country's population often overspends

beyond their needs. Sufficiency Economy can ensure the ability to establishing economic stability. Fundamentally, Thailand is an agricultural country; therefore, the country's economy should be keyed towards agro-economy and food stability in order to establish a stable economic system. This is an economic system that can help lessen the risks of having an economic instability in the long term.

Sufficiency Economy can be applied to all levels, branches, and sectors of the economy. It is not necessarily applied to only agricultural or rural sectors because the core of Sufficient Economy, which aims to integrate the simple principles of emphasizing moderation in performance, reasonableness, and creating immunity for oneself and society, can actually be applied to any financial status, real estate, and even the international trade and investment sectors.

The Philosophy of Sufficiency Economy as Life Guidance (The Chaipattana Foundation, 2015a)

His Majesty the King has an in-depth comprehension of Thai society. Thus, in granting initiatives or delivering advices, he would also take into consideration of the people's way of life and social norms to avoid internal conflicts that may obstruct the implementation.

How to lead a life in accordance with the Philosophy of Sufficiency Economy:

1. Adhere to economizing by cutting down expenses in all aspects and forego extravagances in balancing one's life.
2. Adhere to pursuing one's occupation with decorum and honesty.
3. Stop contending for beneficial gains and using harsh methods in commercial competition.
4. Never cease to find a way to escape hardship. On the other hand, attempt to gain knowledge in order to increase one's income to the point of sufficiency.
5. Leading one's life by following the good path, avoiding bad behaviors, and adhering to religious principles.

Udomporm Amorntham (1994) stated that the meaning of "sufficient economy" are profound as follows:

“Sufficiency Economy” means the economy can hold various lifts itself (relative self-sufficiency), not to be in trouble. Building its own economic base to be well first and if it is well enough to be self-reliant, it can further create the prosperity and a higher economic status.

“Sufficiency Economy” means many things are linked together to create a balance. This suggests that Sufficiency Economy does not mean to be isolated from anyone, or having no trading, no exporting, no productivity for others and macroeconomic but sufficiency means at least seven things provided as follows:

1. Suffice for all people and all families.
2. Sufficient mind, love and caring people. Human who are not satisfied with what they have, are likely to not being able to love anyone and destroy others.
3. Sufficient environment, conservation and enhancement of the environment can make sustenance such as integrated farming which can gain food, preserve environment and make more money.
4. Sufficient and strong community, the combination means a strong community is able to solve any problems such as social, poverty or environmental problems.
5. Learning together to practice and get along continuously.
6. Based on sufficient culture, culture refers to the lives of people in the community and their relation with the diverse environment. So the economy should be related and developed according to the basis of the culture in order to create stability.
7. The stable economy will enhance the sanity.

Apichai Phanthasen (2006: 8-11) indicated that “Sufficiency Economy” can be called among the other names such as balanced economy, base economy, integrated economy, moral economy or moderate economy. Balance means normal and enduring which links all of dimensions namely economic, mind, social, cultural and environmental. Some groups of people use the word of “economy” to get advantages in separated feature and that destroys the equilibrium and will be in crisis.

The philosophy of sufficiency economy can be classified into five parts as follows:

1. Conceptual Framework guiding the existence and behaving in a way that should follow the traditional Thai lifestyle. This can be applied at any time. Since a systematic view of the world is changing all the time, thus with awareness in saving from disaster and crisis to stability and sustainability of development.

2. Features sufficient economy can be applied to their action at all levels with an emphasis on moderate practical ways and development stages.

3. Definition sufficiency must include three features simultaneously as follows:

3.1 Modesty means the fit is not too much and too little, not to exploit oneself and others.

3.2 Rationality refers to the decision on the level of self-sufficiency that must be made reasonable by carefully considering the factors involved and the expected results that may occur due to the action.

3.3 Good immunity means to be ready to accept the impact and any changes which may occur with regard to the possibility of situations which are expected to happen sooner or later in a long term.

4. Conditions the decisions and activities must be made on a level of sufficiency but strongly requires both knowledge and ethics.

4.1 Knowledge conditions consist of academic knowledge. The various types of knowledge are linked together and being used in planning and discreet execution.

4.2 Moral conditions to strengthen the awareness of morality, honesty, patience, wisdom, perseverance, not greedy and stingy.

5. Guideline / Expected Results the using of sufficiency economy philosophy is applied in which a balanced and sustainable development can be constructed to be prepared to cope with any changes in economic, social, environmental, knowledge and technology development.

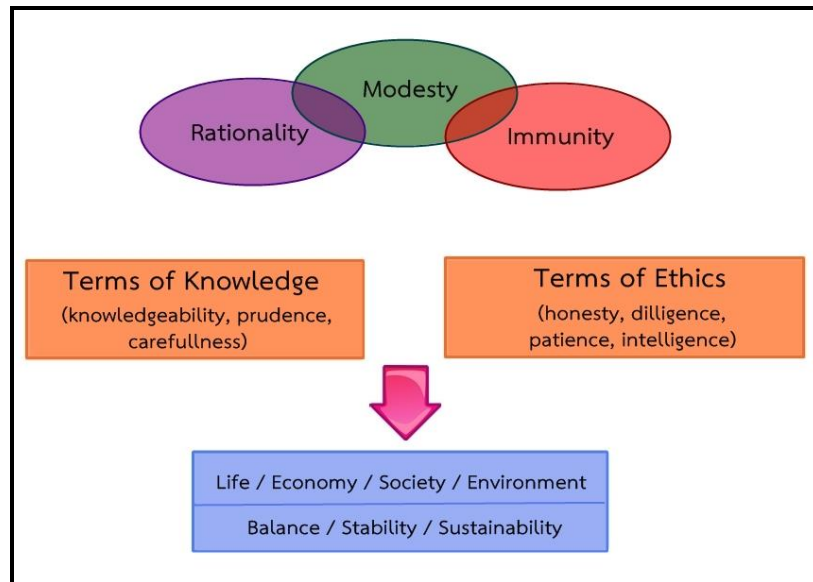


Figure 1 Model of Sufficiency Economy Philosophy

Source: Sarawut Sutheerawong, **Model of Sufficiency Economy Philosophy**, accessed November 5, 2015, available from <http://www.krusarawut.net/>

Seri Phongphit (2007) stated that the sufficiency economy consists of four components as follows:

1. There is a real political will at all levels, from national to local levels, from the government to Subdistrict Administrative Organization (SAO), from small political parties to any peoples' organizations which participate in public politics. Politicians, development policies and decisions at various levels are required.

- 1.1 To make the sufficiency economy as the national agenda or the "heart" of the national development strategy. Do not make people understand that the sufficiency economy is only suitable for poor rural residents. But it is the development methodology that can be applied at all levels and in all sectors.

- 1.2 The development policy can be practical without being the extreme pragmatism that directly focuses on the results (output) but ignoring the process.

- 1.3 A policy of decentralization and governance is being paid attention and should not be confused with a domineering patronage system. Instead of that, it is encouraging independence and self-reliance of the locals and

communities. It is not a subsystem branching from a larger system but the large system as a whole caused by the subsystem.

1.4 Unite the people of the nation as one to achieve the same purpose about serious problems resolutions which need to be sorted out by using the principle, reasons and academic along with the study and practices of knowledge and wisdom. All of the parties are encouraged to be involved in the strategic development of all economic levels (participation), then specify the roles and responsibilities of all parties to proceed the economic reality (organization).

2. The communities across the country have learning process and development strategy of their own. It is meant to build opportunities and create an appropriate learning environment for the people all over the country. It is not the lack of resources, labors or money, but the lack of intellectual capital. If the community has learning, the community will be strong due to:

2.1 Put their best attempt and determination in being self-reliant according to decentralization, frequently depending on the central government organization is not a reasonable option. So they should out of way to be self-reliant, thoughtfully manage their own lives, find rich resources in their local areas, integrating local wisdom capital, social and cultural capital into solving problems and be self-sufficient.

2.2 Refuse to use connection due to hierarchical culture but readily enter the era of using knowledge and logic, which is expected to be the new mindset for local people. The positive result proves that people who know their origin would know the better ways to improve themselves based on the unique advantage that they value. They are likely to conduct logical thinking into reasoning their opinions and working procedure. The self-known realization and having knowledge will intrigue them to learn not to imitate what others originally have and they don't.

2.3 Change thinking system from reductionism thinking into associative integrated thinking and management integration (synergy).

2.4 Participate to create a self-reliant local economy instead of finding for the capital budget. Communities learn, use knowledge to build the community economic system.

Immune system is the key to economic self-sufficiency. Because the interaction between many activities could link to the cluster and caused the synergy that yielded more, and may be multiplied. Many projects and activities came out from research surveys in the community also known as People Research and Development (PR & D). Well model scheme and learning process of community will lead to the stability of local economic system which is well immune of community.

The Royal Initiative for Development of Farmers Self-Reliance (The Chaipattana Foundation, 2015b)

The Royal Initiatives of the community development primarily focuses on building a self-reliant community by its people. Every project and activity initiated in Thailand has a common goal; to empower the people to sustain their own community. In order to advance career specialization and local agriculture to promote stability, it is suggested that literally applying the Royal Initiatives will bring the community together and yield self-reliance. Thus, the self-reliant community couldn't be possible without following His Majesty's Royal Initiatives that have been introduced to Thai agriculturists.

Procedure:

1. The King advises that to be able to support oneself, it's critical to work with passion and desire in a field great interest. Therefore, refuse to ask people to do things they aren't excited about.
2. The core of self-reliance is for people to try their best to stand strong by themselves and struggle to find ways to support themselves as much as possible without seeking assistance from others unless it's necessary.
3. The King emphasizes that the people's participation is of utmost importance to the development as outlined by the Royal Initiatives since the people of the community will play a crucial role in architecting a self-reliant community.
4. Employing principles of democracy while practicing the procedure is another crucial element as emphasized by the King. More than just words, the King supports this by taking action. It's obvious when the King visits people in rural areas and knows the problems people encounter and listens to his staff as well as

academics for suggestions. Even when the officers have differing opinions from the king, he kindly accepts their input and is willing to compromise within the project.

5. The royal project is being carried out while paying special attention to the community's condition in every aspect; environment, geography, culture and traditions. Since he realizes that the immediate change is likely to impact local values, familiarity and authentic lives of its people.

6. One of His Majesty's initiatives expresses his idea of strengthening the community by forming strong foundations that are essential for production; this will lend itself to long term self-reliance and development. The most important resource for this foundation is water. Water is the main resource that nurtures farming products all year. By having their own farming resources, the people can generate their own food supply within the community. When the community is flush with water resources and can produce their own food, the other important cornerstone is transportation and accessibility that will allow the community to connect with other societies. The strategy is termed "the inner explosion" and is clearly explained by the king.

7. To fulfill the essential needs of the locals which is knowledge related to the related fields, the King suggests employing the proper technology and equipment. Furthermore, the locals can be inspired by having successful role models who assimilate their lives to benefit the economy and their own conditions. He expects these role models to be publicized throughout the country.

8. The King will employ modern technology that will sufficiently meet the locals needs. The introduction of new technology shall be taught systematically and continually. The main goal is to allow them to adopt the new and appropriate technology to their farming practices and become truly successful.

The King uses various methods in order to introduce locals to introduce new ideas for a sustainable economy. The methods are described as follows:

1. Using the people's participation to solve the communities pressing problems. This cooperation promotes a strong base that will further progress self-reliant development. One clear example of promoting collaboration is by setting up a cooperative. The King encourages the communities that he visits and starts the

royal project to establish a cooperative. Having a cooperative means that locals have enough power to solve the common problems and together boost their economy while keeping expenses down. Many of the cooperatives under the royal projects have been succeeded. For example, Hub Kra Pong cooperative which performs organic vegetable farming for their community.

2. Another way of motivating people to become interested in building a sufficient economy for themselves is by having a good leader as someone they can look up to. To be a good leader, he or she must govern the community with virtue, generosity and have a strong desire to maintain their homeland. With the Thai structure that values a hierarchical system, a leader who has a good economy is likely to support the community and empower people in poverty to work on their own and support their family. As the King says “.....To work proficiently; everyone must put all of their intentions, effort and patience into making it happen while keeping a good relationship amongst the community with virtue, harmony and honesty to build stability and bring the benefits back to the whole community....”

3. To promote a self-reliant community, it must take time and be done step by step. The most important factor is developing a nourishing food supply within the community before taking bigger steps in developing other aspects such as expanding productivity. The King also suggests that the locals need to have knowledge in marketing and learn simple business accounting to protect their own interests.

Community Economy

Chatthip Nartsupha (2001: 39-41) summarizes that at the global level, the concept of local community is brought up by two important leaders. The first person is Mahatma Gandhi. He has proposed two important concepts that help support the community, Swadeshi and Swaraj which are of Sanskrit language. These concepts focus on domestic utilization, for example, we should purchase domestic products, and support the domestic market more than international market. Swaraj suggested that village community is republic in itself and should have autonomy. In Russia, the idea of community economy is a concept that flourished before the use of

centralized planning of Bolshevik party in 1927. The concept leader is A.V. Chayanov (1888-1939), he has written many books and articles about Chayanov's theory, which is part of the concept of the important political party in Russia, as known as Social Revolutionary (SR). After the revolution in 1917, there was an establishment of a The Constituent Assembly, SR party was elected the most votes. But The Constituent Assembly was being subverted, SR party was destroyed by Bolshevik party by the coup authority, SR party was dispelled by military. However, SR party has been destroyed, but the concept of farmers' community still exists in Russia, especially in farmers research institution under the leadership of Chayanov until 1927. Since then the Chayanov's concept was considered to be small capitalism and had just been revived in 1987 after Russia had converted from communism. There are also ideas against the capitalism namely cooperative concept is Robert Owen (1771-1858), Rochdale Pioneers which is the leader to establish the first cooperative in England in 1844 and Wilhelm Raiffeizen (1818-1888).

Another economist who seeks to entitle the national economy with the concept of local economy is Frederik List, 1789-1846, who is as important as Adam Smith (1723-1790) and Karl Marx (1818-1883), who suggested the concept of cultural economy or national economy. But he suggested it as to apply to a whole national economy instead of community economy because small and big economy should be linked together by building the big community from small community, from families to local communities and to become national economy.

In Thailand, Prawet Wasi (1999) who was the first to use the term of "Cultural Economy", explained that cultural economy is the type of economy based on the strength of itself, another name is "Primary Economy" or "Self-reliance Economy". The appropriate match should be the self-reliant economy because self-reliance is a cornerstone of Buddhism. It provides strength, sustainability, independence, and immunity. The foundation of each society is culture because unique culture is the strength point of the country. Cultural economy is related to family, community, culture and environment which is an integrated economy and connected to life, mind, society and environment. It is a balanced economy, moral economy or sufficient economy.

Wichitwong Na Pompetch (2003: 191-193) stated that community economy is a production system, an exchange and a distribution towards community that is consistent with life, economic, society and culture under the conditions of history, geography, natural resources and environment. Community economic system is a non-capitalist system that supports the capital owners to gain the maximum benefits but it is also not an economy which is controlled by the government. Community economy is managed by the member of community. It aims to achieve a sufficiency, fairness and peace in the community. Community economy can be carried out under the capitalism economic which is the main economic system of the country and has enough potential to compete with the private sector in the shared product market. Meanwhile, there is a protection of capitalism economy dominated in rural areas. This is the collaboration between producers and consumers in the economic implementation in the form of a cooperative.

For the government, it has an important role in supporting the community economy, especially from research and development in science and technology in order to produce various types of products with high quality and standards. Moreover, it provides the cost of capital in production to increase their products more value to be able to compete in the free market. Using of cooperative system is a way for developing the new community economic development, progressive in modern world and can stand on their own without relying upon external helps such as the government assistance, private business or foreign organizations' support. This lifestyle is a demand of economic development of Thailand because it is a way to eliminate the weakness of economic development even it is in the distribution of wealth, technological self-reliance, natural resources and environment conservation and others social problems such as slums, crime and migration to seek job and money. Also, this lifestyle can approach the poverty alleviation effectively of the best.

Natural Resources Management

Somphan Techa-athik (2001: 62-63) indicated that the concept and definition of natural resource management is the management of land, water,

forests, minerals, etc. which appertain to the country both their own and the public taking ownership by farmers and community as well as being involved with the government to maintain, protect, conserve, rehabilitate and develop natural resources. However, the sustainable agriculture and natural resource management may be integrated and supported with each other which means that the sustainable agriculture has been managed by farmers but does not cover all the activities and characteristics of the network integration. And if there is a well management of natural resources, then it would be sustainable agriculture, thus, only individual farmer may not be able to build sustainable agricultural activities in the fields without having other factors provided.

Wasin Inkhatanakul (2005a) has defined the meaning that “The management of natural resources as a means to continue to provide resources to facilitate effective human use forever without shortage any issues” with the concept of natural resources management as follows:

1. One of the major objectives of natural resources management is the way to prepare limited resources to meet human needs and sustain it in a long term. In particular, the factors are lent for survival, convenience, life safety and quality of human life. The appropriate natural resources management must be in accordance with sustainable development.

2. In addition to prepare the limited resources to meet the needs of humans. Proper natural resources management must strengthen the productivity of natural resources, namely the use of renewable natural resources must regard of the ability, amount and the rate of renewable natural resources, without the cost of resources to be utilized.

3. Natural resource management covers operations to control waste and environmental pollution. The waste of natural resources causes depletion in available sources and if there is waste of natural resources process, will affect the abundance and quality of natural resources. Besides, the environmental pollution is also important factor that impacts directly on the quality of human life.

4. The natural resource management is an application of natural conservation principle. Then, it needs to be developed, improved the natural

resources using in order to remain overall abundant and still be sustainably yielded adequate for the needs of human.

5. What could not be avoided in natural resource management is a part of the changes in type, quantity, proportion, distribution and quality of natural resources composition. Therefore, there is a need to give priority to such changes by trying to maintain a balance of all elements.

6. In any action on the environment, we need to focus on the quality of the environment and the quality of human life and must take into an account social factors along with the use of natural resources. In particular, we need to develop the education, economy, society and culture in order to improve the quality of life and environment.

Somphan Techa-athik (2001: 62-63) indicated that the natural resources using management can be analyzed in the broad view. There are four important characteristics to manage as follows:

1. Before using any kind of natural resource, it must be configured its utility effectiveness. There is a classification model on how to use natural resources efficiently into 7 types: Recycle, Reuse, Reclaim, Recover, Repair, Reduce and Reject. The model determination in using of each type of natural resources needs to be considered carefully.

2. In the process of natural resources as raw material in the producing goods and services. We need to focus on the worth utilization using and regard to the damage and effect chain that may occur in other types of resources. There is always a need to determine measures for prevention and monitor effectively.

3. During the use of natural resources by each of them. There is a need to focus on prevention solutions of waste such as the application of other natural resources to be applied as renewable resources, research to explore other types of artificial things, etc.

4. To promote knowledge and awareness to the public about the conservation, management and utilization of natural resources in all forms and levels. Taking into account of the quality of life and quality of the environment is the most important. This can be taught and applied with the whole educational system

from infrastructure to external related network, published in various forms of media, technological developments related to the utilization of natural resources, etc.

Wasin Inkapattanakul (2005b) defined that the objective of the integrated natural resource management is to meet the needs of human and remain sustainably. The benefits are distributed equally and not cause any loss or problem. The integrated natural resources management requires using the conservation principles collectively, assembled with the use of natural resources and environment synchronized with the basic principle are as follows:

1. To determine the appropriate pattern of utilization with regard to conservation principles, namely natural resources utilization should be reasonable and safe, reducing waste at all stages of the use. The utilization of natural resources must be flexible with regard to the advantages and disadvantages of the use.

2. The status of each type of natural resources is very different in terms of the amount and distribution. Therefore, it needs to increase the ability of natural resources using to be utilized most effectively. We need to consider the status of natural resources on overall status in the country.

3. The result of the use of natural resources without effective planning is the degradation of natural resources. The integrated natural resources management is necessary to define the rehabilitation and develop the natural resources to be in completed status. Moreover, it is also development the quality of environment to be better.

4. The important objectives or goals of integrated natural resource management are to enhance the quality of life and quality of the environment holistically. So, the integrated natural resources management should be covered to elevate the status of the economy, society, politics, education, culture of the people. However, the principles and procedures of each area will be different. We need to pay attention at the details of the targeted group in each area.

Sustainable Development

Concept of Sustainable Development

The meaning of sustainable development can be classified into several aspects. Meadows et al. (1972) summarized that sustainable development is a

development that has been possible in the process in order to provide ecological and economic security. Meanwhile, Caring for the Earth proves that sustainable development is the improving of human life while living within the carrying capacity of supporting ecosystem (Mitchell, 1996). Our Common Future or Brundtland Commission explained that sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Blowers, 1993). IUCN et al. (1991) described that sustainable development is the development of natural resources to meet present human needs in a way that does not harm biological system, and considers the needs of future generations as well. United Nations Environment Programme (UNEP) defined that sustainable development is development that does not contribute to the status of the ecology, economics and society must be destroyed or degraded quality (Wasin Ingkhapattanakul, 2005c).

The concept of the Dhamma Pitaka (P. A. Payutto, 1996) defined the heart of sustainable development as it is composed of words which, taken together, matching two pairs are the development and the environment, the economy and the ecology. The economic prosperity should be included under the terms of the environment conservation means that the development or economic growth must progress without damaging the environment. This sustainable development is integrated developments which make it to be a holistic means that the elements are concerned, coordinated and balanced feather. To be achieved in development, the human need to be ethical, as nowadays it is a consumerist society which faced social problems and more, as well as environmental issues. Therefore, we need to carry the morality to solve the problems seriously by human development led by education as a guidance. When the morality and education of the people are developed, it will bright up to the real morality of satisfaction and true happiness.

The process of sustainable development is divided into two parts (P. A. Payutto, 1996):

1. Human Development which needs to be developed to complete the three aspects.

1.1 Behavior and way of life as well as making a living which is the appearance of the solution.

1.2 Mind such as moral development, mind stability and healthy mind status to realize the true happiness.

1.3 Intelligence or wisdom is a deep understanding including of the concepts, attitudes and values.

2. Sustainable Development System

When the manual and mental ability and behavior of human are developed, they are able to complete anything they expect to do. Therefore, the human is the core of sustainable development, there are four elements of development including human, society, nature and technology. If the social systems can be implemented successfully, it will contribute the better self, can develop self-confidence to be have potential, can invent technology to solve problems and conservation such as new technologies development to maintain non-destructive nature, save energy of technologies or efficient energy using which will lead to sustainable development finally.

The Origins of Sustainable Development

The theoretical framework for sustainable development evolved between 1972 and 1992 through a series of international conferences and initiatives. The UN Conference on the Human Environment, held in Stockholm in 1972, was the first major international gathering to discuss about sustainability at the global scale. The conference created considerable momentum, and a series of recommendations led to the establishment of the UN Environment Programme (UNEP) as well as the creation of numerous national environmental protection agencies at the national level. The recommendations from Stockholm were further elaborated in 1980 in World Conservation Strategy—a collaboration between the International Union for the Conservation of Nature, the World Wildlife Fund (WWF), and UNEP—which aimed to advance sustainable development by identifying priority conservation issues and key policy options.

In 1983, the UN convened the World Commission on Environment and Development (WCED), chaired by Norwegian Prime Minister Gro Harlem Brundtland. Comprised of representatives from both developed and developing countries, the Commission was created to address growing concern over the “accelerating deterioration of the human environment and natural resources and the consequences of that deterioration over economic and social development”. Four years later, the group produced the landmark publication *Our Common Future* (or the Brundtland report) that provided a stark diagnosis of the state of the environment. The report popularized the most commonly used definition of sustainable development: “Development that meets the needs of current generations without compromising the ability of future generations to meet their own needs” (WCED, 1987).

The Brundtland report provided the momentum for the landmark 1992 Rio Summit that laid the foundations for the global institutionalization of sustainable development. Marking the twentieth anniversary of the Stockholm Conference, the Earth Summit adopted the Rio Declaration on Environment and Development and Agenda 21, a global plan of action for sustainable development. The Rio Declaration contained 27 principles of sustainable development, including principle 7 on “common but differentiated responsibilities”, which stated: “In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command”.

Agenda 21 included 40 separated chapters, setting out actions in regard to the social and economic dimensions of sustainable development, conservation and management of natural resources, the role of major groups, and means of implementation. In Agenda 21, developed countries reaffirmed their previous commitments to reach the accepted UN target of contributing 0.7 percent of their annual gross national product (GNP) to an official development assistance, and to

provide favourable access to the transfer of environmentally sound technologies, in particular to developing countries.

Three seminal instruments of environmental governance were established at the Rio Summit: the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and the non-legally binding Statement of Forest Principles. Following a recommendation in Agenda 21, the UN General Assembly officially created the Commission on Sustainable Development (CSD) later that year. The Rio Summit was very successful from a political standpoint: it had the world's attention and active engagement and attendance by virtually every national leader. Its challenges lay in two areas: first, too much of an emphasis on the “environment pillar” in the negotiations and secondly, all too little implementation of goals established under Agenda 21, particularly those related to development aid and cooperation.

Since that time a number of important international conferences on sustainable development have been held—including the 1997 Earth Summit+5 in New York and the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg. These meetings were primarily reviews of progress; and reported that a number of positive results had been achieved, but implementation efforts largely had been unsuccessful at the national and international level. The UN General Assembly noted in 1997 that “the overall trends with respect to sustainable development are worse today than they were in 1992” and “much remains to be done to activate the means of implementation set out in Agenda 21, in particular in the areas of finance and technology transfer, technical assistance and capacity-building”. In his 2002 report on implementing Agenda 21, United Nations Secretary-General Kofi Annan confirmed that “progress towards reaching the goals set at Rio has been slower than anticipated” and “there is undoubtedly a gap in implementation” (United Nations Economic and Social Council, 2002). Regrettably, initiatives following the seminal Rio Summit have not attracted the attention, commitment, and resources required for effective implementation of sustainable development. This is a problem with multilateral agreements, in those commitments at the international level do not reflect the processes and realities in countries,

where multiple stakeholders—including government, businesses, and non-governmental organizations (NGOs)—need to be engaged in action.

The negotiations at the WSSD in 2002 demonstrated a major shift in the perception of sustainable development—away from environmental issues toward social and economic development. This shift, which was driven by the needs of the developing countries and strongly influenced by the Millennium Development Goals (MDGs), one example of how sustainable development has been pulled in various directions over its 20-plus year history. Defining and implementing sustainable development has had to deal with the tensions between the three pillars, and the prevailing “influences” at different points in time. Ironically, it could be said that WSSD succeeded where Rio failed, but failed where Rio succeeded. The WSSD did make a constructive change by focusing considerably more attention on development issues, particularly in integrating the MDGs with sustainable development principles and practices. However, the political timing was simply not there: the political leadership was not engaged because the world, led by the United States, was more focused on security issues around terrorism, weapons of mass destruction, and Iraq. Unfortunately, the seeds planted in 2002 fell upon arid land.

At and since the Rio Summit, sustainable development has found its most prominent “hook” (at least in terms of media and political attention) around the issue of climate change. Responses to address climate change, both mitigation and adaptation, are linked to sustainable development. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2007, chapter 12.1.1) pointed out the iterative relationship between climate change and sustainable development, and that the two can be mutually reinforcing. In many respects, the UNFCCC has become an international proxy for discussions around sustainable development, and a potential means to channel required funding and technology from developed to developing countries. While climate change is certainly one manifestation of the broader challenge of sustainable development, the scale and complexity of the broader sustainability challenge means that it cannot be adequately addressed in the confines of the climate change negotiations. (Drexhage and Murphy, 2012)

Wasin Ingkhapattanakul (2005d) has considered the overall definition of sustainable development focus on the balance of the 3 sections (Figure 2) which are Social Needs, Economic Needs and Environmental Capacity. The success of sustainable development is based on the balance and the mutual dependence between such components.

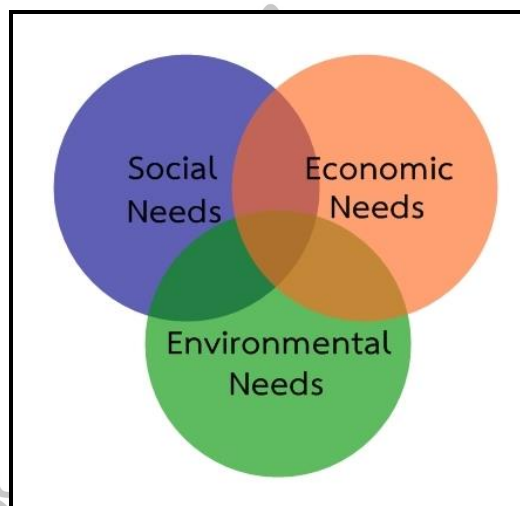


Figure 2 Compositions of Sustainable Development

Source: Barton, **Sustainable Communities** (London: Earthscan, 2000)

Principles of Sustainable Development of Sustainability Indicators Symposium.

Murcott (1997) postulated Robinson et al. (1990) sets out the principles of sustainable development to ensure the continuity of the natural resources needed to maintain the quality and forever along with the economic, social and cultural development to be in good level. The classification of principles of sustainable development is divided into 2 parts namely pay attention to sustainable ecosystem and principle of sustainable economic and social development. Anyhow, the principle of ecological sustainable development focusing on maintaining the quality of natural resources is vital to life. Meanwhile, must try to prevent damage that may occur to biological resources and support the management of natural resources in the integrated features and recover the damaged ecosystems to be normal.

Sustainable economy and social development focus on the form and intensity of the activities of human beings, which must not exceed the carrying capacity of the ecosystem to regenerate it. It must find the ways to save on materials and energy in the production process. Moreover, it also needs focus on economic, social and political equality to progress toward a sustainable society. The requirement to develop the potential of the community at all levels in order to live on their own as much as possible, and provide opportunity for public participation in the decision making process.

Anuch Arphaphirom (2002: 70-71) claimed that Prawet Wasi proved the basic principles of sustainable development that are always paired with respect in dignity and the value of people of Thailand, it consists of the five main aspects as follows:

1. Self-reliance
2. Use cultural economy to replace capitalism, which focuses on the most profitable economy. Cultural economic is concerned with the way of life of all people namely realizing the people's benefits, respect for unique diversity of the local community, income distribution, building families and communities to be strong, to make sustainable environment and conservation of local wisdom.
3. Build a sufficiency economy and genuine economy, sufficiency economy means sufficiency / balance in mind, persistence, wisdom, culture, environment, and generosity. Genuine economy refers to the production which is focus on the warm family, strong community and sustainable environment, not activities that aim to gain the more profits.
4. Power distribution to the public and local communities. Define the future/possible consequence of it.
5. Maintain a good relationship with other countries with our hospitality and dignity.

Chalong Chotikakam, Lt. Gen. (1999) concluded principles of sustainable development as follows:

1. The development must be integrated with the nature to create a completed system. It should not be used unnecessarily, so the human need to preserve it.

2. Sustainable development should be objectives for people, not a numeric productivity of nations. The development must be done by the people.

3. The development will need to focus on women from the past to the present. The women raise the primary necessity in society such as food, shelter, care of others, etc. It may summarize that the women is the center of sustainable development.

4. Pursuit of basic human needs, sustainable development has to be a way to seek for important basic needs that are what the most people need before making a higher profit by anyone or any organization.

5. Decentralization, sustainable development intends to decentralize the decision-making processes and control of using resources in order to distribute the benefits as whole, various planning has to be made publicly. The people should be able to control and manage their resources by themselves. And the goal of development is to create a self-reliant community.

6. Democracy from the fundamental group, the people must involve in democracy in all levels of society.

7. Build the peace and nonviolence, each community plays a self-care coverage in a way that non-violence at all levels. Sustainable development is to be like a tree growing from the lower to the upper part of a tree in a balance with nature.

Community-based tourism

The concept of Community-based Tourism (CBT) can be found in the work of Murphy (1985), where aspects concerning tourism and developing local communities are analyzed, and in a further study by the same author in 2004 (Murphy and Murphy, 2004). Along with these two studies, there are several other research papers analyzing the relationship between tourism and local communities (such as Richards and Hall, 2000). This concept paves the way for new lines of

investigation and for the possibility of tourism development together with other alternatives such Pro-Poor Tourism (PPT); Community Benefit Tourist Initiatives (CBTIs) (Simpsons, 2008); or Community-Based Enterprises (CBEs) (Manyara and Jones, 2007: 628-644). To summarize, all these initiatives agree that the destination community should be included in the tourism planning and management decision-making process, owed to three main reasons: it considers them to be part of the tourist product, local communities adapt to changes easily, and it helps to open their minds (Lopez, Sanchez and Pavon, 2011: 69-84).

Community-based tourism is premised on the inclusion of local people in the development of the industry. In fact, its characteristics include local control of development, community involvement in planning, equitable flow of benefits, and incorporation of resident values (Tosun 2006; Blackstock 2005; Reid 2003; Hall 1996; Pearce 1992; Haywood 1988; Murphy 1985). Much research has examined the value of tourism in rural communities (Reid 2003; Jamal & Getz 1999; Reed 1997; Butler 1998), suggesting that community-based tourism development may provide an opportunity for a sustainable tourism industry. Subsequently, community-based tourism has come to be understood as a bottom-up approach to tourism planning and development that incorporates local individuals in the planning process, in a meaningful way.

The tourism industry broadly is understood to be growing at exponential rates and is continually permeating different locales around the globe. Much literature has discussed its benefits and costs to the areas in which it exists, but as Harrill (2004: 251-266) points out, there is a relative dearth of literature regarding planning for the industry. As indicated, tourism developments have been criticized on several fronts, and many authors would argue that these criticisms are a result of a lack of planning, and importantly, a lack of involvement of local people in that planning process (Reid 2003; Ryan 2002; Hall 2000; Joppe 1996; Inskeep 1991; Murphy 1985). Given the levels at which the tourism industry pervades a community (employment, land use, environment, social structure and infrastructure) obtaining the perspective of residents should be integral to any tourism planning.

In order to complete a tourism development plan in keeping with the community-based philosophy, Reid (2003) indicates a series of steps must be undertaken, which include the following:

1. History - Utilize past strategic plans and surveys to determine what is already known about tourism in the community;
2. Objectives – Based on what is learned from past research, determine a vision of what the community might look like in the future in relationship to tourism;
3. Strengths and Weaknesses of Existing Tourism Product – Examine what currently exists with regards to tourism (current/past tourism statistics and potential tourism developments);
4. An Inventory – Undertake an inventory of current tourism and recreation related attributes in the community and immediate region;
5. Action Items – Identify what needs to be done and what the priority areas are. This should include the identification of partnerships and existing community groups and organizations that can potentially be involved. Action items and implementation strategies should be determined, along with a time frame for development.
6. Develop a Planning Document – Create a document that outlines the process, the priority areas, partnerships, actions & implementation strategies and potential time frames. This document should be shared with the community more broadly through a variety of venues and Reid (2003) suggests that public meetings are the least preferred method and advocated for smaller venues and multiple meeting times. The final document should be approved and accepted by local government.

As this discussion illustrated, community-based tourism development has arisen from a desire for a more inclusive approach to tourism planning which are thought to provide greater benefits and control to the local community and ultimately, aid in the transition towards a sustainable future.

The researcher aims to study about the way of life of Baan Omlong community and found that Phra Borommathat Doi Pha Som Temple has induced “BORWORN” initiated by His Majesty King Bhumibol Adulyadej to be used as the

basis way of life and using the philosophy of sufficiency economy, part of solutions in community-driven in the three dimensions of economic development (community product, processing and distribution channel), social equity (Home School and Four requisites) and environmental conservation (Natural resources conservation). However, the researcher has considered the factors influencing community achievements and the obstructions of community development in order to create a lifelong community development by using tourism management plan to incorporate the principles of sustainable development at Baan Omlong community in the future as the framework shown in figure 3.

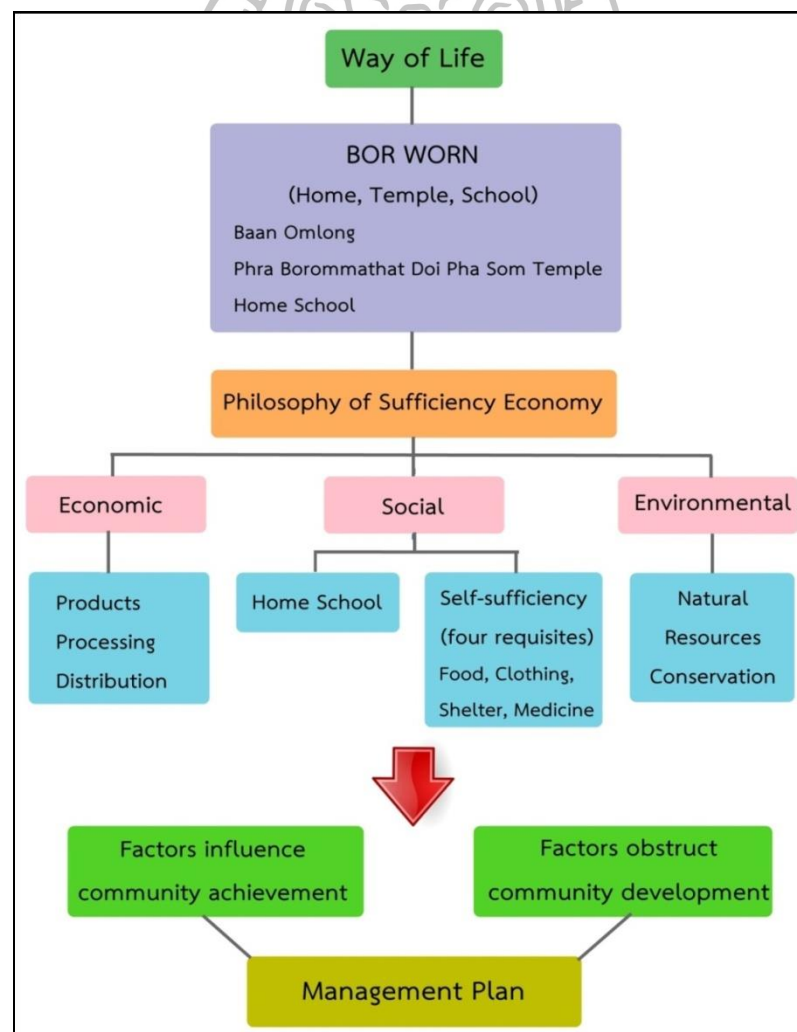


Figure 3 Model of Baan Omlong Community for Sustainable Development

Chapter 3

Life in Moderation of Baan Omlong Community

In Chapter 3, the presentation will be separated into two parts; the first part is the general characteristics of the community comprising geography, history, location and settlement, population, and social contexts in different perspectives including cultures, religions, beliefs, customs, traditions, and the second part presents the real activities within the community, people's living, and development process, mainly using the king's theory "BORWORN" or HTS organizations (Home, Temple, and School). The study is separated into two durations; the study of supporting factors and obstacles in development process shown in chapter 3, and development planning, tools, and problem solving shown in chapter 4.

General Information of Baan Omlong Community

1. Location

Baan Omlong community is located at Moo 2, Maesab Subdistrict, Samoeng District, Chiang Mai Province. Maesab Subdistrict is located on the Northeast, away from Samoeng District about 20 kilometers and about 60 kilometers away from the city of Chiang Mai. Baan Omlong community has borders with the other villages as follows:

North next to Baan Ngiwtow, Moo 8, Maesab Subdistrict, Samoeng District

South next to Baan Hadsompoi, Moo 7, Bokaew Subdistrict, Samoeng District

West next to Baan Kongkagnoi, Moo 8, Maesab Subdistrict, Samoeng District

East next to Baan Angky, Moo 4, Yangmern Subdistrict, Samoeng District

2. Geography

Baan Omlong is located in the valleys. The main area is on the flat

land among the valleys, at 800-1,000 feet high over the sea level. People's housing and plantation spread near the main stream and main road passing through the village. There are many creeks and streams at the edge of the village; Huay Maiyang, Huay Maeyang, and Huay Bong. There is also the seven-level waterfall with five to fifteen metre height named Mae Pruer Waterfall which is the village tourist attraction.

3. Climate

The weather is mostly chilling throughout the year with these three seasons; summer is from March to April, rainy season is from May to October and winter is from November to February. The highest temperature is at 35 degree Celsius, and the lowest at eight degree Celsius. The average temperature is 22 degree Celsius. The precipitation is averagely at 114 mm/year, the highest is at 166 mm/year (Department of Provincial Administration, 2003).

4. History

Ministry of Culture (2011) indicates that at first, the village was accommodated by Karen tribe. In 1857, Lue people from Baan Maesab led by Grandpa Mern Sasujitra, Grandpa Nahn Kiti Sasujitra, and Grandpa Noi Mala Sriwanna, immigrated and re-settled at Baan Omlong. Grandpa Nahnkiti was elected to be the village headman. Then the Karen tribe gradually moved out. In the past, different tribes had their own amulets and people tended to test or compete them but did not succeed because in front of the village heading to the north, there is a strange valley where against the amulet worked, leading the history of the village named "Omlong" which means "Competing". For the history of Maesab Subdistrict, the district was located among valleys. One of the biggest valleys is "Khunsab" valley which is the headwater of Maesab Stream which is the main blood of people in the area. With this gratitude, people named "Maesab" as the name of the district from then (Thai Tambon, 2000).

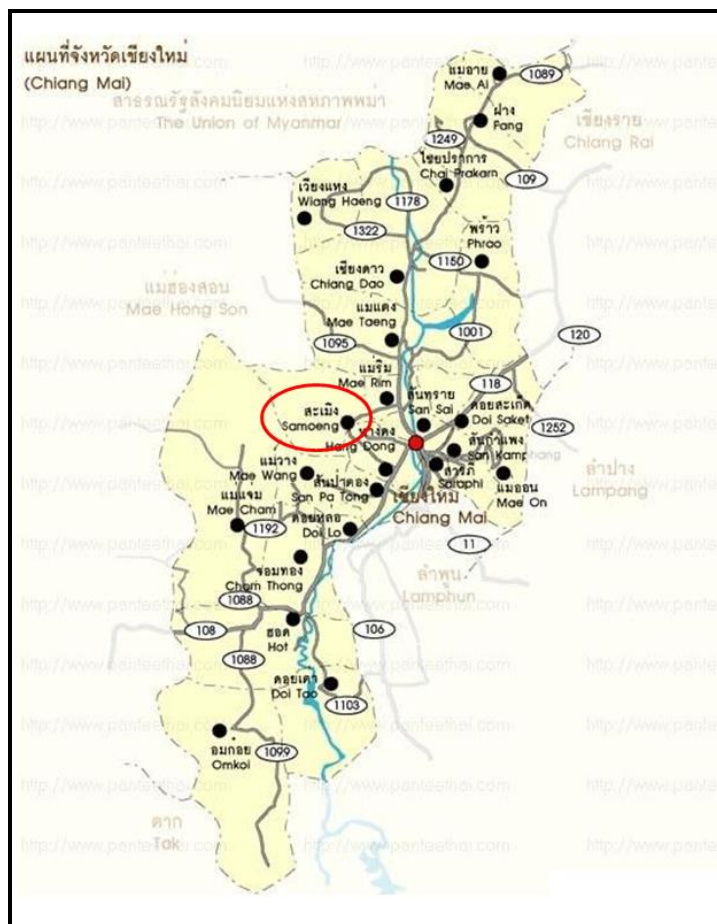


Figure 4 Map of Chiang Mai

Source: Tourism Authority of Thailand, **Panteethai**, accessed November 17, 2014, available from <http://www.panteethai.com/จังหวัดเชียงใหม่/>

5. Transportation

Transportation to Baan Omlong: As shown in Figure 4, by using Highway No. 1096 (Samoeng-Mae Rim) or Highway No. 1296 (Samoeng-Hang Dong). The distance is 50 km., passing Samoeng District Office to Ror Por Chor Samoeng-Yangmern Asphalt Road. The distance is 25 km passing Maesab village at Southern of Samoeng District, MaeKhan village, Had Sompoy village; two hours driving with private transportation or three hours by public transportation.

Public transportation time table;

1. From Baan Omlong to Chiang Mai Metropolitan (departure at 7:00 hrs., arrival at 10:00 hrs.), 100 THB/person

2. From Chiang Mai Metropolitan to Baan Omlong (departure at 10:30 hrs., arrival at 14:00 hrs.), 100 THB/person

3. From Baan Yangmern passing Baan Omlong at 9:00 hrs. to Chiang Mai Metropolitan, arrival time at 15:00, 100 THB/person

Transportation within the village: The main asphalt road was built by the Accelerated Rural Development Programme. There were also concrete streets built by Subdistrict Administrative Organization (SAO) as well as gravel streets through the subarea within the village.

6. The settlement, Population Characteristics, and Social Context

People's housings are mostly at the hillside or brae descending among the valleys, starting their location near the stream in the centre of the village, then expanding outwards. The plantation area is located both near the housing area and far from the housing area which depends on the availability. The old houses were built with the elevated basement without walls which we can generally see this type of design in the village. With the increase of the population, people tend to build their new houses. The collaboration among neighborhood remains strongly in this community. People will come to help during the house building and the house owner will provide food, drink, or what they can harvest as the reciprocation. Prior to the house building, the house owner requires the permission or approval of SAO to bring the dead wood from the forest with the re-forestation (see Figure 5).



Figure 5 The houses settlement style of Baan Omlong community

The demographics information surveyed by SAO in year 2014 showed that the population comprised 200 men and 183 women to be 383 people in total with 112 households.

With lifestyle of Northern people, the expanded family pattern remains strong. From the survey, people in the village are relatives. When people get married, they normally build their houses near their parents' houses in order to maintain the closeness and relationship among families and community. Some also get married with different tribes within the village but can live well despite of differences.

From the past until the present, Baan Omlong people have lived with nature. Their occupation depends on agriculture such as rice farming or livestock on the flat or plain land as food supply within the community. Most people find food supply from either their own garden or the forest. However, when the changes come, people tend to focus on their income rather than self-sufficiency by doing mono-agriculture, for example strawberry farming which requires high investment for chemical fertilizers. When there is pestilence or pest spreading in the area, causing the damage of the whole productivity, or when the market price drops, people need to carry all impacts and related debts inevitably, which results in moving the family to the metropolitan or in the city area to find money for debt settlement. A few years ago, most families return their life back to the village and set up the social enterprise group working such as Pgazkoenyau organic rice, garlics, chrysanthemum and stevia plantation etc. This brings the quality of life of people in Baan Omlong back and the people have more time for their family.

7. Infrastructure system

Electricity: In the past, there was no electricity available. People used torches made of rubber tree oil mixing with saw dust, shaping in bullion shape, wrapping with bark and bundling with bamboo strip. This was used with the flint to ignite. People also used oil from bark or coir which they could find in the area in their living. Then they brought electric generators to provide light at night. In year 1974, the electricity installation was established (Pharasri, 2014, pers. comm. 5 November).

Water Supply: The first water supply in the village is from the sand pond for household usage. Currently there is the water piping connection from Huay Patongsad, the water reservoir in the east of Doi Pha Som to the village for household usage. The water supply for plantation and farming is from the natural pond and catchment built at the village and also the catchment from Mae Khan reservoir. These are also the main reservoirs supporting people in Baan Omlong.

Telephone: The communication within the village was by word of mouth, or sending letter by horse in case of long distance. Then, a group of people bought the network antenna to support AIS network (Sasujitr, 2014, pers. comm. 5 November).

8. Religion, Belief, Tradition and Culture

Most people in Baan Omlong are Buddhist, only two families are Christian. There are two religious places the area; Omlong Temple and Phra Borommathat Doi Pha Som Temple.

Belief: From the ancient time, people have believed and respected the guardian ghosts which are the pillars in shape of people's routines and behaviours. The villagers remain the house guardian ghost raising as well as ancestor ghost raising as their life safety, protection, prosperity, occupation, and livelihood. They will have the same ghost in one family. Getting married within the same family is untoward.

Traditions at Baan Omlong are as follows;

The leader worship hall is the respect which people pay to the leader ghost in the past. They believe that the community leaders, most were warriors, after they passed away, their protection remained for people in the community not only at their houses but also the plantation areas. The hall is similar to the house guardian or shrine. People will have the worship ceremony before and at the end of The Buddhist Lent Day, Songkran or Thai New Year, as well as the special occasions of the village. People usually bring foods; rice, fruit, old time dessert, boiled chicken, and alcohol, and bring water with Sompoi leaves pouring to pay respect to the ghost.

Songkran Festival is during 13th-15th April. This is the Thai New Year. People will prepare water mixing with Sompoi leaves for pouring on others' hands as respect during these three days. In the morning of 13th, people's guns will be fired

with one bullet to fire the badness happened during the past year. On 14th, this is the day to bring all goodness to their lives. No scolding, no rudeness, or bad saying are permitted. If anyone does, they believe that the bad thing will happen for the whole incoming year. In the afternoon of 14th, people will bring sand to the temple as the donation to the temple. They strongly believe that this is a very big event of getting merit. Some also believe that this is to compensate to the bad things they did intentionally and unintentionally.

Slakpat period or “Tan Guoy Slak” is the festival during the month of 6th-8th of Northern calendar. “Guoy” means basket, “Slak” means the food and supplies provided to monks. The monk assistants will lead this work in the temple by scheduling the day during the period, searching for the hosts in the community. On the Slakpat day, the hosts and their families will prepare food, and supplies; for example betel and betel nut, herbs wrapped in leaves, matches, red shallot, garlics, toothbrush, tooth paste, rice, etc. Then the hosts will identify the number for their baskets or trays for the monks’ sweepstake. When the monk picks the number, the picked host will come to offer the food and supplies to the monk. This is the giving without knowing the receiving monk. After the sweepstake, the monk will give the sermon to the ceremony participants as well as providing blessing chanting. People will take this time thinking of their ancestors and family members who passed away to let them receive the merit. Afterwards, people invent tree wrapping with golden and silver paper, hanging the number to do sweepstake. The name of the ceremony is changed to “Tan Ton Ngern, Tan Ton Thong”. Sometimes they also hang the bank notes as per of the sweepstake.

The annual celebration of Buddha Relics at Doi Pha Som occurs on the 8th month of Northern calendar or May. People will prepare water mixing with Sompoi leaves, putting in a nice glass, pouring on the water trough made of bamboo, to the relics, to provide apology from the wrong things they did intentionally and unintentionally during the past year to the tri-precious stone in Buddhism (see Figure 6).



Figure 6 The Annual Celebration of Buddha Relics at Doi Pha Som

Source: Phra Borommathat Doi Pha Som Temple (2015)

Costumes: In general, people dress up to work for their plantation, farming, and gardening purpose. During the local tradition and festival, people will dress in Northern style; white shirt with long sleeves and sarong.

Language: People use “Mueng” speaking Language, or Thai language in Northern accent and Northern words. Old people may speak “Thai Lue” speaking language. Also old “Lanna” writing language remains in some families but this language is not widely used in the present.

The Elements of Baan Omlong Community

The development of Baan Omlong follows the King’s Thought “BORWORN” or HTS organizations. “Baan” means home, “Wat” means temple, and “Rongrean” means school which are three major pillars in the Thai society. These play major roles in connecting people and communities and supporting systems within the society. The collaboration of the pillars has left peace and stability in the society for ages.

1. Family Institution (Home) comprises people and group of people in the community

2. Buddhism Institution (Temple) comprises the abbot, monk, temple goers, Buddhist association including organizations or institutes related to Buddhism in the community.

3. Academic Institution (School) and Governmental Authority or Organization comprises the school director, principle, teacher, academicians in school, college, university; headman, village chief, village committee, community / district health volunteer, district agriculture officer, including the office or elected officer in the district and sub-district administrative organization (State of community level lessons, p.14).

“BORWORN” Principle is bringing the main community institutes together, working as the mechanism to drive the development and strengthen the community, acting as the backbone in community development, decision, problem solving, determining the community framework, and creating the planning, ownership and community management within the community.

Baan Omlong’s BORWORN Principle is led by the “Temple” element. The temple leader supervises people in their living to be appropriate both outside and within. The temple brings Buddha’s taught into daily life as well as encourages people to live in basic precepts, and understand the self-sufficient way of living. For “home” element, this pillar plays a major role in bringing the principle into action and people’s routine, as well as daily problem solving. For “School” element, this pillar plays a major role in educating and cultivating more values of the principle in the community.

Although three elements play different roles, for the community development, it requires all three elements working together as the complete set of mechanism. The main purpose is the community’s capability in living in self-sufficient way. The key thing is that the community is developing the economics and moral which is mind and soul together. To bring peace into community, it requires cultivation of cohesion as shown in Figure 7.

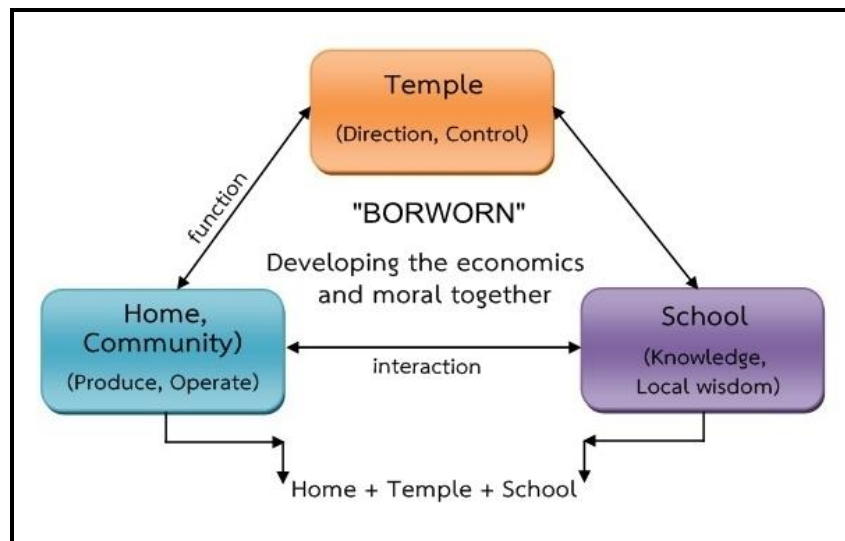


Figure 7 Baan Omlong BORWORN Model

Source: Office of the National Economics and Social Development Board, **State of community level lessons**, accessed May 3, 2015, available from http://social.nesdb.go.th/social/Portals/0/Documents/รายงานถอดบทเรียนระดับชุมชน_153.pdf

Development Process Using “BORWORN” Principle Based on Sufficiency Economy

Baan Omlong during the year of 2005-2011: Doi Pha Som or Morn Phasom is located at 1,200 meters high above the sea level. The importance of this mountain is the water reservoir for people’s household usage, plantation, farming and gardening. The stone-mountain has released water through layers of stones which taste slightly sour which means “Som” in Northern language. This is the reason why “Som” is part of the mountain name. The head water is worshipped by people as sacred water. When people get sick, they will come to ask the permission from the guardian ghost to bring the water from the headwater area to heal their family’s sickness, especially as skin therapy.

From the telling of the old people in the community, 70-80 years ago, there was a monk named “Krua Sriwichai” pilgrimaged and had done the restoration for The Relics of Buddha at Morn Peia which was five km. from Morn

Phasom. He came to Baan Omlong and worked with the monk named “Kruba Upala” and people in Maesab and Yangmuen District to restore The Relics of Buddha on the top of Morn Phasom. The construction was a drastic challenge with the difficulty in transporting all material and equipment by cow.



Figure 8 Phra Borommathat Doi Pha Som Temple
Source: Phra Borommathat Doi Pha Som Temple (2015)

In 2004, there was another young monk from North-East flat land named “Luang Por Toang”. His official name is Provost Suphromthummaphiwat (Soryuth Chayapanyo). He pilgrimaged and passed Morn Phasom. He, with the support of the abbot of Chedi Luang Varavihara Temple, Chiang Mai and his group, did the restoration together with the villagers and people from everywhere. In 2005, beside the restoration of the pagoda, there was the four-sided porch with the ancient Northern style roofing. The restoration brought back life to this place with people’s strong faith to worship Buddha and pay respect to King Bhumibol (Rama IX) in his 80th anniversary. In 2006, The Relics of Buddha was enshrined on the top pagoda of roof (see Figure 8).

During the period of restoration in 2005, Luang Por Toang (see Figure 9) had an opportunity to work with the villagers. He directly found out the problem in the community, people mostly got debt from their mono-agriculture; wage, fertilizer,

chemical pesticide, as well as uncontrollable external factors; for example natural disaster, drastic change of weather, instability of income and market price, soil deterioration after long-term chemical application. People gradually left the community to live in the city, trying to recover their debt. This also had impacts on the next generation's way of living like their offspring abandoned the old time occupation and ancestor's intellectuality and went to study and learn in the city, following the globalization. In the end, the burden churned to be more critical due to the huge spending in the living in the city of the family.



Figure 9 The Abbot of Phra Borommathat Doi Pha Som Temple

Source: Press Council, **Religious-Amulet**, accessed February 3, 2015, available from <http://www.komchadluek.net/>

When Luang Por Toang had deeper understanding in the community trouble. He started establishing the development process in the community as a long term solution, by root causing the issues and finding the holistic and integrated solutions. He has provided four key directions as follows;

1. Reforestation and water reservoir restoration and creation as the basic foundation to sustain the plantation

2. Bringing life back to the land by increasing abundance in soil as the basic resource to grow food for people and community

3. Restricting dependency from the outside community and creating more local production especially the bio-fertilizer and bio-energy to reduce the manufacturing cost.

4. Changing the community value in sending children to study in the city, causing more debt, cultural impact, as well as lack of ancestor's intellectuality continuance.

Luang Por Toang collaboratively designed the activities in conjunction with people's living, community's economics, social structure and culture and traditions which allowed the development in increased quality of lives and self-sufficiency. The four key activities are:

1. Reforestation and water reservoir revival; Three Types of Plants for Four Benefits and building check dams across water channels or streams at intervals to retain some water and silt.

2. Creating four-requisites and biological substances; encouraging people to move towards organics and integrated agricultures, establishing the simple system to manage waste and excess materials in the community, as well as reducing the purchase household supplies, for example multi-purpose liquids, soap, shampoo from outsiders and produce them by the community for the community.

3. Creating substitute energy and energy preservation system; focusing on recycle the used oil to bio-diesel, utilizing the clean energy resource like manure gas, and encouraging people to do sunflower and Jatropha plantation and use their oil to produce bio-gas.

4. Creating Home School integrated with the governmental school academic system of the Ministry of Education for primary and secondary school levels. This allows the parents to live at their hometown, have enough time to maintain the healthy way of living including maintain the continuance of ancestor's intellectuality, and keep their arable land of the family.

The transition to Self-Sufficiency Economy way of living started on 2007, when Luang Por Toang met his friend named Luang Por Sangkhom Thanapanyo, he

became the major driver in working with the community, applying the King's theory of Sufficiency Economy to solve people's problem and to create the sustainability in the community. They firstly started establishing the learning center and workshop at Huay Bong area, nearby Baan Omlong which is the first prototype space or village in executing "BORWORN" system.

Then in 2008, Toyota Motor Thailand Limited became the supporter of all four key activities. At the same time, Moral Promotion Center (Public Organization) came to support two projects of the temple. The first one is applying Buddhism and King's Self-Sufficiency Economics in building the morality center. The second one is highly focusing in self-sufficiency economics by using 'BORWORN' principle as the driving mechanism. The project pulled supports and collaboration from SAO, Thai Army, Department of Forestry, many academic institutions, as well as private sectors. This resulted in drastic transition in the community.

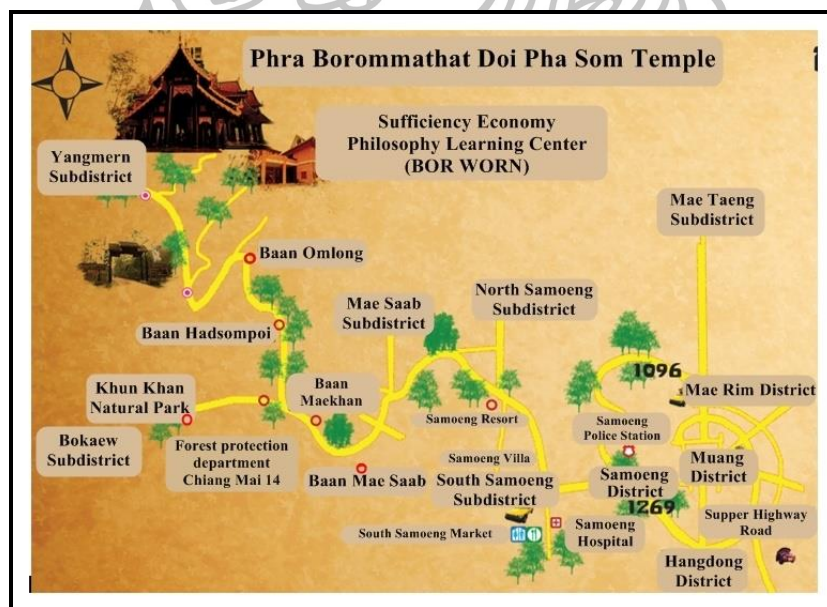


Figure 10 Location of Temple, Learning Center and Baan Omlong

Source: Phra Borommathat Doi Pha Som Temple (Chiang Mai, n.d.)

People development is the important key in driving the community development. So the Learning Center provided opportunities and supported the

community leaders from many groups to participate in related workshops and trainings in other centers and communities, for example Special Agricultural Projects at Muang-Ngai under Queen's Foundation, other Agricultural Centers, and Pathom-Asoke Community (see Figure 10). After the leaders directly experienced the outcome at other centers and communities, they were enrolled in the benefits of Three Types of Plants for Four Benefits, building check dams, and integrated agriculture and started the transition process; from mono-agriculture to integrated agriculture. They can share what they harvest to their neighbors, from putting chemicals into soil to use organics farming, from forest cutting and firing to reforestation and water reservoir revival.

Moreover, the community leaders established the nine learning bases and demonstrated objectively as follows;

Base 1 – “Rak Pa” is forest preservation: creating tree banks, activate Three Types of Plants for Four Benefits. People can benefit from the forest on daily basis, monthly basis, and annual basis.

Base 2 – “Rak Nahm” is water reservoir preservation: building check dams to prevent the landslide, and forest flood. The participants from both in the community and outside the community built more than 1,000 small check dams and six big concrete catchments with the support of engineers.

Base 3 – “Rak Mae” is microorganism and organics workshop at the learning center.

Base 4 – “Khon Mee Nahmya” is household supplies workshop (multi-purposed liquid, dish washing, detergent, soap) to reduce household expenditures.

Base 5 – “Khon Aow-Than” is charcoal cremation produced from wood to remove insects.

Base 6 – “Por Yoo Por Gin” is integrated agriculture and organics plantation. This is also to encourage people to do their own gardening as their own food supply and reduce household expenditure as well as preserve soil quality.

Base 7 – “Khon Liang Sat” is pig feeding in the hole, using leftover food to feed and utilize pig's manure to produce manure gas and fertilizer.

Base 8 – “Khon Mee Fai” is bio-gas made of leftover and edible oil from the kitchen.

Base 9 – “Na In-see” is organics rice farming to create safe food supply within the community as well as preserve the ecosystem

In 2009, the learning center was selected to be the research and execution base of the research network of Upper Northern Zone of Chiang Mai University, supported by the Moral Promotion Center (Public Organization), under the project name “One Rai of Morality by Self-Sufficiency Economy Theory for Baan Omlong Enterprise”. With the on-site survey and follow-up, the finding was that only few people brought back what were trained to apply in their living due to the lack of investment and arable land. So the project team re-invited people to work on only 1-rai space, work on Three Types of Plants (edible forest, usable forest, and buildable forest), pig feeding, worm farming, and charcoal cremation. There were nineteen families participating in this program, resulting in the increase of self-sufficiency level. People have four “Por” means adequacy; adequate to live, adequate to eat, adequate to use, and adequate to be self-content. People have the capability to cut their household spending, adding more food supply stability and quality, and adding more income from selling excessive output from vegetable and pig.

After they experienced the progress and benefited from the program and were able to create their own intellectuality in self-sufficient way of living, the learning center started establishing the mechanism in the nearby communities as well as the interested group of people, with two strategies below;

1. Strengthening the community – with this strategy, the learning center designed the activities and established the learning process providing the variety of development activities for three aspects of the center which are; forest and water reservoir preservation, four-requisites and biological substances, and renewable energy and energy preservation. Moreover, the program was funded by the research network of Upper Northern Zone of Chiang Mai University for the community leader training to be the program trainers for other communities. The training significantly

enhanced the program development and transition from “doer” to “trainer” to transfer the community’s intellectuality to others.

2. Strengthening the network – Various organizations have participated in the program; for example; Moral Promotion Center (Public Organization), The Research Network of Upper Northern Zone of Chiang Mai University, Toyota Motor Thailand, Theppadungporn Coconut Co., Ltd., Siam City Cement Limited, Chiang Mai Rajaphat University, North Chiang Mai University, Chiang Mai University, and many academic institutions, SAO and private sectors.

In 2011, the temple was supported by Moral Promotion Center (Public Organization) in driving more nine communities under “BORWORN” network. The objectives of this program were for bio-fertilization campaign, establishing cooperative for Pgazkoenyau organic rice, life bank, multi-purposed liquid production, waste bank, bio-degradable fertilizer and integrated agriculture which is 1-rai of morality. There was intellectuality exchange among participants.

In 2012, Moral Promotion Center (Public Organization) funded the program to create the program span into five zones. 1) The Learning Center of Phra Borommathat Doi Pha Som Temple 2) Baan Mae Ha-yang, Baan Pakiah, School of Police Patrol Rappaport at Bo-Kaew, Baan Mae Dad Noi and Baan Chan in Gullayaniwatthana District 3) Baan Maeloei, Baan Nafan, Baan Maepa and Baan Mai Tonphueng in Maesab District 4) South Samoeng Council School 5) Baan Thungluang, Baan Maewang, Baan Pakhanok and Baan Huay Yasai. Beside the existing learning bases providing to other communities, the temple also put the alternative medication into the program (Moral Center, 2014).

Key success factors which cause the increase of self-sufficiency level during 2005-2011 period

1. Leadership (Monk) – plays a major role in leading, training, planning, encouraging and cultivating the knowledge, intellectuality in community development based on social landscape, culture, tradition of specific community, increasing the self-sufficiency level, and being the spiritual center in the community.

2. The abundance of the natural resource, demographics, and climates – allows people to create their own food supplies with variety.

3. The relationship within the community—significantly helps in connecting and sharing among people causing the balance in the community support.

Limitation of the community development during 2005-2011 period

1. People who disagree with the King's Theory. The belief in using chemicals and fertilizers to gain faster and much more productivity widely exists.

2. Globalization, the community inevitably continues getting the impact from capitalism. People still give more importance to materials or money than mind or soul development, and send their children to live in the city.

3. The number of participants to the program is not big enough to create the significant impacts due to the inadequate arable land.

Baan Omlong from 2011–present: The temple's development mechanism is focused on the establishment of the learning process through hand-on process on detailed operational work and self-actualization, emphasizing on personal development, transforming people's belief in measuring the quality of life through money or profits to be self-content, capable of sharing to community, families, senior people, relatives, children, disables, animals, and natural environment. The temple's development direction and strategies have not been permanently fixed but flexible for further adjustment upon changes. The research is explicitly illustrated into three aspects as follows;

1. Economics Dimension

The temple is the prototype of the collaboration of the natural resource preservation work and religious organization. The social or communal development work has been done through Buddhism's Four Noble Truth, allowing people to access to self-actualization and realization, then demonstrating in development strategies and tactical works; cultivating self-sufficient way of living, household spending cut-off, setting up cooperative unit to transfer excessive productivity to other communities to create more income, etc. Once the community has the capability to sustain themselves, the development work is uplifted to the networking level which is named as "Kabuan Boon" meaning "Parade of Merit", in the form of social enterprise, aiming for morality, compassion, harmony, happiness, and public consciousness among the network.

“Kabuan Boon” is the transformation tool by connecting the upstream with the downstream via natural products from the communities. The excessive materials and products are turned into processed and repacked foods, distributing to the downstream communities and cities at the reasonable and accessible prices. “Giving and Sharing” is the main context of this mechanism to cultivate the culture of “Being Gratitude” in Thailand. People have the capability to create and sustain their family income without migrating into the city. People also have more time and run their social enterprise operation, which is funded by public fund. It is evident that the economics aspect is the leading factor in this work.

Kruba Weerayuth (2014, pers. comm. 13 November), Vice Abbot expressed that there are two levels of economy. The first level is the basic economy, meaning that people have the capability of self-sufficiency. The second one is advance economy level or commercialization level. Every single family who joins the project focuses on basic level to solve their household imbalance income and expenditure and sustain the self-sufficiency level first. Then they gradually move to the next level to commercialize their excessive productivity via “Kabuan Boon” which is the program of the temple to bring out the surplus of community products into reforestation fund. This kind of market is focusing on people who understand the objective’s temple and willing to involve or support via the community products.

There are four types of community product of as follows:

1.1 Garlics (Leader: Mrs. Jandee Boonmala, Villager)

Boonmala (2015, 6 May), in a personal conversation, indicates that “Previously, I solely did a strawberry plantation as monoculture or chemical agriculture. The more I worked, the more debt I had because I would like to be more profitable, therefore, I was investing more, putting more wages and expenditures but had less profit and ended up having more debt. After I met the abbot, I became a member of temple then the abbot supported me to have training outside in order to gain more skills and knowledge about sufficiency economy. There are many activities I have trained such as making the multi-purposed solution, fertilizers, organic agriculture, etc. Later on, I have got an opportunity to participate in organic garlic plantation training program.

Boonmala also comments that “in her first year of garlic plantation, she had her debt of THB 470,000. However, she still believed in modern way of agriculture, therefore, she resisted on using chemical fertilizers. The abbot taught to focus on supporting ourselves rather than relying on external factors or others. In her second year, she started to follow the King’s theory by using composed fertilizers which she produced, stopped creating more debt and reduced the amount of labour so she could save the annual hiring expenses of THB 200,000. Eventually, in her third year, all of her debt was paid and she does not have debt since then”.

“Afterwards, she decided to drive the garlic group to be the leading group to help people in debt settlement. The members have been increasing from 10, 27, 57, 70, 100, and to be 200 in six consecutive years with the big support of Theppadungporn Coconut Co., Ltd. Since the company realized the importance of the community development work in reforestation, environmental preservation, and debt deduction, the company provided the long term support in participating in the garlic program called “Kratiam Boon” by providing the selected seeds and also purchasing at higher-than-the-market price. The garlic plantation program allows only bio-compost or non-chemical fertilizer. 70% of profit will be used for the program development and for the temple activities. If any person disagrees on the way and conditions, she will not accept to the group. At the moment, she and the garlic group continue expanding networks into others communities; Baan Angkai, Baan Maekaan, Baan Pa-kiah, Baan Sanamkeela, Baan Huay Pa-kuay, Baan Ngiew-Taw, Baan Tung-yao, Baan Maetungting, Baan GongKakluang, and Baan Tungluang” (Boonmala 2015, pers. comm. 6 May).

Lastly, Boonmala pointed out that Baan Maemood, which is far way in San Pa-tong District have participated in this program. She claims “I will always share other people to follow the King’s theory and the abbot taught, be self-reliance and do not greedy. Then what we did will pay us back and bring us happiness”



Figure 11 Garlic House



Figure 12 Garlic

1.2 Organics Pgazkoenyau Rice (Leader: Ms. Sirinat Potha, Home School Student, M.6)

Potha (2015, pers. comm. 6 May) asserts that “The temple network is connected to many villages of Karen or Pgazkoenyau Tribe in Chiang Mai, for example Baan Panakok, Baan Sop-laan, extending to Baan Maewang or Baan Tungluang which is the huge village of Karen Tribe. This village is able to produce lots of rice as well as Baan Huaykang is. Previously, the household sized rice mill machine was at my house to run the operation from milling to packing (see figure 13 and 14) due to the expansion of this program, we move the rice mill machine to the learning center in order to allow others to learn about the rice program (see figure 15 and 16). However, the packing process remains at my house. There are main

community networks help distribute the rice product (see figure 17) namely Very Good Group, Roong Aroon School and Assumption University”.

“We trade at reasonable price and the profit will go to the forest preservation program. The challenge of this program is expenditure control, especially, how to balance profit and loss during the wildfire extinction season (Jan-May). The expenditure always runs very high to support the forest fire fighting such as food, petrol, machine maintenance cost in high risk areas, etc. Another challenge of this program is the quality control. Since the raw materials are from different villages with different plantation techniques and cultures, the results after milling are different. This leads to customer complaint. Looking forwards, I will be learning deeper in every steps of rice farming of every village and figuring out the solution for quality control” (Potha 2015, pers. comm. 6 May).



Figure 13 Brown Rice Mill



Figure 14 Separated Brown Rice and Paddy Machine



Figure 15 Normal Rice Mill



Figure 16 Barnyard



Figure 17 Rice Product

1.3 Fried Banana (Leader: Mrs. Anong Phutthaso, Villager)

“I used to do strawberry plantation with high investment and the capitalist made me feel that I got a chance. But in the real situation, I had more debt and the amount of money was not enough to spend with my family. I was very sad and never found the solutions until I met the abbot. He encouraged me to make fried banana and supported me to train in anywhere in order to apply in the project. I tried several times, at first I could not sell and there were a lot of obstacles along the way, my neighbors also aggravated me. However, I thought that I would never give up and I would do my best, at the moment I do this project for consecutive six years, all of my debt was paid. Currently, I work only fifteen days per month and I spend the rest of my time to help others, community and temple which make me very happy” (Phutthaso 2015, pers. comm. 12 April).

The problem for doing fried banana is at the beginning if there are a lot of orders day by day, I will not be able to finish it on time as I cannot find enough bananas. Nowadays, the orders have to be made in advance in order to manage the quantity of bananas and my time.

How to do fried banana

Raw materials: Raw Banana, Vegetable Oil, Sugar and Margarine

Process:

1. Peel the raw banana and soak into fresh water (see figure 18).
2. Bring them into the basket and gradually slice the banana with the wooden slicer right into the hot oil.
3. Wait for 7-8 minutes till it turns into golden color and use a colander to bring them out and place them on another pot.
4. While the first round of fried banana is sat, mix melting margarine with sugar, then gradually pour over the fried banana and gently mix them together (see figure 19).
5. Bring the banana to fry for the second time for five minutes.
6. Use the colander to bring the banana to sit on the threshing basket until cool.
7. Then pack into the plastic bag for sales (see figure 20).



Figure 18 Ripe Banana



Figure 19 Mrs. Anong Putthaso is frying banana



Figure 20 Fried Banana

1.4 Multi-Purpose Liquid (Leader: Mrs. Jamlong Sasujitr, Villager)

“Initially, I did strawberry plantation but it had high investment and spent a lot of money on chemicals, labor cost etc. I had debt continuously because when the costs rose, I had to take a loan. Meanwhile, I could not find more money to pay debt and could not find the way to solve the problem until I met the abbot. He advised me to do the multi-purpose liquid, he gave me opportunities to train with the specialist in other areas as well as encouraged and supported me. The obstacle is an abuse from other people in the village that I have to put up with and overcome. Finally, I can rely on myself and save a lot of money because I never buy soap, shampoo, dishwashing liquid, etc. In the meantime, I can generate my income from selling this product” (Jamlong Sasujitr, dir. 2012).

Table 1 The Procedure for Making Multi-Purposed Liquid

Raw material	Utensils
- N70 inoculum 1 kg.	- Mixer container suitable for stirring process
- F 24 (stain remover chemical) 1 kg.	- Basin
- Salt 0.5 kg.	- 1 liter measuring cup
- Fragrance 1 table spoon	- Cooking paddle
- Foam powder 1 table spoon	
- Alkali water 8 liters	
- Pure water 3 liters	
- Food coloring powder and natural coloring powder	

Procedure:

1. Mix F24 and N70 well together and pure into the container for stirring.
2. Stir until the mixture becomes united and sticky.
3. Add salt. The salt should be divided into three portions and put only one potion at a time. (Salt help to make the mixture become less sticky and help to adjust alkalinity)

4. Continue stirring until the mixture becomes very sticky, add four liters of alkali water and keep stirring.

5. Stir until the mixture becomes very sticky again, put the second portion and keep stirring.

6. Again, stir until the mixture becomes very sticky, put four more liters of alkali water and continue stirring.

7. The mixture will become stickiest compared to those in the previous step so add the third portion of salt to reduce the stickiness.

8. Keep stirring until the mixture become sticky again, then put three liters of water and continue stirring.

9. Put coloring powder into ½ liter of water until getting the right color add fragrance and foam powder, stir well, then put into the mixture above and stir until it is well mixed.

10. Finally, filter out the sediment by covering the container with filtering cloth and pour the mixture into the container through the filtering cloth.

It takes only a short period of time and uses only cost saving materials, the multi-purpose liquid is now ready to be used for washing dishes, clothes, cars and other things (Sasujitr, dir. 2012).



Figure 21 Shampoo, Soap and Multi-Purpose Solution

Product Distribution: Mostly the distribution is in the event via two channels. One is the event under the Educational Service Area Authority. The other one is being hosted by the temple fair network which is the main channel to find the supporting fund for the temple activities (see figure 21, 22, 23, 24 and 25).



Figure 22 Home School Students sell products at Central Kadsuankaew, Chiang Mai
Source: Phra Borommathat Doi Pha Som Temple (2014)



Figure 23 Home School students and volunteer group sell community products at
Central Chaengwattana
Source: Phra Borommathat Doi Pha Som Temple (2014)



Figure 24 Very Good Network Group sells products at True Corporation
Source: Phra Borommathat Doi Pha Som Temple (2014)



Figure 25 Assumption University Network Group sells products at The Yellow Umbrella Market at Suan Luang Rama IX.

Source: Phra Borommathat Doi Pha Som Temple (2014)

Currently, production, food processing and products distribution have been expanded distribution channels more under economic development through social businessmen with any channel such as social media, newspapers, features and exhibition programs on merit caravan or booths in Bangkok and Chiang Mai with the objective to generate sufficient and advanced economic learning resources, and to promote the knowledge, activities, lessons and model to strengthen and expand the network as a whole, and to extend the concept of self-making, self-using, the products of four requisites and expand the network to other areas which is driven in practice to support and strengthen the network and expand the network to learn and be able to rely on their own experience. The main idea is to do not rely on external factors, do not focus on marketing or profit derived from the merit parade, but focus on the concept of public relations to expand the concepts in accordance with the philosophy of sufficient economy. Abbot Sorayut Chayapunyo will suggest the guidance to be complied with the situation in the community, as well as being a consultant in the management of the proceeds from the sales procession merit which are divided into three parts: the first part is used to make the investment in products. The second part is in the form of wages and dividends. And the third part is brought to the fund for natural resources in order to build check dams, firebreak building and develop other parts of temple. Meanwhile, “Parade of Merit” is a fund

center point for villagers to borrow money to invest in any activities without interest but there is a share of profit from selling products; 50% return back to merit parade fund. This condition will be agreed between the members of communities (Moral Promotion Center, 2014).

In conclusion, the economic development of Baan Omlong starts to do activities which is focused primarily on self-sufficiency in household such as organic vegetable planting, multi-purpose solution, etc. Subsequently, it has further developed knowledge that is planning of production in order to use in community and build in the form of “Parade of Merit” to sell local products at cost for people in community and network with the objective of using the good quality of products yet in reasonable price. Further, this process can extend to other networks and be adjusted to use with their communities. The main concept is self-reliance without the need to rely on external factors. And the proceeds from the selling products will be contributed to the fund to take care of natural resources conservation. The community realizes that the nature gives their life, therefore, it needs to be preserved and restored at the same time from human beings.

2. Social Dimension

During this period, Baan Omlong community is capable of social development, resulting from the increase of self-reliance objectively via the collaboration between the villagers, the temple, and the temple network. The main purpose is to bring the development to sustainable level. People are able to control their household expenditure in the long run. With “BORWORN” principle, people live in the community as expanded family. The researcher has brought “Four Requisites” and “Home School” as the key drivers in viewing the social aspect.

2.1 Four Requisites

Knowing that the four requisites are the most basic fundamental requirements of all human being, self-reliance according to the philosophy of self-sufficiency economy starts from the belief of individual family capability in innovating and extending their own knowledge and wisdom. In addition, the particular knowledge and wisdom is being shared to others inside and outside the community

and this can lead to the community development expansion and establish sustainability.

Food – The major source of energy, human being used. The stabilization of food in each community critically relies on both environmental factors and the community's way of life. For Baan Omlong, most of people grow their own vegetable and fruits and some people find their food in the forest. Currently, they are still exchanging food with each other and some are giving food to others as complementary (see figure 26 and 27).



Figure 26 Mrs. Chanadda Sasujitr is feeding chicken and bringing eggs to eat, sell and give to the temple



Figure 27 Home school student is picking vegetable in her home to cook by herself

Accommodation – Due to the mountainous landscape, comprising of low / flat lands and hillsides, their houses were built with the natural materials, majorly teak wood. The houses were inherited from the previous generation. With the increasing amount of population, some families also expand their accommodation. The old traditions still remain strongly. People provide support within their own neighborhood in constructing houses (see figure 28).

There is also the regulation to control the usage of the wood that people bring outside the forest. Subdistrict Administrative Organization (SAO) approval is required before sawing the dead tree in the forest. The reforestation is mandatory following each approval.



Figure 28 Houses in Baan Omlong

Clothes and Dressing Culture – Previously, people sew clothes for their own use as a part of their routine. Nowadays people wear comfortable clothes that suit their work like plantation, gardening, or farming. Only when they have to participate in special occasions or festivals, northern Thai style clothes will be popularly worn (see figure 29).



Figure 29 Student wear clothes in Northern Thai style

Natural Herb and Medication - Herb is natural resource for medication being descended from our ancestors. The wisdom of using herb is critical in Baan Omlong due to the transportation difficulty; a long distance (1 hour drive) from the district hospital. There is only one health care service in the village with limited medication. Most of people in the village generally grow herb for their own medication healing basic symptoms (see figure 30).



Figure 30 Finding herbs to extract the medicine

Beside the medication from the health care service, Mr. Boonsong (volunteer doctor), has provided the alternative medications for people in the village. He offers service at Arokhaya clinic which ran by Phra Borommathat Doi Pha Som Temple (available on weekends and religious days). Normally he works in his garden. After his working hours, he always spends time on volunteering health service in osteopathy, massage, Guasa, and Yumkang (Northern Thai way of massaging by using foot). With his kindness, he always accepts extra treatment requests both day and night with his compassion and morale.

There are medication methodologies provided in the community as follows;

Guasa: Wisdom of medication of Chinese, Vietnamese, Cambodia, and the highlanders around eastern Asia, inherited from ancestors. Guasa functions well in body detoxification. With the drastically change in living, this causes many Non-Communicable Diseases (NCDs) not only from urban lifestyle but rural lifestyle also. Many behaviors, for example, hurry, smartphone addiction, tension, directly impact on people's health. Many illnesses and symptoms cannot be healed by modern medication, but alternative medication. Guasa detoxification becomes more convenient and popular as this technique allows people, families, and communities run their own primary health care. Guasa combines healing techniques of traditional Chinese Medication. It is originated in ancient China over 2,000 years. The technique is scraping to remove toxin from body. This is like we stir dirt or accumulated toxin in the body through skin, in order to allow better blood circulation. Some people call this as acupuncture without needle or massage without hands. If any part of the body is abnormal or contain toxin, it will be shown through discolouration after skin scraping. The skin color will become very dark or less, depending on the level of the illness. If the body does not have abnormality, even when the scrap force is pressed, there will be no trace of discoloration. This treatment can be applied at household level, at any time and any place. People can spend less than 30 minutes a day scraping from head to toe to stimulate the metabolism, resulting in better health condition. The only equipment is the scraper (see figure 31), which can be a

wooden spoon, small ceramics bowl or cup, or plate made of cow horn or yak horn. People also apply this when they have a headache, shoulder ache, and backache.

The benefits of Guasa are pain relief at neck, back and waist areas, blood circulation stimulation, increase effectiveness of immune system, anti-aging, rejuvenation, help searching body's abnormality in each organ and reduce emerging illness. The equipment for Guasa required scrap, spoon or coin and wax or herbal oil (see figure 32), which can be used if the illness is caused by heat such as oil extract from Bai-Yanang (*Limacia Triandra Miers*). If illness is caused by coolness, some types of oil should provide heating effect such as sesame or ginger oil. Guasa is both diagnosis and medication at the same time. Mostly within 7 days after Guasa, the redness will disappear. For the serious cases, Guasa can be applied on daily basis or many times a day if this can help the patient feel more relieved. The only one prohibit is scraping on the open or suppurating wound. This will cause more damage on the patient's skin.



Figure 31 Guasa equipment

Guasa Techniques

1. Grab the Guasa scrap at 45 degree from the skin, then scrap.
2. Can scrap at the joints, but with less force.
3. Scraping direction; from top to bottom, from outside to inside; at chest, face, stomach, and shoulder.



Figure 32 Cooling Oil

4. Toxin accumulation levels ; 3 levels

4.1 Tissue level – This can be detoxified directly from skin scraping especially at the flat or plain skin areas.

4.2 In-between muscles level – This is deeper than tissue level. Toxin is accumulated between muscles and bones. Instead of scraping, we need to dig between muscles and bones especially upper arm area to rib.

4.3 Bone level – When the bone is out of shape or misaligned; for example at coccyx “area, the toxin gas being locked inside the bone due to wrong sitting postures and less exercise for a long time and imbalance food intake, this required digging into the bone position directly.

How to Guasa

1. Regardless of the illness, the scrap will be taken at the pulsation area on the skeleton. Scrap from the back of the neck down to waist level, using consistent force creates a bearable pain.

2. The appropriate force level is taken until the little red rash emerges. Keep scraping until the redness is stable. Then change the scrap area.

3. Normally 2-3 days after scraping, there will be some pain. The patient will need to wait 5-7 days before repeating the Guasa at the particular area. For non-problematic area, Guasa through clothes can be applied on daily basis.

4. If the scraping position is being done accurately or wrong technique is previously applied, there is no side-effect at all.

5. After being Guasa, the patient is required to drink water to increase body metabolism.

6. The place for practicing Guasa must not be windy or in the air-condition room. This will cause the imbalance of Yin & Yang or Heat & Coolness.

7. Guasa can be applied 1-2 hours after showering. This is to allow skin pores to adjust to normal after showering or bathing.

8. Showering or taking a bath is allowed 5-8 hours after finishing Guasa. Warm water is highly recommended.

Toxin Level Identification and Skin condition or Discoloration Observation

1. Pale red means good health (see figure 33).
2. Little swelling means the toxin starts being collected at this area.
3. Bruise like Dengue Fever rash means the toxin has been collected at this area for a long time. In alternative medication called “Lom-Tak” means the breakage of the gas.
4. Bruise with blood inside, the colours varied from deep red, purple, or black, means heavily collected toxin. The black color can be identified as a cancer. More than 80% of the patients who has purple or black bruise has cancer.



Figure 33 Guasa Medication

Source: Phra Borommathat Doi Pha Som Temple (2014)

Cupping: Cupping therapy is an ancient form of alternative medication which a local suction is created on the skin; practitioners believe this mobilizes blood flow in order to boost healing. Suction is created using heat (fire) or mechanical devices (hand or electrical pumps). Through either heat or suction, the skin is gently drawn upwards by creating a vacuum in a cup over the targeted area of the skin. The cup stays in place for five to fifteen minutes. It is believed to help relieve pain, deep scar tissues in the muscles and connective tissue, muscle knots, and swelling. There are 3 types of cupping equipment being used widely; bamboo cylinder, ceramics cup or glass cup. Bamboo is cheap comparing with ceramics or glass cup, but the effectiveness is not as good as others. For ceramics cup, the edge is smoother than the bamboo one but the ceramics can be breakable. For glass cup, the shape is similar to the ball, edges are smooth and help make a good suction, easy to break, and this is the only material that allows seeing the skin color. Cupping technique aims to reduce the air pressure inside the cupping equipment before placing the cup on the skin (see figure 34). With bamboo equipment, putting the bamboo cup into the boiling water or using fire, for glass cup, there is a gun to suck the air inside the cup after placing on the skin. Cupping with fire is prohibited to apply when the patient is at home alone as the situation risks the fire and being done under the experienced assistant. After 10-15 minutes, the cups will be removed. The skin discoloration means the toxin being locked inside the body and being pulled out to the skin level. The discoloration can also identify the abnormality of the organ and abnormal inside the body. For example;

1. White: feel the cold when touching, means insufficient blood flow in that area.

2. Red: means the abnormal blood flow. The imbalance between coolness and heat; less cool but high level of heat. This can cause the headache or fever.

3. Pale red & yellow: means too high of humidity inside the body. This could be intrigued by external coolness or heat.

4. Purple and grey: means the body temperature is too cool that can cause thrombus or blood clot.

5. Pale and dark purple: means the body temperature is cold and more thrombus is collected.

6. Black: means there are lots of blood clots, low Chi flow, insufficient blood flows to the heart, and problematic menstruation.

All toxins that being stuck to skin, it will be excreted through sweat, urine, and stool. The continuous treatment will help release more toxin, resulting in diminishing skin discoloration from time to time. In some cases, when the blood clot emerges frequently, the therapist will apply acupuncture to pierce the skin to let the blood out.



Figure 34 Cupping

What symptom can be cured?

Mostly the cupping is used as a medication for pain relief applying in different areas of body. Moreover this treatment can help digestive system, respiratory system, paralysis patients. Some believe that the treatment helps stimulate Chi energy, so they use this on depression case. However, the treatment is prohibited for people who have fever, open wound, tumor and 1-3 month pregnancy. Especially, 1-3 months pregnancy, no cupping on waist area, belly area, and around coccyx (<https://aunlamun.exteen.com>, accessed February 20, 2015).

2.2 Home School

Home School education management is one of the centers for learning and action planning for Sufficiency Economy Learning Center of Phra

Borommathat Doi Pha Som Temple. It is established to resolve problems, improve quality of life and sustainability of the community, and to ensure that the learners can study in order to comply with their lifestyle with economic, social and environmental aspects. Home School focuses on improving the quality of people to have knowledge, moral, moderation, self-known and community deeply, and supporting the community development properly according to the world changing and society transformation, while still keeping the value of their real identity and culture of the community.

Objectives

1. To establish a learning process that allows people to ultimately realize their potential, self-esteem, actuality of family, community, and to establish fundamental social morality, integrity, and responsibility.
2. To establish the inheritance process of their traditions, customs, culture, local intellectuality, as well as benefiting from the ancestor's intellectuality.
3. To multiply the occupational paths and career from the development at individual, group, community, and network levels combining with Self-Sufficiency Economy theory.
4. To establish the public consciousness and self-realization of nature and environment especially in conserving local natural resources, decrease and prevent natural resource devastation, and create humble living with moral, integrity, and social responsibility.

Home School education relies on the participation of group in order to bring about the teaching and learning issues of the practical sufficiency economy learning center. There are four groups of participants involving in Home School education management as follows:

1. Sufficiency Economy Learning Center: Making a home study courses by educational management and coordination of participants. Teaching activities, meeting with families and students. Monitoring and assessment of the workshop.
2. Students: Studying on their own and studying courses at the

Learning Center. Reviewing lessons and methods of teaching by the teachers and also evaluating their learning progression.

3. Parents and family members: Helping with educating the students about the works related to Sufficiency Economy and social manner.

4. Community: Collaborating data, resources and support for the learning processes of Sufficiency Economy Learning Center.

Learning Standards

Observance of principles of the development of the brain and the theory of multiple intelligence is required to achieve learners' balanced development. The Basic Education Core Curriculum is therefore prescribed in the following eight learning areas: 1) Thai Language 2) Mathematics 3) Science 4) Social Studies, Religions and Culture 5) Health and Physical Education 6) Arts 7) Occupations and Technology 8) Foreign Languages.

For each learning area, learning standards serve as a goal to be achieved in the development of learners' capabilities. These standards prescribe what learners should know and should be able to perform. They also indicate moral and ethical values as well as desirable characteristics upon completing the education at basic level. Besides, the learning standards serve as an essential mechanism in advancing the whole educational system, as they have informed us of contents, teaching and evaluating methods. Learning standards also serve as instruments for quality assurances and they are also adopted for both internal quality assurances and external evaluation. Learning standards are practiced in educational service areas of Thailand or in the national levels. Monitoring for internal quality assurance is essential, as it indicates the extent of success in achieving the quality as prescribed on the pertinent standards.

Learning areas comprise of bodies of knowledge, skills and learning processes and the desirable characteristics. The attainment of which required for all basic educational learners. The contents are divided into eight learning areas (The Basic Education Core Curriculum, 2008), as shown in figure 35.



Figure 35 Basic Education Core Curriculum

Source: Ministry of Education 2008, **The Basic Education Core Curriculum**, accessed February 9, 2015, available from www.act.ac.th/document/1741.pdf

Learning center focuses on integrated teaching. The theories of the learning center are the King's Philosophy and Sufficiency Economy Philosophy. The practices are Sufficiency Economy Project. The two subjects of the learning center can be prescribed in the following eight learning areas; Thai Language, Mathematics, Science, Social Studies, Religions and Culture, Health and Physical Education, Arts, Occupations and Technology and Foreign Languages which are all supplemented by knowledge of competencies and skills of learners and desirable ethics and morals to the learning activities and the sharing of knowledge.

In secondary Level (Mathayom 1-3), the study focuses on creating processes that will enable students to practice sufficiency living which suitable for their lives and their families by addressing on self and family assistance, gaining knowledge and sharing awareness of surrounding matters, the realization of themselves; families, friends, communities, local wisdoms, nature and environment to establish harmony cohabitation; consciousness of sharing including helping each other, sacrifice and being considerate. The students will acknowledge the sufficiency living philosophy from their daily practice, such as offering food to the monks of the village before going to schools or their farms, sufficiency eating and spending, their dedication on public charities by helping in local dam constructions, community reforestations, firefighting, the development of project approaches, etc. These project approaches help to develop consciousness for others and also built up the capability in dealing with their problems and others' problems, which consequently develop a happy community.

In high school level (Mathayom 4-6), the students will learn about relationship between their communities, local wisdoms, natural resources and the environment of sub-districts, districts, provinces in Northern parts and other parts of Thailand, with the emphasis on the importance of ecosystem associated with the interdependency between upstream and downstream inhabitant (see figure 36). While the students are engaging in conservation of land, forest, and water resources and having respectful attitude toward the environment, their project approaches will provide them chances to perform activities relating to the natural resources reservation such as, building dams, reforestation and firefighting, etc. Subsequently, they will develop consciousness for others and build up their capability in dealing with their own problems and the problems of other people which consequently develop a happy community (Phra Borommathat Doi Pha Som Temple High School Curriculum, 2013).

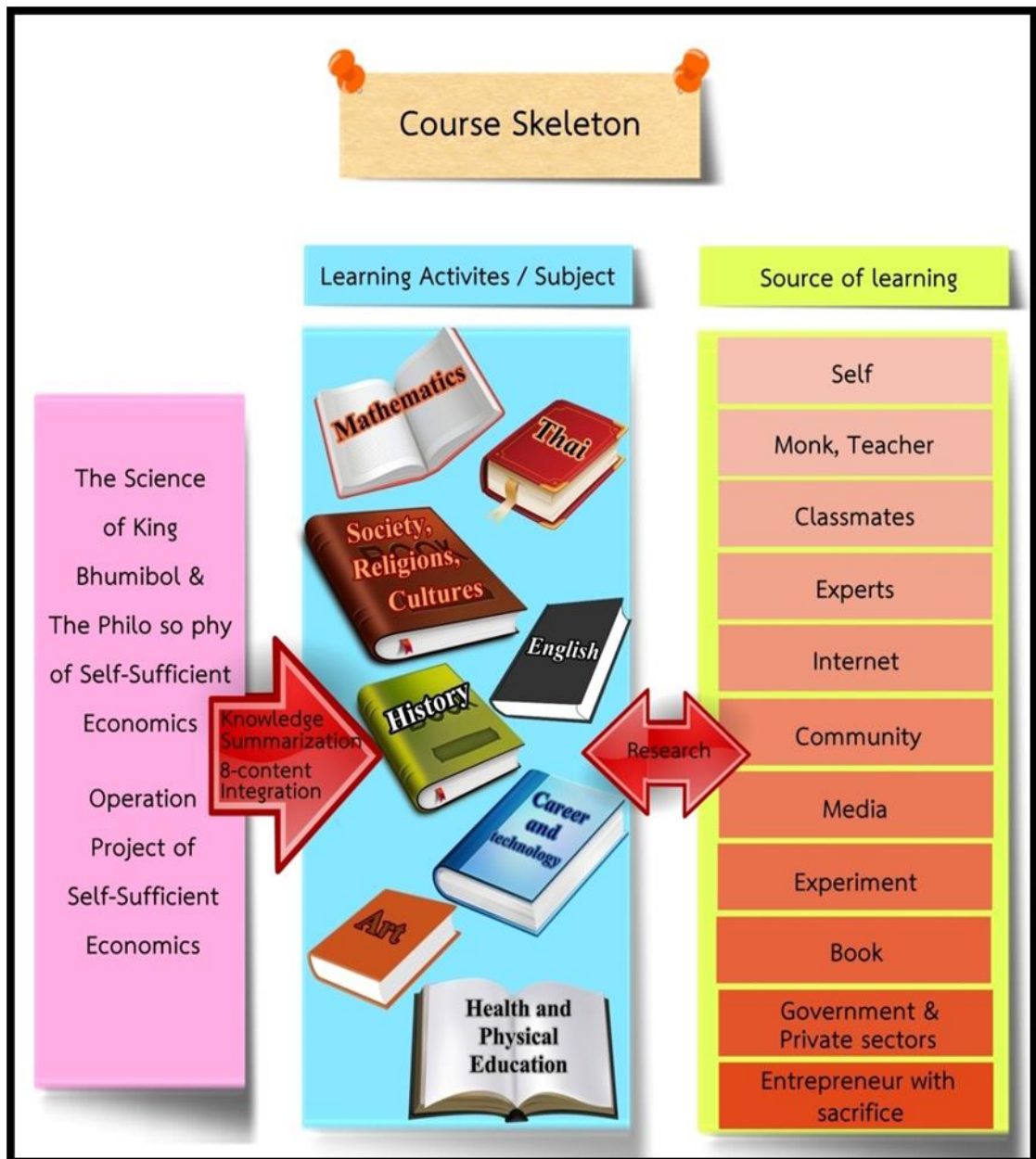


Figure 36 Overview of Home School Learning Skeleton

Source: Phra Borommathat Doi Pha Som Temple (2013)

Table 2 Class Schedule Following the Regulations of Curriculum on 2008

Time	Activities
4:00	Wake up / Temple & Community
5:00	Service
5:30	Chanting & Meditation / Morning Talk & Dhamma
6:10	Learning / Summary of Morning
6:30	Activities Discussion
7:00	Alarms-Rounds / Breakfast Cooking / Cleaning Buddha Relics pavilion / Temple Cleaning
9:00	Breakfast Offering / Fundamental Subject
10:00	Learning
12:00	Lunch
13:00	Self-Sufficient Economy Projects
15:00	Temple & Community Service / Cooking / Cleaning Buddha Relics Pavilion / Toilet Cleaning / Tree & Plant Watering
16:00	Shower & Laundry
17:00	Dinner
18:00	Diary Time
20:00	Chanting & Meditaion
21:00	Bed Time

Source: Phra Borommathat Doi Pha Som Temple (2014)

The Annual Curriculum of Home School at Phra Borommathat Doi Pha Som Temple comprises of 2 semesters:

The 1st semester: June 1st to September 30th (the 1st school break is in October)

The 2nd semester: November 1st to April 30th (the 2nd school break is in May)

Holiday – Both elementary and secondary school pupils can take a weekly holiday on Buddhist Holy Day



Figure 37 Home School of Phra Borommathat Doi Pha Som Temple

Education program in Home School at Phra Borommathat Doi Pha Som is separated into studying in classrooms and projects of each student (see figure 37). Students will study together. They are taught in classes, which will be held on every Monday and Friday. The main subjects will be rotated for the class such as Mathematics, English and Thai language, etc. Classes will start from 10:00 a.m. - 15:00 p.m. and teachers are the monks, local teachers and volunteer teachers. The content of studying is not too difficult because all levels of children are studying together. Each child has a different basic of knowledge. Therefore, the teachers need to adjust the content of their courses to suit their children. Meanwhile, teachers have to make learning a fun activity, easy to understand and connect with the subjects to give students access to genuine knowledge as Home School's children here basically dislike studying too academic courses.



Figure 38 Studying in the classroom

In the project at Home School Learning Center of Phra Borommathat Doi Pha Som Temple, researcher will discuss on the project of Home School students of 2014 which consisted of the importance of the project (see figure 38), project objectives and study results. There are 12 students, each of whom has a project that varies depending on their interests and aptitudes (Home School Student Report, 2014) as follows.

1. Mr. Nat, M.1 - Project: Doctor (Folk Remedies), as shown in figure 39

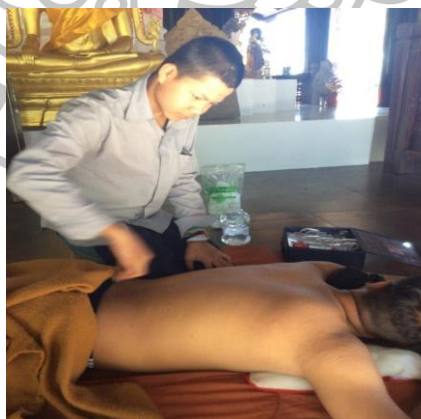


Figure 39 Mr. Nat

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Background and Significance: “This project was created due to my poor health. I have gotten my body fully check and find out that I have low blood pressure and Hyperglycemia which are the cause of my dizziness when moving up or down and also have the iron and protein deficiency. If I have not taken enough rest, I will get a severe headache. The doctor advised me not to be on diet and that I should not work under the strong sunlight. Furthermore I have defective immunity that makes me easily get flu so I have to consume a lot of vitamin C. I am also at risk of developing diabetes and having an allergy. I, therefore, decided to study folk medicine to be able to use alternative medical treatments in curing myself. The alternative treatments including Guasa, Cupping, Steam, Massage, Pressing therapy to remove poisonous substances from the body and to use food as medicine for body balancing”.

Objectives: To cure personal and others’ sickness, study to become a folk doctor who provides natural treatments and uses household herbs.

Procedure: Learn “Guasa” techniques, “Cupping” technique and how to use local herbs to massage, spa and press with heated herbal balls.

Summary of Study Results: “I think I was lucky that I was born with perfect human body even though I was not healthy. I am also lucky that I stay up here and study here and have learned what general schools would never have taught. I can choose to learn what I am interested in. I have been taught to work and earn money. Furthermore, I have been trained to meditate and I get the chance to listen to Dharma talks. I have done Guasa and Cupping for more than 50 people. Some people need a lot of treatments by me because they have not gotten better. In further study, I want to make records of patient biodata and treatment history for following up the case. At the moment I am studying about herbs from Berkapho, my senior who is currently studying in bachelor degree. I want to use the knowledge to cure myself so I would like to study about it in deeper details. I will further discuss and ask for some advice from Luangpor and Kru Ba. Another subject that I would like to study is the massage of arranging the bones, the press with heated herbal balls, the body spa and the making of herbal water for body balancing to be the alternative health care. The herbs can be found in the temple at Huay Bong or at

Baan Omlong. I want to make some healthy drinks. Some of my friends have started to grow some herbs such as lemon grass which can be used to make tea to keep the body warm in wintertime. “Anchan” or the Butterfly pea flowers in which we can pick up along the road can be used to make juice for recovering the first stage of sore throat. This priceless local wisdom, I think is worth studying and it should be preserved to the end. I am only in Mathayom 1, but I have already seen the chances to earn money and I think I am luckier than those students in general schools”.

2. Mr. Pee, M.2 - Project: Self-Reliance Approach, as shown in figure 40



Figure 40 Mr. Pee

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Background and Significance: “I choose to do this project because I am Thai Yai. I was born in Thailand. I have Thai nationality. I feel so lucky that I have been living and studying here in Thailand, an abundant country contains numerous lands, water resources and forests. The “Self-reliance Approach” was designed to help eradicate suffering and poverty including simple science on self-reliance that will initiate sufficiency living and higher income. I wish to live my life like that after graduation. Fortunately, Maejo Baan Din Homestay, a model Dharma learning center of Cultural Ministry which located at Banpao Subdistrict, Maetaeng

District, Chiang Mai Province, had accepted me to stay and study there for 8 months from April – December, 2014. At the learning center I was not only instructed to build low cost house like soil house but I was also taught to grow rice and vegetables, to build dams in the forests and to contribute to water resources conservation. Selecting and reserving vegetable seeds for planting and exchange with other people. I made new friends there, with friends staying at the same homestay at Maejo Baandin organized training for young people. I have learned to make new friends which will be beneficial to my life in the society”.

Objectives: To study about self-reliance concepts in connection with food and housing such as grow rice and soil house building, restore upstream resources by dam building and land fertilization, develop personal future career and build awareness of human and mother land’s values.

Procedure: Stay with Maejo Baandin Homestay group as a closed relative, attend the trainings such as building soil house, selecting and storing plant seeds, farming organic rice, making biological compost, getting rid of aphids, culturing white fungus for making plant and soil fertilization and making bamboo dams for land and water reservation, discuss and exchange ideas with Maejo Baandin Homestay group for the conclusion of each lesson (see figure 41).

Summary of Study Results: “I am proud of being born and grow up in Thailand. I intend to live on my own relying on eco-friendly agriculture after I finish school. On the second year of my study at Phra Borommathat Doi Pha Som Temple Learning Center, I was in Mathayom 2 and I got the chance to get training on what I was interested in i.e. soil house building and organic agriculture with the Northern network. It assured me that the self-reliance concepts were achievable and could help eradicate suffering and poverty, because if we have foods to eat, houses to live in good natural surroundings, we will be able to live happily. Furthermore, by staying with mother Thongbai’s family, my host family, and with many other volunteers who rotated to stay at Maejo Baandin, Maetang District, Chiang Mai Province, I had earned self-confidence in communicating with new friends. As a host, I had to talk with people using social skills. I also had to be responsible for my

duties when staying far away from the teachers and friends of the temples. The most important thing I would have never forgotten was that mother Thongbai took care of me as her own children even when she was not my real mother”.



Figure 41 Preparing soil for organic rice farming

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

3. Mr. Supapon Chaosuantangpee, M.2 - Project: Video Media, as shown in figure 42.



Figure 42 Mr. Supapon Chaosuantangpee

Background and Significance: “In academic year 2013, I was interested in doing the project on multipurpose liquid, charcoal making and being a DJ, playing music and broadcasting general news of the temple. I did try to do electrical wiring but I found that I was not good at it. I, therefore, chose to try on Video Media of the temple because the temple had had many activities that had never been recorded by video or photo cameras”.

Objectives: To study how to prepare video scripts, how to make story videos, how to edit a video, how to publicize the video and how to make a maximum of ten minutes video for 10 stories.

Procedure: Prepare the video script, record and publicize the video.

Summary of Study Results: “After I started, I faced with so many problems, such as there were no people available to teach me so I had to study from websites. The first program I learned from the Internet was Adobe Premiere Pro. I mostly used the program for video rearrangement but the program was not reliable. Sometimes it was good, sometimes there was the problem about the sound, sometimes about color adjustments. I did not know any person to consult with at that time so I decided to try Picasa Program to produce a video to include subtitles and music as my senior suggested. The video production was completed easily without problems on storytelling, insertion of short statement. Though for the music selections, I have to learn a little bit more. The other problem was that when I needed to participate in temple’s activities, I happened to had been assigned to do some other works. So I got no time for taking photos or videos. The worst part was that the video camera of the temple had been taken for repairing a long time ago. What I need to study more in the future is how to take pictures, then how to select photos to create a story and, lastly, how to choose the music to match with the story”.

4. Mr. Chanasorn Pa-un, M.2 - Project: Local Plants Preservation, as shown in figure 43.



Figure 43 Mr. Chanasorn Pa-un

Background and Significance: “At present, the way of life of Pgazkoenyau people has changed. In the past they went into the wood to find food but people cannot do that anymore now. They have to buy vegetables and food from the market which may be contaminated with chemicals. With the aim to reserve local plants and to provide clean food to the community, I, therefore, chose to do this project”.

Objectives: To cultivate, expand and reserve local plants such as chillies, Hom, etc., to establish natural food resources and provide the market for organic foods.

Procedures: Build a mulch garden for planting, cultivate the local plants and study about marketing plans (see figure 44 and 45).

Budgets: 5,000 Baht for purchasing agricultural tools such as knives, hoes, spades, scissors, black bags and slan sheet.

Summary of Study Results: “I used to be a lazy boy. I liked to play rather than helping my parents to do works. There was many things that had happened in my life while I was in the Phra Borommathat Doi Pha Som Learning Center. I could wake up early to take care of the teachers, to chant and to meditate so I had improved my concentration and could be able to focus on what I do. I am a responsible person now. Kruba Sa-ea advised me to do the local plants preservation project because I was an alert boy and liked to grow plants since local plants were easy to take care. They are enduring and growing fast so I can do it

while learning to be patient and responsible. I did carry soil, fertilizers and husks to mix the soil and put the soil into 1,000 of black bags then lined them properly. In lining the bags, I learned to count and calculate the plants per line. Next for the building of nursery, I learned to make the measurement of the area and the numbers of structural poles. Lastly, the most important things were the love and the unity among friends. If I had nobody helping me, I would not be able to complete my project. I also realize that if we want to do something we have to concentrate and work hard. Where there is a will, there is a way”.



Figure 44 Planting Ironwood seeds



Figure 45 Cultivating *Sauropus androgynous* by rooting plant from cuttings

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

5. Mr. Chonnawee Yoorungruang, M.2 - Project: Arabika Coffee, as shown in figure 46.



Figure 46 Mr. Chonnawee Yoorungruang

Background and Significance: “In 2013, I was interested in growing coffee trees because coffee trees can be grown in plain land and ample forest which help to reserve the forest as well as making good long term income for the grower. This year, I have grown 3,500 coffee plants in 2 Rais of land in Huay Bong. At present there are only 500 coffee plants left.”

Objectives: To increase number of trees in the forest, reserve Arabica coffee, take care of the growing coffee and replace the dead trees, grow Stevia while waiting for coffee yields and help other friends in agriculture group.

Procedures: Taking care of the coffee trees, watering, cutting grass, giving fertilizer and replacing the dead trees.

Summary of Study Results: “The problem that I found was the coffee trees were growing in different areas. In some areas, there were insufficient water and the coffee trees were dried drastically. When I got the chance to attend the training about growing and producing Arabica coffee at the Faculty of Agriculture, Chiang Mai University, conducted by Prof. Pachchanee Suwanwisonkij (see figure 47), I

gained additional knowledge about coffee, not only the growing method but also the cultivation of young coffee trees, the harvesting of coffee cherries, the management of coffee cherries after harvesting, the storing of shells, the screening of coffee contents, the crushing of coffee, the grinding of crushed coffee, and the serving of coffee, etc. I also went to see the work at Phayong village where the coffee was grown in reserved lands for 23 years. The coffee cherries were harvested many tons a year. The main income of the people there was from producing coffee. They were unable to grow rice because there was no land to do rice farming and the weather is too cold to feed the fishes. Phra Borommathat Doi Pha Som Temple, therefore, had the project to help Phayong village by offering rice to reduce their expense for rice and help to purchase the coffee cherries. The coffee was bought from Phayong village was 15 Baht per kilo. If they delivered the coffee to Phra Borommathat Doi Pha Som Temple, it would cost 16.50 Baht per kilo. The extra 1 Baht was charged for fuel cost, 50 satang for Kabuan Boon project or known as the merit fund”.



Figure 47 Studying about making coffee at Chiang Mai University

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

6. Mr. Kosubin Thasa, M.3 - Project: Drawing with Sketchuk 8, as shown in figure 48.



Figure 48 Mr. Kosubin Thasa

Background and Significance: “I decided to do the project on “Drawing with Sketchup 8” because I want to continue what I have learned from my father and as nowadays most of people prefer to live in single family so the demand of having a house is increasing and subsequently the demand of construction drawing is also rising. I will learn from my father how to draw, to read the drawing, to estimate the cost, to make the model, to draw with Autocad program, and to draw a construction plan manually”.

Objectives: To learn how to draw construction plan, estimate construction costs and learn how to build a model (see figure 49).

Summary of the project results: “We need to be imaginative in performing drawing work. I am happy to get the chance to do the project. I will try to further develop my skill in architectural designing, dams and other structures designing to provide my help to my friends in the center and most importantly I can offer my help to the abbot. The problem was that I was not an enthusiastic person, so frequency of project correction was very high. Sometimes technical details were required to complete my drawing works, but as I didn’t bother to ask, I did not learn such technical knowledge to improve my job. My first project “Boonyarit Reservoir” was the first project that I used Sketchup 8 program. However, it was the project that already inspired me to go forward for better achievement”.



Figure 49 Boonyarit reservoir designed by Mr. Kosubin Thasa

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

7. Mr. Phurinat Preecha, M.4 - Project: Organic passion fruit, as shown in figure 50).



Figure 50 Mr. Phurinat Preecha

Background and Significance: “Since my family has been growing passion fruit, I, therefore, would like to study about growing of organic passion fruit

because there was no chemical used so the soil was not toxified, in other hand, it helped to restore the soil and helped in conserving natural resources”.

Objectives: To grow organic passion fruit, study about processed passion fruit products and marketing route of passion fruit.

Procedures: Grow organic passion fruit in approximately 8,000 square meters, make processed passion fruit such as jam, juice and ice-cream, etc. and learn about the market of passion fruit (see figure 51, 52, 53 and 54).

Budgets: 500 numbers of passion fruit young plants cost at 2,500 Baht, 300 cement poles cost at 30,000 Baht, 20 rolls of metal net cost at 1,900 Baht, 1 piece of cutting pliers cost at 35 Baht, 1 roll of rope cost at 95 Baht, 6 rolls of metal wire cost at 5,520 Baht, 4 hoes cost at 800 Baht and 1 spade costs at 500 Baht. Total budget was 50,000 Baht.

Summary of the study result:

Activity 1: Preparation of the area for growing passion fruit “I have learned how to use and take care of agriculture equipment as well as how to repair equipments such as grass cutting machines and hoes, etc. I also have learned about water resource management, canal digging, and growing area preparation concerning water draining”.

Activity 2: Making of growing stand “I have learned how to arrange the poles and the materials for making the stand including an awareness of the quantity such as the amount of poles and roll of nets that I need, as well as what kind of bamboo to be used and how to tie the metal wire properly”.

Activity 3: Growing of passion fruit “I have learned that if the soil was not properly prepared, the passion fruit will not grow steadily. My team and I did not have enough knowledge about soil preparation, consequently, some of my plants were died. I, therefore, tried to find out proper mixture of soil, husk and fertilizer”.

Activity 4: Nurturing of growing passion fruit “I have learned that the root of passion fruit could be expanded up to 1 meter long, so within 1 meter radius, the area must not be weed because the weed will snatch the food of passion fruit. And learn about allow fertilizer to penetrate into the soil properly such as organic

fertilizer comprise some heat so it should be given properly, should not put it near the plant as it may die”.

Activity 5: Growing of other plants in the area to contribute maximum profit “As I have seen my parents grow passion fruits since I was very young so I thought growing passion fruit was not hard but it was not as I thought. When I did it by myself, I need to get a lot of supports from my father, furthermore I have invested 70,000 Baht for growing the passion fruit and it takes 8 months to 1 year for passion fruit to yield its crop so I decided to grow some other plants to earn some money in a meantime”.



Figure 51 Loosen the soils for the cultivation

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)



Figure 52 Building passion fruits house

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)



Figure 53 Manure

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)



Figure 54 Dredging the water course

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

8. Ms. Naree Poonue and Ms. Suthamas Oatchansri, M4. - Project: Miracle Hom, as shown in figure 55 and 56 respectively.



Figure 55 Ms. Naree Poonue



Figure 56 Ms. Suthamas Oatchansri

Background and Significance: “This project was initiated to notify that dyeing with natural colors is fading out because chemical colors became popular as it was easy to produce and the cost is lower. The natural Hom (traditional Thai fabric) is produced from natural plant is disappearing so we would like to study about it and remain this traditional method as it is priceless and can be applied as a career in the future”.

Objectives: To reserve economical, local plant, and the land in Samoeng where Hom is grown as well as study the process of making and dyeing Hom.

Procedures: Takecare of Hom grown in Thungnador, purchase and collect Hom from different villages such as Omlong, Angkai, Maesab, Ngiewthao, Maedad for experiment and observe the process of producing Hom and dyeing at Mae Chansri mother's house (see figure 57).

Summary of the study results (Ms. Naree): "I consider myself lucky that I have had the chance to stay at this temple. The abbot has given me the chance to stay and study here. I have gained a lot of knowledge and got to know so many people from all paths of lives. I have learned that if we are good, everybody will be good to us. People have different behaviors. Living in this temple, I have known many elders, senior staffs, friends and younger people who joined together with me in doing activities. We live closely with each other, chit chat, hang out together and have learned many things. When friends got sick we took care of them and provided medicine for them. We loved each other like brothers and sisters. Studying here, we all have project to handle individually. In other schools the students will have to study in different classes but at this temple we study together so we are well bonded and love each other. My friends and I have attended the training on "Hom" and have done a lot of experiments. We learned about the change of the colors. We thought Hom is a living thing and we need to understand it. We have been taught to be honest to ourselves and to others; be responsible and well organized; understand other people, forgive and forget, work together cooperatively, careful and able to solve the problems, as well as being respectful and consultative with elders. The hardest thing about the project was to give the answers to difficult questions about the project. Some questions were too hard for high school students. I, nevertheless, will keep that as my lesson. I have worked with Kru Ba and the seniors at the temple since the "Hom" building was firstly built. I did start from a very beginning like carry the bricks, rocks, cement and sand by myself. We would not have the chance to do those kinds of things if we were in regular

schools. Even I'm young but I had my own "Hom" workshop to promote education and careers".

Summary of study results (Ms. Suthamas): "I think I have been very lucky that I have got the chance to stay at the temple. I have learned to be strong from Dhamma taught by the abbot and the advices from senior staffs and the teachers. Studying at the temple was free of charge; likewise, we got the salary. Staying in the temple we had no risk as I did not have to face with bad people who may encouraged us to do some bad things. The people we interacted with at the temple motivated us to work harder, pay more attention and details to the works, talk and think positively about others first as well as think consciously before doing anything. "Hom" work was very sensitive. To produce "Hom" I need to do experiments many times to derive the colours at its finest quality. In each step I need to stay calm, neat, diligent and be honest to the work I do. I have joined with Kru Ba and the elders in the temple building "Hom" workshop from the beginning. I have helped to carry bricks, rocks, cement and sand. Now it is during the designing stage. This kind of learning approach do not present in general schools. I have got the chance to have my own "Hom" workshop for studying and doing my job. Only at this age, that what I have got".



Figure 57 Harvest Hom with friends

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

9. Mr. Mongkonchai Wanakulphitak, M.5 - Project: Bladesmith, as shown in figure 58.



Figure 58 Mr. Mongkonchai Wanakulphitak

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Background and Significance: “As I was from Karen or Pgazkoenyau family lives in Baan Nongdaeng, Moo 6, Baanchan Subdistrict, Kalayaniwattana District, Chiang Mai Province. In the past, people from this village were known for their excellent bladesmith skills and able to produce various farming tools such as spades, hoes, knives and axes etc. However, in the present, the skill is disappearing as the experts are getting old or already passed away and their children are not interested in continuing it. I am of Pgazkoenyau and also well aware of the value of the local wisdom. This is the reason why I initiated this project approach to study about bladesmith to better my ability and my knowledge in producing various types of knives. In addition, I expect that, with my advanced skills, I will be able to help my family lower their expenses on buying and repairing farming tools, while, in the other hand, I will be able to earn good income from bladesmith job in the future”.

Objectives: To study how to make and modify farming tools such as spades, hoes and knives by bladesmith skills, conserve local wisdom and expand the knowledge about bladesmith to other people in the community, also analyze the market of bladesmith products (see figure 59).

Summary of the study results: “During the school break I returned home to help my parents in the farm and that inspired my desire to learn how to produce knives for using in my family’s career and being able to transfer the disappearing knowledge to my community. Furthermore, I think it is another way to help my family reduce expenses on buying or to repairing the farming tools such as spades, knives and hoes anymore. And I will be able to earn money from the career used such knowledge in the future. Later, I discussed about my idea with the teachers in the temples and they helped me to ask for a permission from the abbot to allow me to change my project. Not so long after that, I could initiate my new project “Bladesmith” (see figure 60). From June – August 2014, I was allowed to go learn about bladesmith with specialist at Baan Maetungting, Moo 5, Maesai Subdistrict, Samoeng District, Chiang Mai Province. During those 3 months, I had learned much more about bladesmith techniques and control my patience on doing the works until they are completed. When I was there, sometimes I felt lonely and missed my friends at Phra Borommathat Doi Pha Som Temple. I did practice to oppose my need; to run away back to the temple. Gradually, I learned to stay with different people and different environment. Besides, I was glad that the knives for cutting the wood and grass I made for 5 pieces were sold out at 160 Baht and 170 Baht. I gave all the money to the teacher, who was my trainer, to buy materials and equipment for his works.



Figure 59 Student is learning how to make bladesmith

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

After finishing the training at Baan Maetungting, I was back to stay at the temple in September. I then asked the abbot and got permission to build a bladesmith workshop in Phra Borommathat Doi Pha Som Temple. These days I can make various types of works. Having the workshop, I can spend more time to practice and improve my bladesmith skills. I am proud that I can create and design different styles of knives”.



Figure 60 Building bladesmith house

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

10. Ms. Chalida Chaiwang, M.5 -Project: Dyeing with natural herbs by using local wisdom of Pgzakoenyau, as shown in figure 61.



Figure 61 Ms. Chalida Chaiwang

Background and Significance: “ThePgzakoenyau at Baan Sob Lan is the oldest hill tribe in Sameung District who has normal and simple lifestyle and

also has a lot of wisdoms such as eating etiquette, wooden stuff finding, dyeing with natural herbs, weaving, basketworks and creating music, etc. However, a lot of their cultures are vanishing because their children have left to study in town and brought back the city culture. I am, therefore, interested in continue their wisdom on dyeing with natural herbs and their weaving skills. This will be my study topics and, if possible, I will share the knowledge to people who are interested in it. I believe I will be able to make money from the skills and so do the people at Baan Sob Lan”.

Objectives: To study to weaving methods various patterns, study about selling techniques, create alternative products, dye cloth with natural herbs and learn about marketing strategy (see figure 62).

Procedures:

Table 3 Procedures

Month	Study Topics
June	Learn from the experts about dyeing with natural products.
July	Find the dyeing place and learn to weave clothes by trial dyed cotton.
August	Learn to dye cloth with natural products and the wisdom on pattern weaving.
September	Weave the dyed cotton into scarves, bags and shirts.
October	Learn about design and selling techniques.

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Summary of the study results: “In the academic year of 2013 I have studied about dyeing with natural products as I was interested in clothing and needed to maintain Pgazkoenyau wisdom. Nowadays, Pgazkoenyau children have gone to study in town so their lifestyle has been changed and since the medias have influenced their lives, some Pgazkoenyau like to send their children to gain education in town and become a teacher or a doctor. They want them to do

convenient works rather than manually working in the rice field. Some parents worked very hard to facilitate high education of their children and some left the village to find the job that they can earn more money. Those are the reasons why the wisdoms of Pgazkoenyau are disappearing. I, therefore, would like to reserve their wisdoms of dyeing and weaving as I think the dyeing and weaving techniques are priceless. I have been living with Pgazkoenyau for a long time and have used a lot of natural products my entire life so I really love and feel attached to the nature. The deforestation is very important because every living thing needs to rely on the forest as it originates water for living. In this semester, I have learned to dye cotton with natural products and used it for weaving into various kinds of clothings (see figure 63). The woods used for dying are padauk, pega, gooseberries, Hom leaves, wooden rambutan and core of jackfruit tree. The weaven clothings are scarves, shirts and bags. To study about dyeing and weaving, we should have a great passion in it because we have to be patient and use much effort in producing a piece of work. I have strived my best attempt and sometimes it did not go as it was planned while some were successful. I have learned a lot from practicing it and have realized the value of the work I have done by myself. From this study I have gained both valuable knowledge and got the chance to develop my mind”.



Figure 62 Weaving

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)



Figure 63 Drying the cotton after dying

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

11. Ms. Sirinath Potha, M.6 - Project: Instant Gaba Rice Powder, as shown in figure 64.

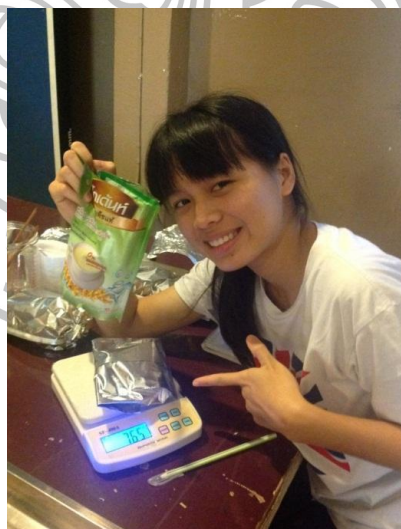


Figure 64 Ms. Sirinath Potha

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Background and Significance: “As I have chosen to learn about processed rice as my main subject continued from Mathayom5. I have studied about the process of making instant Gaba rice while maintaining the nutrition of rice. This project is the project for my final year as the assessment of Mathayom 6”.

Objectives: To increase the nutrition of Gaba rice, create three recipes at minimum, apply the old process to the modern one, study how to preserve food and generate revenue at least THB 30,000 from the project.

Summary of Study Results: “Through 6 years of studying here I have learned the whole process of rice framing from the step of land preparation to seed selection, single plant growing, increasing of crops, rice framing, cost reduction and the processing of rice. After I finished Mathayom 3, I want to continue my project by producing Gaba rice in the form of instant Gaba rice powder (see figure 65). Therefore, when I studied in Mathayom 6, I created 3 recipes of instant Gaba rice powder. The first recipe was Gaba rice mixed with black sesame, the second recipe was Gaba rice mixed with cereal (corn, black sesame and soya bean) and the third recipe was traditional Gaba rice. I also learned to estimate the cost and the nutrition quantity per glass (170 ml.) of instant Gaba rice powder. I had fun doing the project as I felt like I was a scientist who creating various Gaba rice recipes to deliver highest nutrition to the consumers. In addition I have learned to do accounting true cost and the benefit from Gaba rice. Even though the accounting made me feel bored and frustrated, I thought, on the other hand, if I improve myself to be more detail oriented and precise, I will be able to apply the skills in my daily activities and that will be beneficial to me after I graduate and turned to be an entrepreneur in the future. I think I was lucky that the abbot was so kind and supporting over the project and I have got the chance to know those elder people from the Kabuan Boon team project who helped take my products to sell in Bangkok and collected the money for forestry conservation. In this year the temple will have more number of people join in Kabuan Boon project such as a group from Assumption University and this can increase the number of distribution channel of Instant Gaba Rice Powder”.



Figure 65 Gaba rice processing

Source: Phra Borommathat Doi Pha Som Temple, Home School Student Report (2014)

Jirinda stated that it was an alternative integrated education infused with local curriculum and addressed on Buddhism philosophy with involvement of house, temple and school. Part of Waldrop theory was conformed to make the study fit for individual student. Each student has their own project and group project. For individual project, the student chose one that they like to do and that matches with their competency. Regarding the group project, the students cooperatively participate in the community services such as constructing dams, planting vetiver, firefighting, and building the roads, etc. The main objective for having the entire students do the group project was to build up their awareness on nature, develop their good spirit, and inspire their affection over the land and the forest that originated water resources because these natural resources were essential to their lives. Most of the people there are working in the farm that has to depend on nature. One problem of the school was the insufficiency of instructors and the teachers here need to be responsible for both teaching and taking caring of the students (Sanehanchai 2014, pers. comm. 21 December).

Phrakru Weerayut, Vice Abbot, expressed that the children have different development. The key idea of the school is to allow the students to do the project that they were capable of and they should do it with passion and attention. Development and assessment should be considered in order to evaluate the apparent results. The students have had the chances to study with the experts

to earn accurate knowledge for their projects execution and to refer to when they have problem with their projects. The school in the temple has separated the students into three groups. The first group is the students who know what they like and good at. Second is group of students who do not know what they like and good at, so the school (the temple) has given the students some assignments and timely evaluated their results to find out their capability. This group of students was also provided the chance to study outside the school. Third is a group of students who need great assistance. The school expected that at least the students should be able to stay on their own by applying the philosophy of sufficiency economy such as they should be able to grow bananas, coffee, etc. The development of the students was subjected to individual capability. Most importantly, the school focused on behavior and disciplinary development rather than theory knowledge. The tools for building up their good behavior are their daily activities, project assignments and social activities which facilitated them with experiences and expertise to apply for their living. For theory contents, the students could learn from report writings and monthly project presentations. Altogether we call “Integrated Education” that addressed on individual requirement. The problems were mostly caused from the misunderstanding of the students. The students, who did not understand or did not like the school concept, would finally quit. However, attitude and emotional adjustment has been made to the students before they left (Prakru Weerayut 2014, pers. comm. 13 November).

“My mother brought me here. Previously I lived in Samutprakarn province and was planned to attend another public school in downtown Chiang Mai. My mother has met the abbot and decided to move me to study here. If I attended the public school, I would be in a classroom from Monday to Friday, but the main activity here is the workshop. Over here, I learned to separate time for my own project and the temple project and work such as, building and renovating some areas in the temple, and also other friends’ projects like passion fruit plantation. I have lived here for two years and been very happy” (Chaosuantang 2014, pers. comm. 6 November).

“I have studied here for two years. Teacher Aom, she actually stays near my house and has recommended me to move here. I enjoy learning in the workshop but I feel bored when I am in the classroom. During the workshop period, I enjoy working with friends. I can do what I like and be happy with it” (Pa-un 2014, pers. comm. 6 November).

“Phra Boonchai Kittipanyo came from the same district as me. He recommended me to study here which is different from other schools. I have a chance to learn by practicing which is very funny. Previously, I only studied in the classroom and learned only from books, which is totally different from here” (Yoorungruang 2014, pers. comm. 7 November).

“I have studied here for 6 months. Previously my parents planned to bring me to other school in Chiang Mai Province. We met another friend of mine and he recommended me to come here. I had a chance to learn by doing and I like it much more than learning in the classroom. I can do what I like and enjoy it” (Preecha 2014, pers. comm. 6 November).

“My aunt brought me to this school. I have studied here for 2 years now. Actually I did not want to be here at the beginning but after these past years, I have developed warm feeling and acquaintance with friends. I have had the precious opportunities to train myself from learning by doing and understand myself more about my interests. At this school, there are also classes we had to attend with students from all grades, which are also fun for me” (Punu 2014, pers. comm. 8 November).

“My friend and a monk at my hometown at Kullayaniwattana District recommended me to study here. I have lived here for longer than a year. I am Karen and dislike to be in the classroom, doing repetitive work, and it's difficult for me. I wanted to improve Thai language. The workshop activities are different on daily basis. If there are visitors in the temple, I will help with the welcome preparation. Sometimes I also do vegetable gardening, building or renovating some areas in the temple. All friends help one another here. I know myself on what I like and am good at. We all are different. I assess myself that I fit here. However in the classroom, I am not good at studying the theories. I like to study here and I enjoy it.

For others, if they like to be in the classroom, they may not like to stay outside. I spend most of my time for public work of the temple and less time to improve myself in other areas. But I have learned so much more about life” (Wanakulphitak 2014, pers. comm. 6 November).

“I have studied here for 5 years already. My ex-school has only 3 levels. The school teacher knew the abbot and recommended me to be here. In this school, I have freedom to learn and do not need to be in the classroom the whole time. I do not like to be forced to stay in the square room and doing homework. It’s boring and I cannot do what I like to do. In this school, I have freedom and do what I like. This is also the only school that applies “BOR WORN” principle and Buddhism as spiritual center of the people” (Chaiwang 2014, pers. comm.. 8 November).

“I have studies here since Mathayom 1. At first, I intended to study in the public school teaching agriculture and Thai music. Fortunately I was brought to attend this school. The study here comprises academic part which is what we reports on the project progress on monthly basis, and the workshop part which is our own project, it was fantastic because I can create products by my own. In terms of academic, I have to do report every month on what we did, the result, presentation, as well as our planning for the upcoming activity” (Potha 2014, pers. comm. 8 November).

“Nowadays, I am studying Architecture, I got a chance to visit to Sathira Dhammasathan and other places in order to get an idea to design the buildings. Firstly, my father recommended me to study here as he works with Mab-Ueang Agri-Nature Center and he knows what Home School is. I think the academic course is better than other schools because I study from the real situations and have chances to practice which I can bring them to adapt with my interested area which is very useful and this is what cannot be found in public schools.” (Thasa 2014, pers. comm. 8 November).

“At first, my mother recommended me to study here, I think it is different from other schools which mostly study in the classroom and are stuffed with too many theories. Currently, I am studying about the traditional treatments

such as Guasa, Cupping, Massage and Herbs stream. After graduation, I would like to study deeply about herbal medicine because the temple and community is far away from hospital, therefore, I would like to help myself first as I have problems with my health as well as helping others in the community. This program is very beneficial and I like it so much” (Nat 2014, pers. comm. 8 November).

In summary, the home school of Phra Borommathat Doi Pha Som Temple is the integrated alternative education system, emphasizing on Buddhism principle and “BORWORN” principles as the driving mechanism, and generating child-centered system. The home school creates lots of opportunities for the children to search for their likes and dislikes. Then the students can choose their own projects depending on the aptitude and interest. After that, the temple will support the students by sending them to be trained with the specialists which can be at the temple or outside such as Mr. Chonnawee interested in coffee, so he got an opportunity to study with a professor at Chiang Mai University and had a chance to visit Baan Phayong area where the premium coffee were produced, to gain more knowledge and experience. The students can see the actual place and process over there and can bring back the knowledge to establish and develop his own project. The importances are creating the integrity and self-realization, and connecting the students with nature and morality. The tools are the routine, the temple daily works, community work, for example; morning and evening chanting session, meditation, check dam building with the community, forestation, and wild fire work. All of these activities allow the students to absorb the humbleness, morality, environmental consciousness, and self-sufficiency.

3. Environmental Dimension

Forest is the basic foundation of every life on earth; being the source of foods and shelters for people. Seven years ago, there was no water resources in Huay Bong, the forest appeared to be arid and decadent especially during winter and summer times, drought were widely spreading. Only wooden sticks were all around with wildfire occurred everywhere causing environmental deterioration.

Mr. Don, Chief of Sufficiency Economy Learning Center under the Royal Initiative of His Majesty the King (BORWORN) or called Huay Bong, stated that he used

to be a chemical farmer who did monocultures by using pesticides and chemicals with his crops every year. At that time, he had been suffering from monoculture farming and stressing from debts as it was a never ending circle. In 2007, he has met the abbot and Luang Por Sangkhom who were community leaders. The abbot persuaded him to donate his land in Huay Bong about 10 acres to build the learning center for community as it would implement the philosophy of sufficiency economy. There are many activities about natural resources conservation mentioned as follows:

3.1 Reforestation

After donation the land, the abbot, Luang Por Sangkhom and Mr. Don donated started planting Three Forests-Four Benefits. His Majesty advised growing mixed forests. This combines agro-forestry and socio-economic considerations into a comprehensive approach to afforestation. In other words, forests should be divided into three parts to grow timber, fruits and firewood. These are the forests which also offer great three benefits to the people. The fourth benefit as the by-product of the **Three Forests** is the conservation of soil and watersheds (The Chaipattana Foundation, 2015).

Mr. Don explained that Three Forests consist of edible plants such as herbs, vegetables and fruit. Secondly, usable plants which are fast growing using multitude functions such as bamboo, rattan, etc. The third is livable plants which are hardwood trees such as Teak, Rosewood, Balau, Redwood, Ironwood, Sandalwood, etc. used for building houses or living place. When we have three different benefits, another fourth benefit is a fully peaceful natural environment that can help reduce global warming or climate change (see figure 66). If we mix growing different kinds of plants, they will grow even faster, because the plants and trees will dissimilarly consume nutrients and grow differently over the period of time and they will complement one another. If we grow the same type of plants as before, they will all consume the same nutrients which will not be enough for them, and then causes the trees to grow slower. This project was begun in a year and the result was satisfying, so he thought that it is the right way to continue. In the meantime, the abbot supported Mr. Don to have studying and training trips to gain more knowledge

to adjust in the area. He had a chance to see other villagers in the Northeastern and also attended a leadership training school in Kanchanaburi Province and Mab-Ueang Agri-Nature Center, as shown in figure 67 (Sukkho 2014, pers. comm. 13 November).



Figure 66 Three Forests-Four Benefits Project on 1 August 2015

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 67 Leader of Very Good Group is Planting Trees

Source: Phra Borommathat Doi Pha Som Temple (2015)

Later on, other locals join to work with spirit of volunteers. The abbot and Luang Por Sangkhom tried to change their way of thinking and raised the community's spirit as well as awareness of protecting the natural environment. From that moment on, they were introduced to the process and practiced on the project, the villagers started to understand how they could protect their environment and nature with the power of collaboration and faith to the abbot. By doing so, it could obviously help in preserving water, forests, environments and nature.

The main activity at the temple is always a forestation. The activities which are done regularly consist of reviving and maintaining the abundance of forests upstream, protecting forest from wildfires and building check dams. Because natural resources are the precious heritage that communities rely on to survive on their way of life. Therefore, the use of natural resources must be planned on replacement and managed resources appropriately. Human and nature must not be separated. For 10 years after the abbot first arrived to the village, he observed the forest deterioration extensively in conjunction with the weakness or lack of self-reliance in the community. He started to plant a seed in the heart of the people. Many of the King's recommendations have been continuously applied. The abbot followed the King's Forest Rehabilitation and Development Theory by starting from Baan Omlong, the nearest community and the pioneer group of people who participated in reforestation program.

3.2 Forest Fire Fighting

Forest fires are a major problem of environmental protection which causing the loss of natural resources including wildlife, trees and abundance of spaces. Wildfires also contribute to air pollution in which occurred naturally and from the hands of human as for some people are not aware of the importance of the forests. They also do not recognize the damages of the impacts caused by forest fires and boost up the damage by venturing into the jungle to commit an illegal deforestation several thousands of hectares of the forest. The watershed of Mae Khan River meets Ping River before flowing into Chao Phraya River which is the major river of Thailand that feeds the whole country. It is the area of wildlife sanctuary adjoins Doi Suthep and Doi Pui that suffer wildfires every year.

The firebreaks building are main activity of community to prevent forest fires, it is a local wisdom of community. The area needs to be cleaned and bare as much as to be removed of the fuel. The firebreaks building will remove any burning operations from one side to the other side. This can reduce the destructiveness occurred in the area. The firebreaks are usually done early during summer season (February – May) which takes about four months. For this activity the temple's members will persuade the villagers and seek help from other institutions, such as Kawila Military Camp and the temple networks, to help building the firebreaks in order to prevent and control forest fires from spreading over a wide area or at least for people to fight the wildfires in a narrower space (see figure 68, 69 and 70).

3.2.1 Firebreak Zoning

Zone 1: Boh Cherry, Khun-Huay Rin, Khun-Huay Doi-Jing, Huay Mai hang 1 and 2, Pha-Poon, Kiew-Lom, Mor E-Daeng, Buak Din-Daen and Khun-Huay Pa-Koay comprise of 5 kilometres distance surrounded the mountain, a highly risky area due to its steepness. The temple's community has been raising fund to build a 3 meters width road in order to allow a water refill truck to climb up the street to each tanks. This zone is able to control half of the forest under the temple's responsibility.

Zone 2: Drinking water factory to Payabaan Curve Road. The approximate distance is about 500 metres. This is the red zone and a high risk area as the fire will come from nearby communities, across the main road and passing directly to the temple.

Zone 3: The temple area (the edge of the relics). The distance is around 500 metres. The Home School pupils and villagers are responsible for this zone.

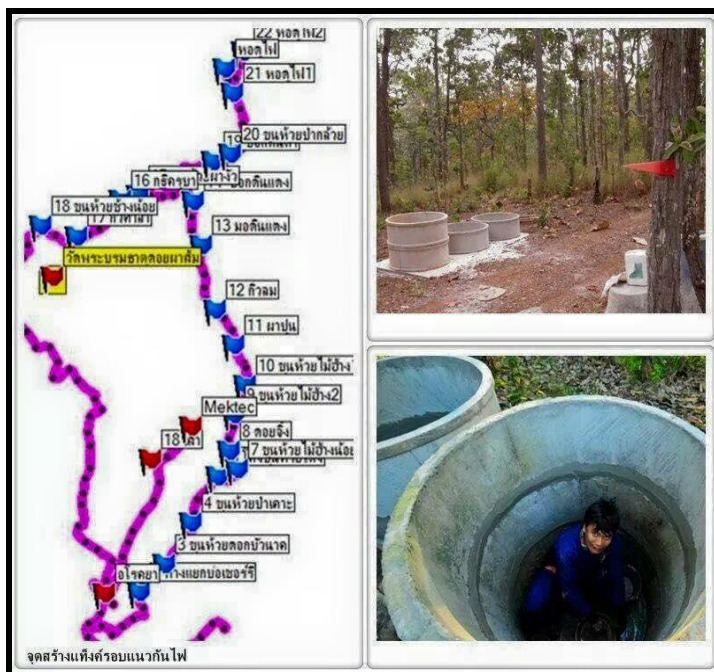


Figure 68 Tanks Stations around Firebreaks:

Source: Phra Borommathat Doi Pha Som Temple (2014)

Material / Equipment for Firebreaks Building: 30 Coconut Palms Brooms, 10 Rakes, 5 knives and 5 hoes.



Figure 69 Firebreaks Building

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 70 Villagers Sweep a Firebreak Line

Source: Phra Borommathat Doi Pha Som Temple (2015)

The patrol in the forest is also a part of the community activity. Villagers were divided into groups and working together as a sentry to watch out for the fires and smugglers who illegally cutting down trees in the forest. If they found a wildfire that had happened, they would mobilize volunteers to control and extinguish the fire stopping it from spreading vast destruction. To manage forest firefighting, the temple's members would take money from the forest conservation funds (Kabuanboon Project) and merit-making events in order to use in fire extinction strategies, such as building water tanks for water supply. Also, to build the shelters and tents for the patrols to undertake surveillance of forest fires during their operation, to cover food and medicine costs during the making of firebreaks which takes the whole day and night and to buy equipments to perform firefighting operations such as radio communication electronics, masks, water bottles, fire boots, hats, etc. The community must support each other, meanwhile, other sectors have to collaborate to educate people of the fire fighting to preserve forest for the future.

3.2.2 Extinguish Forest Fires

Forest fire regularly happens in dry forest. The fire forest is happening frequently because the accumulation of fuel on the floor. Normally, if forest fires occur, we will use water and fire extinguisher (see figure 71 and 72). However if there is a lot of fire, we need to use four wheels cars with water

containers to support teams because the forest is located on the high mountain and difficult to go (Sasujitr 2015, pers. com. 9 September).



Figure 71 Kruba Weerayut is fighting with forest fires

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 72 Forest Fires at night time

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 73 Community Meeting at Sufficiency Economy Learning Center

Source: Phra Borommathat Doi Pha Som Temple (2015)

Besides, the temple also found ways to prevent long-term problems by educating people and starting to raise the awareness to all our young people as well as providing knowledge to set up a learning center workshop of sufficiency economy works in order to be the distributor of information and knowledge on various matters for bringing the life of living together with nature in order to create a sustainable balance (see figure 73 and 74).



Figure 74 Villagers and Home School Students are learning about forest fire.

Source: Phra Borommathat Doi Pha Som Temple (2015)

3.3 Check Dams

Seven years ago, there had been forest fires every year at Huay Bong which caused the environmental deterioration. But since 2008, after Mr. Don made the decision to donate his land of 10 acres to establish Learning Center and started planting Three Types of Plants for Four Benefits with other villagers. The area had visibly changed and forest degradations were reforested then the next project was check dams building. They made check dams in accordance with the Royal Projects to slow down water in the watershed. Currently, there are more than 1,000 check dams which have been built by the abbot, volunteers and Baan Omlong villagers. Meanwhile, temple's networks also came to support in building the check dams. With the increasing amount of check dams, the soil contained more moisture and water, which impacted on the fertility of the water sources. And small dams caused many big differences in people's lives such as the weather, the atmosphere, the variety of food and herb and water availabilities.

The check dam is an obstruction built across a watercourse. Normally, the check dams block small streams of watersheds or steeply sloping areas. Check dam reduces water velocity and collect silt preventing it from flowing downstream. For these reasons, check dams are effective instruments for soil and water conservation.

Check Dams Recommended by His Majesty the King (The Chaipattana Foundation, 2015)

3.3.1 Basic Local-Style Check Dam: Built with readily available natural materials, such as branches and trunks of fallen trees held in place by rocks of various sizes from the stream. This simple check dam should be built in the upper reaches of the stream. Such dams effectively trap silt, slow down water flow, and increase moisture in the surrounding area.

3.3.2 Semi-Permanent Rock Check Dams: Rocks are laid in rows to form a wall in the middle or a lower area of the stream, or to form a channel to trap silt and store some water during the dry season.

3.3.3 Permanent Ferro-Concrete Check Dams: This structure is mostly constructed towards the end of the water channel or stream. It is very effective in trapping silt and storing water during dry season.

Mr. Don stated that in Huay Bong, there are three types of dams which are made of bamboo stick, rock and reinforcement concrete as a permanent dam. In 2007, there were about 200-300 bamboo dams used to trap sediment but it was inapplicable. At that time, the people did not have much knowledge and experience for building, therefore, when the flash flood rushed down, all the bamboo dams were destroyed as they were built at the end of the river toward water source which is theoretically incorrect. Therefore, check dams had to be built from water source toward the end of the river in order to slow down the massive stream.

A year later, there were outside support teams who had joined to help on budget as they saw the community intentions and the possibilities. Thus, the locals began to build a genuine rock dam by using cement mixed with sand and then piled it up with stones about 50-60 centimeters or one meter high with the width depending on the creek. Once the number of rock dams had gotten larger, then the people started to build permanent concrete dams to store water (Sukkho 2014, pers. com. 13 November).



Figure 75 Bamboo Dams Building

Source: Phra Borommathat Doi Pha Som Temple (2015)

Method of Bamboo Check Dams Building (see figure 75)

Materials / Equipment: Bamboo sticks, hammers and knives

Process: Cut the bamboo to split in half about one meter long. Bury as a cross and nailed them together in and tie with lace. Embedded with channel into the garden to give plants more water leads the fertilize soil around the dams and grow little trees along the creek weir set (Home School Report, 2014).

Method of Permanent Check Dams

Materials / Equipment: Coarse sand, cement, stones, water, big container to mix or a grinder, buckets, gloves and Spades / Shovels

Process:

1. Dig up the area to make a dam core with the appropriate depth.
2. Prepare large and small rocks (see figure 76).
3. Mixing water and cement to make a cement mortar (see figure 77).
4. The ratio of the mixture is one bag of cement per 12-14 buckets of water and mix well.
5. When the concrete mixture is done, put it into buckets. Pour the cement mortar into the dam or pour the cement mortar first and then follow with large and small rocks that fit with the area, as shown in figure 78.



Figure 76 Check Dams Building (1)

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 77 Check Dams Building (2)

Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 78 Check Dams Building (3)

Source: Phra Borommathat Doi Pha Som Temple (2015)

Another type of check dam is built from Vetiver Grass, His Majesty the King had initiated this type of check dam. Lately, Mr. Don and villagers (see figure 79) intended to build the 1st Vetiver Grass check dam at Huay Bong which already completed on the King's Birthday, 2014 (see figure 80). Vetiver Grass was one of the major plants that the abbot initiated the program to help the people to increase their income. Fortunately, in November 2014, the number of Vetiver Grass leftover

was sufficient to support the Vetiver Grass check dam and other dams' building projects so that they could finish on time.



Figure 79 Mr. Udon Sukkho, Chief of Sufficiency Economy Learning Center
Source: Phra Borommathat Doi Pha Som Temple (2015)



Figure 80 Home School Students and Vetiver Grass Check Dam
Source: Phra Borommathat Doi Pha Som Temple (2015)

For over seven years until today, the forest area has become such an integrated model of sustainable development, by following to the King's Theory

in a wide variety of water management by building check dams and concrete dam, building wet forest firebreak and permanent firebreak, forest fire monitoring, implement the Three Forests-Four Benefits project along with the philosophy of sufficiency economy and Vetiver Grass planting. All activities can lead to the rehabilitation and conservation of natural resources which can actually give life back to the earth. However, there are some crisis circumstances of natural resources degradation expand into other areas, even though the temple strive to expand the process of sustainable development to other communities, still they cannot expand much with their limited manpower to protect water source forest.

Nevertheless, in year of 2015, the sufficiency community's network of Phra Borommathat Doi Pha Som Temple sees significant opportunities to connect within the community to look after their forests. Although the amount of people in the community are not much, their intentions and voluntary spirits are very high to come and join the sufficiency economy movement of giving life back to the earth. In which the sufficiency economy movement will make the development processes extended to sustainable solutions for local communities, community partnerships and many more people among the current crisis of the environment and natural resources.

The sufficiency community's network jointly organize a project "99 Dams Present to the King" to dedicate to royal charity on the occasion of His Majesty the King's reign of 70 years on May 5th, 2016, and for the King's reaching the age of 90 on December 5th, 2016 to celebrate His Majesty the King's birthday. The timing of the construction of check dams from 5th May 2015 to 5th December 2016 led by the a network administrator to revive the forest of their community are as follows (99 Dams Present to the King Report, 2015); 1) Baan Omlong, Moo 2, Maesab Subdistrict, Samoeng District, Chiang Mai 2) Baan Phayong, Moo 9, Maesab Subdistrict, Samoeng District, Chiang Mai 3) Baan Sanamkeera, Moo 5, Borkaew Subdistrict, Samoeng District, Chiang Mai 4) Baan Pakianok, Moo 2, Borkaew Subdistrict, Samoeng District, Chiang Mai 5) Baan Tungluang, Moo 2, Maewin Subdistrict, Mae Wang District, Chiang Mai 6) Baan Huaydib, Moo 4, Maetanueu Subdistrict, Mae-on District, Chiang Mai

As a result, we have to bring the King's philosophy in terms of water management to solve the problems of natural crisis of local communities into real practice. The communities have to participate in the project for all areas of the watershed, the upper reach of Ping river, the river of life for Chiang Mai people. Since, many communities are entering a critical issue of water scarcity (some communities are faced with the crisis, and some communities are beginning to receive the signal of the crisis). If the crisis, a likely situation, occurs in an area of natural forest it would certainly affect the livelihoods of people living around the middle part of a stream and the mouth of a river. Every community must be aware of the crisis, unite and took part in the action by the community for the community to help take care of the forest to regain fertility. The Sufficiency Operations Center of Phra Borommathat Doi Pha Som Temple is a major force in driving this project and the provost are a president and a director.

The construction processes of the check dams project is adapted from the dam pioneer moisture variations from Maejo University, Chiang Mai province. The construction processes consist of selecting materials that are in the area, such as sand, stones or bamboo and choosing the choice of model-building and functions that vary according to the nature of the local topography, so it will be easy to prepare and transport construction materials. At some point of the building processes of the dams, workers cannot use the truck so we need to use forces of human to unload transported materials to the venue instead as shown in the map of firebreak data. The areas of forest protected with firebreaks are divided into three zones as follows (see figure 81);

Zone 1 consists of Huay Kiwsala, Huay Phawua, Huay Pa Piang and Huay Po Luang (see figure 82 and 83).

Zone 2 consists of Huay Gorekoi 1, Huay Gorekoi 2, Huay Pangae and Huay Maihang (see figure 84 and 85).

Zone 3 consists of Huay Maihang 2, Huayyao and Huay Maiyangnoi (see figure 86 and 87).

In three zones, only Zone 1 has a stone dam type that forms one kind of watershed dam as details on the map below.

Table 4 Summary Check Dams Building Area Survey Zone 1

Location	Branch Creek	Height	Length	Width	Remark
Zone 1					
Huay Kiwsala	1	976 m.	201 m.	1-3 m.	Total distance is the distance that we can build a dam.
Huay Phawua	2	1,027 m.	106 m.	1-2 m.	
Huay Papiang	3	1,127 m.	369 m.	2-5 m.	
Huay Porlung		970 m.	211 m.	2-3 m.	
Summary	<p>- In Huai Kiwsala, there are a total of 17 riprap check dams, we can not built upward because the area has a slope creek.</p> <p>- In Huai Phawua has 12 riprap check dams and 2 branch creeks. We can build check dams in branch creeks for 2 dams each and in the main creeks we can generate another 5 dams.</p> <p>- In Huai Papiang, there are a total of 22 riprap check dams with 3 branch creeks. The main creeks can store additional 10 dams.</p> <p>- In Huai Porlung, there is no dams but we could build up to 10 dams.</p> <p>Remark: In Zone 1, there are only riprap check dams which we can build a total of 29 dams. There are a lot of bamboo and large rocks but has no sand.</p>				

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)



Figure 83 Zone 1 Area

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)



Figure 84 Map of Firebreaks Line Zone 2

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)

Table 5 Summary Check Dams Building Area Survey Zone 2

Location	Branch Creek	Height	Length	Width	Remark
Zone 2					
HuayKorkoi 1		815 m.	290 m.	2-4 m.	The total distance is the distance that we can build a dam.
HuayKorkoi 2		898 m.	354 m.	2-5 m.	
HuayBuakpa-ngae		868 m.	295 m.	1-2 m.	
HuayMaihang 1		821 m.	110 m.	1-2 m.	
Summary	<p>- In Huay Korkoi 1, we can build 20 more dams in the distance of 290 meters.</p> <p>- In Huay Korkoi 2, we can only build 19 more dams in the distance of 354 meters, because at some point there is a deep abyss in the creek so we need to leave some space and start at some point below the same creek.</p> <p>- In Huay Buakpa-ngae, we can build 17 more dams in the distance of 295 meters because the creek is quite flat. In the range of 10-15 meters, we can build 1 dam.</p> <p>- In Huay Maihang 1, we can build 7 dams in the distance of 110 meters.</p> <p>Remark: There were no check dams in this zone but we could build 63 more dams, they are mostly bamboo, a few rocks and no sand .</p>				

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)



Figure 85 Zone 2 Area

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)



Figure 86 Map of Firebreaks Line Zone 3

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)

Table 6 Summary Check Dams Building Area Survey Zone 3

Location	Branch Creek	Height	Length	Width	Remark
Zone 3					
HuayMaihang 2		921 m.	210 m.	2-5 m.	The total distance is the distance that we can build a dam.
Huay Yao		1001 m.	392 m.	1-5 m.	
HuayMaiyangnoi	4	913 m.	395 m.	2-7 m.	
Summary	<ul style="list-style-type: none"> - In Huay Maihang 2, we can build 6 more check dams in the distance of 210 meters. - In Huay Yao, we can build 10 more check dams in the distance of 392 meters. - In Huay Maiyangnoi, there are 5 riprap check dams. We can build 40 more check dams as it is easy to get into the creeks. <p>Remark: The dam can be added a total of 56 dams. There are bamboos and sand, but not much in zone 3.</p>				

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)



Figure 87 Zone 3 Area

Source: Phra Borommathat Doi Pha Som Temple, 99 Dams Present to the King Report (2015)

There are actually 56 riprap check dams in all 3 zones in the area of the firebreak at the sufficiency economy operations center. And the area where we can build more check dams are in the main creeks the amount of 139 check dams and in branch creeks for 4 check dams, a total of 143 check dams. For the project of “99 Dams Present to the King”, the community can build approximately 40-50 check dams. The building of check dams has to be constantly improving because it requires continuous implementation period, due to the budget and manpower. The remaining check dams’ building points will become a part of a development planning of upstream forests in the next project.

Key success factors and obstacles of Baan Omlong community development

This part of chapter 3 primarily focuses on the factors influence the community achievement and obstructs community development in terms of economic, social and environmental aspects.

1. Economic Dimension

1.1 The Factors influence community achievement.

1.1.1 Self-support principle is promoted to create multiple careers for the locals; In the past times, chemical farming was widely used in the community. Thus, only a single type of plant could be grown in vast areas. Though they could have mass production, incomes were uncertain every year, as well as unpredictable weather that obscured farming. If income was low that year, they would be forced to incur debt. Unsurprisingly, debt accrued each year. The temple, as the heart of the community, promoted the sufficiency economy philosophy to encourage farmers to employ eco-friendly or non-toxic farming process, create agro-biodiversity, and rebalance the soil by using natural fertilizer instead of chemical substances (see figure 88). These suggestions were of interest to the locals. It took some time to develop the practice but the results were astounding. They began to stand strongly by themselves, less dependent upon the outside market, and began producing their own organic food within the community. They have literally integrated the Sufficiency Economy with their career and routine. Making natural

fertilizer and multi-purpose liquid are helping decrease the expenses in buying chemical products.



Figure 88 An agro-biodiversity which is a good example of Sufficiency Economy as a sustainable community development.

Source: Phra Borommathat Doi Pha Som Temple (2014)

Once the community learns to support themselves using the knowledge based on Sufficiency Economy, they can advance their ability to boost the economy as a whole by establishing a community enterprise known as the Kabuan Boon (Merit Fund) project. This project helps the locals to produce more income while staying in their own community and spend more time involved with their community services. The public funds, which are derived from the selling local product, will be used in developing the community. The excess products will go to food processing and new product development.

1.1.2 Create Natural Local Products that are Safe for everyone and Affordable; Consumers feel confident in purchasing local products because they are made naturally because to the campaign that promotes organic vegetable farming and homemade non-chemical fertilizer. People can also buy other natural products such as rice, garlic, fried banana, shampoo and multi-purposes detergent.

1.1.3 Garlic, a normal herb that becomes a high potential product of community enterprise; Garlic is one of the local products that brings more income to many families and village members each year. Some of them can even pay off

the debt by following the Sufficiency Economy. Garlic is well supported by Thepphadungporn Coconut Co., Ltd. which is willing to buy the product at a price higher than the market with the intention of making merit with the temple. This has been taken as a part of the merit fund project and signed as a public enterprise by Omlong organic processed products group.

Terms and Conditions

1. Membership Application Process

1.1 Organize annual meeting for permanent members and initial members in order to inform terms and conditions.

1.2 The application should be screened by the president of the garlic group.

2. The members shall inform the group about their quantity of growing garlic. If the garlic inoculums are required, for example 200 Kilograms, then 200 kilograms of the dry products should be returned to the group first and the balance can be sold to the group.

3. If the garlic inoculums have not been obtained from the group, the members, however, should inform the group the quantity of garlic they would like to sell to the group.

4. The group shall timely make a visit to inspect the members' farms and arrange to yield the crops.

5. The group highly encourages members to do chemical-free farming.

6. The garlic price is subject to market mechanisms.

7. It's not necessary for every member to own a garlic farm as they can join as a garlic group share holder under the following conditions:

7.1 The maximum share per member is 40. It costs 100 Baht per share.

7.2 The dividend is paid annually and subject to the turnover of the group.

7.3 The group has its own farm and the shareholders shall provide their labor.

7.4 Every member shall attend all the organized meetings.

Benefits from the Garlic Group

1. It is an enterprise which shares profits to others.
2. Established merit procession bond.
3. Facilitate members in debt reduction and lead them to get out of debt.
4. The profit is donated to merit fund for forest reservation.
5. The selling system is free of middlemen who sometimes force to buy the products at low prices.
6. The products are directly delivered to the factory.
7. The villagers earn their income from every process of farming.
8. Maintain villager's way of life and local wisdom which are the community heritages.
9. The families are happy for having a chance to make merit together.
10. Every member has got a chance to make merit related to forest preservation.

The amount of members have been increasing from 10, 27, 57, 70, 100, and 200 in 6 consecutive years with the big support of Thepphadungporn Coconut Co., Ltd. in Nakornpathom province and it is likely that the members will increase more since the ones who pay off their debt have become a virtual a good example.

1.2 The factors obstruct the community development

1.2.1 The quality of rice products; The problem with rice is that the rice farms are located in many places. The rice they have currently is imported from other villages including; Baan Pa Kha Nok, Baan Lob Laan in Samoeng District, Baan Tung Luang and Baan Huay Khang in Mae Wang District, thus, the seeds and products do not meet the standard since they belong to different origins and crops growing process inherited from different local knowledge.

1.2.2 A Lack of Proper Distribution Channels of Products; In fact, there is the amount of local products but there is no regular shopping place in the city to help distribute the products. Normally, the local products were sold only at the booths appearing in any event or exhibition. Therefore, when there are not many products distribution revenues as it is expected, the extra income is not enough to help run the activities held by the community. This also causes the difficulty in having a circulating fund to spend on their expenses. Excess products are left. The social media has becoming more essential and accessible for people nowadays, so, in a hope to publicize the local products, the website of the temple is another channel to shed some light on the community. However, they still need people who are specialized in using this type of media.

1.2.3 The Difficulty in Transportation; It is quite a long distance between Baan Omlong and downtown Chiang Mai, approximately 60 kilometers with many dangerous curves and steep hills. Therefore, they have to wait for wholesale orders that are large enough to cover the costs of delivering their products. They can deliver their products to the city only 2 to 3 times a month.

1.2.4 Gaining the confidence in using the community products; Even though many products made by the communities that follow Sufficiency Economy are free from chemical and affordable, they still don't have a famous position in the sharing market due to its brand reliability. Since most of people today tend to opt for brands that they are already familiar with or decide to purchase because of advertising.

1.2.5 Self-esteem and community identity realization; Although there are many careers in the community, the income distribution is limited because some villagers do not value their authenticity and do not realize the value of their career. Due to globalization, some members of the community tend to go work in the city for less saving money than applying their knowledge to benefit the community from which they come from.

2. Social Dimension

2.1 The Factors influence community achievement.

2.1.1 The Community's Leader and Spiritual Leader are Courageous; The abbot is a spiritual leader in the community development, Phra Weerayut Apiwiro and Phra Boonchai Kittipunyo have been the key roles in driving the community. The abbot had an opportunity to work with the villagers and found many problems. The abbot had an insight understanding about their problems. Therefore, he has come up with a solution that provides a long term development by investigating the roots of each problem and finding the holistic and integrated solutions. The abbot had collaboratively designed the activities in conjunction with people's living, community's economy, social structure, culture and traditions. This has allowed the development in increasing quality of locals' lives and self-sufficiency. In the meantime, the abbot is also persuading the villagers who had potential to be working for the community namely Mr. Udon (Chief of Learning Center), Mrs. Chandee (Head of Enterprise Garlic Group), Mrs. Jirinda (Home School Teacher). These people are in different positions; however, they have the same objective which is dedicating their lives to initiate a sustainable development for the future. Nowadays, the abbot is working in terms of planning by providing activities and sufficiency economy philosophy together. Phra Weerayut and Phra Boonchai will work in operation section coordinating with the villagers.

2.1.2 Community Participation; Although there are 38 households from 112 households signed to participate in the temple's project, the households in general have paid attention in every activity. All of them deeply understand the temple's objectives and the benefits that their community can gain. Therefore, they have rapport as well as unity in working together which could be part of a successful implementation and development (see figure 89). Plus, this mentality will be a good model for the next generation.

In terms of relatives and networks, the networks of Phra Borommathat Doi Pha Som Temple have attempted to collaborate well in distributing the products to the consumers in the city and publicizing the religious traditions or events to gain more income to the merit fund.



Figure 89 Community Participation

Source: Phra Borommathat Doi Pha Som (2014)

2.1.3 The Temple is the Spiritual Center of the Locals; The pavillion of Phra Borommathat Doi Pha Som Temple is a community center for practicing meditation and purifying mind and soul. It is also the place where people have moral discussion. They believe that when people have conscience, they will conduct their life with conscios and could resolve tangled problems both in their personal life and the community as a whole (see figure 90 and 91).



Figure 90 A regular religious routine occurring in the morning and evening located in the temple's pavilion



Figure 91 The locals gather together at the temple's pavilion during the important religious ceremonies.

2.1.4 There is Sufficiency Economy Learning Center in Community; Sufficiency economy learning center (BORWORN) or Huay Bong is the most important place for training, learning, doing workshop and setting up community meeting (see figure 92).



Figure 92 Students learn the water management from Ajarn Saharach, an expert from Mab-Ueang Agri-Nature Center



Figure 93 Survey the check dams in Huay Bong

After learning the theory, it is time to set foot on site to observe the nature and dams in Huay Bong Sufficiency Economy learning center (see figure 93).

Phra Borommathat Doi Pha Som Temple established Huay Bong to be a learning center for helping villagers to resolve problems. They mainly focus on improving the quality of its people to have in-depth knowledge, moral, moderation, self-known and community and also be able to support the community development properly. The learners are encouraged to study in order to adapt it with their lifestyle. It is not only Home School students that study in here but the family members as well as local people in the community or from nearby villages.

2.1.5 The project by Home School students is very useful to their daily life; The teaching method for Home School students primarily emphasizes learning from practicing and gaining direct experiences. Thus, the students will improve their problem solving skills, manual tasks, and conduct logical thinking in every action (see figure 94). Home school creates lots of opportunities for the children to search for their interests and skills. After that, the temple will support the students by sending them to be trained by the specialists. The location can be at the temple or outside. The student can see the actual place and process and can use their knowledge to start their own project. The importance is creating the integrity and self-realization while connecting the students with nature and morality. The tools are the routine, the daily responsibility while living in the temple and

community service, for example; morning and evening chanting session, doing meditation, checking damn building with the villagers, forestation, and wild fire. All of these activities allow the students to absorb the humbleness, morality, environmental consciousness, and self-sufficiency.



Figure 94 Project Presentation by Home School Students

2.1.6 Community's Holistic Health Clinic; Because Samoeng hospital and the village are about 20 kilometers away and riddled with dangerous steep hills and valleys throughout the connecting route, the transportation is a huge burden. Mr. Boonsong, who is a local traditional doctor, is willing to dedicate his talents to save the locals' lives. He uses traditional medication methodology to heal basic symptoms, for instance, readjust and rebalance the cold and the heat within the body. Every local herb can be intelligent medicine. The alternative therapies such as Guasa, Cupping and Yum Khang are popular here (see figure 95 and 96).



Figure 95 Holistic Health Clinic in Baan Omlong

Source: Phra Borommathat Doi Pha Som (2015)



Figure 96 Mr. Boonsong and Mr. Berkapoh, the volunteer traditional doctors of the village, are healing their patients with cupping and massaging.

Source: Phra Borommathat Doi Pha Som (2015)

2.2 The factors obstruct the community development

2.2.1 The need in teachers of the Home School Method; Baan Omlong community is located on a mountain range and is difficult to access. There is a lack of education personnel due to the low number of qualified teachers are able to get there.

2.2.2 Conflict within the community; There are also some groups that still do not understand the philosophy adopted by the temple. Roong Napa said that after 7 years of reforestation in Huay Bong, which is part of the national park. People who cultivate must have a license signed by a national forest conservation officer. During the forest restoration effort, Huay Bong has become more fertile with the help of the national park's officers. However, some people are not satisfied with the result because they cannot sell valuable wood from the forest. Before the forest restoration, they could earn lots of money from deforestation and sold the wood to businessmen in town. After the movement of forest conservation and help from the officers, they would get caught. This is the reason why they think that the temple has interfered with reducing their profit. Desperately, some local leaders seem to disagree with the temple's philosophy of forest conservation as we can see by the lacking support in community participation from community leaders. Thus, when the conflict becomes obvious, the clash seems to be very intense. Mainly, the causes of the problems are from having various political perspectives and a certain amount of people suffering from having less income from this business practice. Only 3 out of 12 board members act as facilitators, the rest have contrastingly different opinions from the temple.

2.2.3 The influence from the development under the globalization era; Developing countries under globalization could spread the information easily, resulting in a capitalism economy and people get more and more popular consumer culture, this is a hindrance to the development community because it affects in the area causes people tend to be slave of capitalism. Some groups still believe in modern agriculture, however, they still have debts from annual investment and other expenses. Social media has a huge impact on today's living. People who lack of worldly knowledge, healthy mentality immune or practices in logical thinking, tend to be easily drawn by unreliable news on social media and receive false believes.

2.2.4 The need of Inheriting Local wisdom, Culture and Traditions; Even though the temple encourages people to preserve local traditions and culture by passing them down to younger generations, the social participators are mostly seniors and the young generations are rarely seen during these activities. This

happens because foreign culture has influenced the new generations, for example, they prefer city life than gathering together as a big family. It's obvious because the Lanna language is becoming extinct.

3. Environmental Dimension

3.1 The Factors influence community achievement.

3.1.1 The community owns an abundant nature; After reforestation, the villagers can find the food in the forest because good weather and fertile soil resulted in the growth of wild plants and herbs. Meanwhile, the villagers who plant their vegetables, fruits or herbs around their house, they also grow them easily which could help reduce the expenses on food as well as the transportation to get to the city market.

3.1.2 The Locals Realize the Significance of Nature Conservation; People realize the value of an abundant forest. The locals know that reforestation is essential to revitalize the land from drought to become fertile again because it's the origin of life. The locals utilize local wisdom to manage their land wisely. We can see from building dams, reforesting and making fuel breakers with the collaboration of government organizations such soldiers, officers from the forest department or police. They know that it is important to pass their knowledge to their descendants and their community networks.

3.1.3 The communities social activities' plan; Before holding any social activity or event, the people will gather for the meeting at Huay Bong learning center. The leaders are expected to motivate the people, assign responsibilities, make an activities' plan and estimate the budget sufficient for each project.

3.2 The Obstacles that Distract the Community Development

3.2.1 The working procedure of the headman, community's board members and the Subdistrict of Administrative Organization (SAO) are not well coherent and crucial; Government plays a key role in bringing people together. Some of whose members support the program, some of whose members are against it. Due to the hierarchical system, all of the villagers pay respect to the Subdistrict Administrative Organization (SAO) and village headman. Therefore, spreading news and information to the community is very important; it

must be transparent and fair to all parties. Furthermore, the local government must be ready to support both supporting budget and policies as well as listen to various opinions of people in the community in order to contribute to the community development.

3.2.2 Insufficient Budget for Forest Conservation; Huay Bong owns the forest which is one of the main water sources spanning 12,000 Rai or 19,200,000 square meters. Even though there is help from many government organizations such as, the forest department or soldiers from the Kawila military camp to support the local activities, the budget is very limited and not enough to cover the wildfire dousing, gas, repairing backhoe loaders, laborers, etc. Ms. Sri said that the expenses from June to August 2015 reached 500,000 baht but the income from selling local products is only 130,000 baht.

3.2.3 The Problem with Wildfires in Drought Season; Wildfires here are actually a consequence of political conflict the sway of community support. Some groups that have ideas that oppose the temple are responsible for arson and cause wildfires.

3.2.4 The community still lacks of the evaluation of the community's activities; There are plenty of activities and events in the community but they need to create an evaluation to analyze those activities. In each activity, Monitoring not only helps the community progression, but also ceases the risks of community regression. In addition, measurement is essential to the community management plan. It provides analysis of activities, which clearly portrays the successes and failures, and the effective ways to further improve the community.

Chapter 4

Management Plan

This chapter presents the tourism management plan designed for the Baan Omlong community. The plan was developed with the principles of sufficiency economy in mind. It also takes into account the current situation of the community and the key success factors and obstacles of the successful society as identified in Chapter 3. The tourism management plan focuses on sustainable tourism and small-scale cultural encounters, designed to position the Baan Omlong community as a desirable location for cultural and heritage tourism. Because Baan Omlong currently mainly focuses on agriculture, agriculture and domestic life are the focus of the tourism plan.

The chapter outlines the planned initiatives, and then discusses human resource management needs. Next it discusses a timeline and budget for the projects. Finally it addresses contingency planning.

Initiatives

The aim of this project is to develop tourism in line with Baan Omlong's current and future economic and social needs, supporting key success factors and eliminating obstacles. The relevant key success factors for the tourism management plan include: community self-reliance and multiple careers or earning approaches; the emphasis on creation of natural local products; community participation and spirituality; the Sufficiency Economy Learning Center; and abundant nature and natural resource conservation. The obstacles to be overcome through this plan include: confidence in local products; self-esteem and community identity; quantity of local teachers; inadequate budget for forest conservation; and draught and fire risk.

The proposed initiative program is a tourism home-stay and/or farm-stay program, directed at tourists interested in sustainable or "slow" tourism. Farm tourism or rural tourism is oriented toward residential stays and day visits to working

agricultural regions, focusing on cultural traditions and agricultural production in the region (Phillip, Hunter and Blackstock, 2010: 754-758). Farm-stay tourism is a type of tourism experience where visitors spend a longer visit on the farm, observing, participating and engaging with the farmers and the rhythm of farm life (Phillip, et al., 2010). In home-stay tourism, visitors have a “foster” or “host” family, who they stay with and participate in home activities and home production, as well as the social and spiritual life of the community (Masa, Kayat and Thirumoorthi, 2010: 25-41). Both of these forms of tourism are limited by the number of placements that can be made, for example on a farm or in a single home. However, this limitation is appropriate for Baan Omlong, which does not have tourism infrastructure such as hotels or tourism transport. It is also appropriate from a sustainability perspective, since it will keep tourism development in the community and maintain it as a source of income alongside existing economic activities. Larger-scale tourism runs the risk of losing control to foreign interests, which can actually increase poverty (Scheyvens and Russell, 2012: 417-436).

The specific programs that will be undertaken for this initiative will include:

1. Temple-stay program: Individual tourists will be placed with “host” families for periods of one week to one month. Tourists will participate in family, social, religious and work life alongside the family members. Focused activities will improve their understanding of sufficiency economy, organic farming and other activities going on in the community. Participants may be asked to lead classes or give lectures in their specialty areas, to alleviate a teacher shortage and bring new knowledge to the community.

2. Forest-stay program: Small groups (5-20 persons) will be placed on host farms to participate in forest life for up to one month. Participants will learn about natural resources conservation, and local produce markets. As with home-stay participants will take part in and lead focused activities which linked to the nature.

3. Nature-oriented program: Individual tourists or small groups (up to four) will be placed in community hosting (as with forest-stay or home-stay) for a shorter stay of up to 2 weeks. The focus of activities of this program will be on the four

requisites, for example foraging, organic vegetable planting and herbal medicine. Participants will have the opportunity to take part in and lead classes and activities, as well as engage with local community life.

4. Home School program: All tourists will be asked to participate in programs with Home School students, which will help build mutual understanding and develop Home School communication skills and other skills.

The goal of all of these programs is to play to the strengths of the Baan Omlong community (including agriculture, community and family life, spirituality and self-sufficiency) without disrupting community life or losing tourism resources to international firms managing isolated resorts.

In order to support this program, the following initiatives will need to take place:

1. Host family/area selection and training: Volunteers (families) will be screened and selected. They will then be trained about what requirements they will need to meet and what they can expect from the program.

2. Scheduling and planning system: A system will be designed for scheduling and capacity planning for tourists. Individual families/area will indicate when they can accept tourists and how many they can accept. The program coordinator will then book individuals into appropriate homes or area.

3. Activity planning: Activity planning will be an on-going project. Volunteers from the community will be sought out to plan and take part in activities focused on local agriculture, foraging, herbal medicine, and other topics of interests. Tourists will be asked during their stay planning whether they will lead activities in their areas of expertise, which can then be scheduled.

4. Marketing: A marketing initiative will be ongoing. The Baan Omlong program will be integrated into international databases for cultural and forest tourism. The coordinator will work with Tourism Authority of Thailand (TAT) to bring visitors to the site.

Human Resource Management

1. Accountability

The following human resources will be needed for the project:

1.1 Tourism coordinator : The tourism coordinator will be responsible for the management of the home, forest, and nature programs. Responsibilities will include: planning and scheduling individual programs, recruiting and screening volunteers, scheduling and managing activities, managing tourist bookings, coordinating with government organizations like TAT and tourism agencies, and marketing the program. Initial activities will be focused on creating organizational relationships, marketing the program, and recruiting and screening volunteers. Later activities will focus on day-to-day management, evaluation and monitoring of the program.

1.2 Coordinating assistant: The coordinating assistant will help the tourism coordinator in activities like scheduling and management, payment processing and volunteer management. The coordinating assistant's duties may overlap with the tourism coordinator, depending on their specific strengths.

1.3 Host families (as needed): Host families will provide room and food for individual tourists and engaging them in family, community, and spiritual life.

1.4 Host areas (as needed): Host areas will provide room, board and engage tourists in natural life (including forest tours, explanation, and encouragement to participate in activities such as check dams, forest planting, and other activities).

1.5 Activity leaders (as needed): Activity leaders will lead talks, lectures, and hands-on activities for all tourists. Activities will focus on local products and culture, organic agriculture, spirituality and spiritual beliefs, and the Sufficiency Economy Philosophy itself. Activities will change with the seasons and the community's activities and availability of activity leaders.

Host families, host areas and activity leaders will be paid on an as-needed basis, with earnings coming directly from tourism revenues. It is expected that these jobs will be taken alongside existing agricultural and other jobs, in keeping with Baan Omlong's approach of using multiple income streams to maintain

sufficient income. The tourism coordinator and coordinator assistant will be paid on tourist group basis to support and develop the program over its lifespan.

2. Recruitment, training and facilities

2.1 Recruitment and selection

In keeping with the principles of community sustenance and the Sufficiency Economy, as many personnel as possible should be recruited from within the local community. Host families, host areas and activity leaders will all be recruited from volunteer participants within the Baan Omlong community. Recruitment and selection should be based on voluntary applicants. Participants should be screened for basic suitability and to make sure that they can fulfill the requirements of the job. The program should begin with five host families as a pilot project while managing difficulties and eliminating problems in the training and recruitment process and in the visitor experience.

Participants that may need to be recruited from outside the community include: Tourism coordinator and coordinator assistant, this depends on the availability of appropriately skilled community members. The tourism coordinator should be selected based on professional training and experience in community tourism. The coordinator assistant could be recruited from within the community, or from family connections of Baan Omlong families (for example, sons and daughters who have left home for university). These jobs could be offered as a merit-making opportunity, with students working to support the community during their holiday periods or as a work experience activity.

2.2 Training

Training will need to be conducted for all community participants. Training for each group should cover: roles and responsibilities, what tourists are expecting (e.g. room, food and other activities), conflict management, and other issues as determined by the recruitment coordinator. Each participant should be trained for each role required; for example, if someone acts as both a host family and activity leader, each role should be trained separately. Issues to be trained for each of these roles includes:

Hosts: Room and board accommodation (including inspection of proposed space), overview of expected interactions, conflict management, schedule management sessions, preparation of specific activities (e.g. forest tours, organic farming talks, cooking lessons, spiritual engagements and daily prayers, social activities)

Activity leaders/guides: Key expectations for each activity, assistance with activity preparation, discussion of what issues to bring up.

2.3 Facilities and equipment

No specific facilities will be required for this project. Group activities, such as talks or discussion, will take place in an appropriate central location such as the BOR WORN (Sufficiency Economy Learning Center) or the Phra Borommathat Doi Pha Som temple, or in the natural or home environment of the village. Facilities maintenance and management will take place as part of the general maintenance activities of the village.

The program will need a computer (provided immediately) and internet connection in order to facilitate communication, scheduling and management, and marketing. After the program has been in place for some time, transportation should be acquired to bring tourists from the nearest airport or bus station to the village (if needed). This should be paid for and maintained from the tourism program receipts. A driver should be recruited (potentially from among existing participants).

End Vision and Timeline

The end vision for this program is as follows:

By the end of Year 3, Baan Omlong's host families and farms will be welcoming 10-20 tourists per week for a weekly to monthly visit, engaging with them and educating them about Sufficiency Economy Philosophy, local life and natural resources conservation. The funds from these tourists will stay in the local economy, improving both household and community income. The income improvements will help to natural conservation fund, develop business relationships, transportation maintenance, and make other improvements to the community's long-term economic sustainability. The increased number of professional jobs will keep younger

community members in the community, while allowing them to use advanced skills. Visitors will also contribute their own knowledge – whether it is technical skills, language, or just amusing stories – to the community, enhancing social life. Baan Omlong will be able to continue its traditional life while at the same time gaining access to new technologies and improving income stability.

Table 7 summarizes the timeline and key points for the project over the first three years of its existence. It identifies critical tasks and checkpoints for the tourism initiative. Fine-grained tasks and goals should be determined by the tourism coordinator.

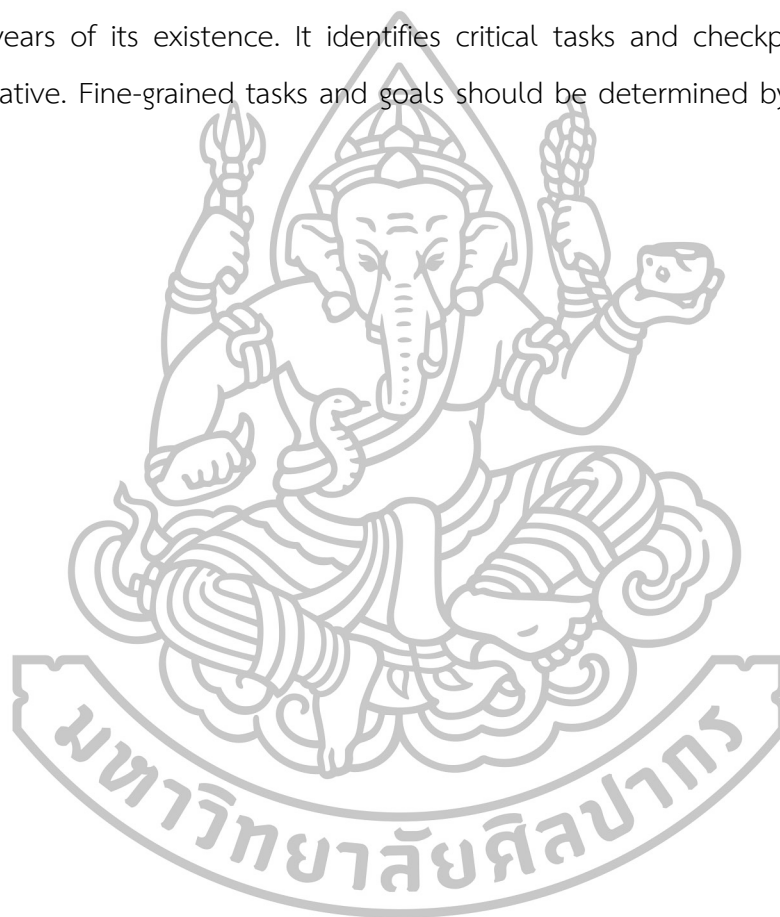


Table 8 summarizes the budget for the operations and activities of the tourism project over three years, including the initial and further sources of income. Government grants will be sought to cover preliminary costs (first three quarters of operation). The majority of expenses will be paid from revenues from the tourist activity after implementation of the tourist program. Tourism revenue is based on assumptions of an average of 10 visitors per week in Q3-Q4 year 1 and all of year 2, and 15 tourists per week in year 3, paying an average of 3,000/person/week. Tourism revenue may be higher or lower depending on demand. The program should be headquartered in the BORWORN, in order to maintain its centrality and ensure it can easily access the community.

Table 8 Summarizes the budget for the operations and activities of the tourism project over three years

	Cost per year (Baht)		
	Year 1	Year 2	Year 3
Income			
Tourism revenue	720,000	1,440,000	2,160,000
Costs			
Visitor costs (food, water, electricity, etc.) 1,800/person	432,000	864,000	1,296,000
Staff Costs			
Tourism coordinator& assistant	30,000	60,000	90,000
Hosts and activity leaders	15,000	30,000	45,000
Other costs			
Internet and communications	5,000	10,000	15,000
Training	10,000	20,000	30,000
Vehicle maintenance	30,000	60,000	90,000
Total	522,000	1,044,000	1,566,000
Residual income	198,000	396,000	594,000
Residual income to be used for development or redistributed to community programs			

Contingency Planning

1. Obstacles and risks

There are several potential obstacles and risks that could occur with this project. These include:

1.1 Marketing and management of the tourism program: If the program is not marketed appropriately or managed effectively, it may be difficult to reach interested tourists. This could be a special problem because the home-stay and farm-stay markets are niche tourism demographics (Masa, Kayat et al., 2010). The tourism coordinator will need to be carefully selected for knowledge and skill with tourism marketing in order to overcome this problem. The Baan Omlong program may also benefit from communication and coordination with non-governmental organizations (NGOs) that manage volunteer tourism and similar activities in order to expand their reach.

1.2 Skills shortages: The community already has a teacher skills shortage, and if the program is not managed responsibly it could negatively impact teaching for the community's own students. Approaches to mitigate this problem include integration of tourist and home school student classes (particularly for specialty topics, such as introductions to organic gardening) and recruiting tourists to teach classes. The tourism program residual income could also be used to recruit full-time teachers for the home school program or recruit the intern from university without hire but offer certificate instead, which will benefit the entire community as well as increase teaching capacity in Baan Omlong.

2. Change management

It is expected that the project will change during the course of its early life as the Baan Omlong community gains experience in home-stay and forest-stay tourism and tourist feedback on the programs is taken into account. Changes will be managed using a continual improvement framework. This means that any participant can suggest a change to the program and changes that are found to be useful will be accepted. The change management process will be as follows.

2.1 Potential changes will be identified through different channels (tourist feedback, participant feedback, or routine program monitoring).

2.2 Changes will be discussed by the program coordinator and a selected group of participants; for example, if the change involves the home stay program, interested home stay host families will discuss the potential change with the program coordinator.

2.3 Changes that are deemed to be initially feasible will be adjusted through one of two routes.

2.3.1 Easy changes will simply be implemented and program documentation updated to reflect them. For example, a new community class or activity will simply be added to the schedule and its description/curriculum will be added to the activity documentation.

2.3.2 Extensive changes will undergo a period of study and consultation with the affected stakeholders to identify: a) changes needed; b) feasibility; c) resources and whether the community has them; d) positive and negative impacts; and e) risks. Following this process, the stakeholder group and tourism coordinator will determine the costs and benefits of the proposed change, as well as any external resources they may need to meet it. Only changes that have a clear benefit and which can be implemented using the community's resources will be selected for implementation.

Chapter 5

Conclusions and Recommendations

This chapter presents conclusions and recommendations which are based on the results from the study. The purpose of the current study is to find key components of the sustainable development and the way of life under the philosophy of sufficiency economy in Baan Omlong community while understanding factors affecting the community achievement in the sustainable way. In addition, the research shall discover factors obstructing the community development at the same time in order to make tourism management plan to help support community income.

The results of this study indicate that the development of Baan Omlong follows the King's Thought "BORWORN" or HTS organizations. "Baan" means home, "Wat" means temple, and "Rongrean" means school which are three major pillars in the Thai society. These play major roles in connecting people and communities and supporting systems within the society. The collaboration of the pillars has left peace and stability in the society for ages. It is led by the Phra Borommathat Doi Pha Som Temple element, in this element, the temple leader advises people on how to live appropriately both as individuals and as members of their community. The temple brings Buddha's teachings into daily life and encourages people to live according to the basic precepts and helps people to understand the self-sufficient way of life. Home is the element that plays a major role in bringing the principles into people's actions, routines, and problem solving. The School element plays a major role in educating and cultivating the principles into the community. The combined efforts lead to a community that is capable of living in a self-sufficient manner. The key concept is the community's development of mind and soul through sufficiency economy and right morals can bring peace and harmony into the community. The research discovered that the philosophy of sufficiency economy initiated by H.M. King Bhumibol Adulyadej was able to minimize Baan Omlong's problem in terms of

economic, social, and environmental dimensions simultaneously, and imprint the sustainability to the community in the long run. The development in various aspects is described as follows:

Economic Dimension

The economic development of Baan Omlong starts from generating activities which is designed to focus primarily on self-sufficiency in household tasks such as organic vegetable planting, organic rices, multi-purpose solution, etc. Subsequently, it has further developed knowledge that is planning of production in order to use in community and build in the form of “Parade of Merit” (Kabuan Boon) to sell local products for people in community and its network at low price with the objective of producing the good quality of products yet in reasonable price. The local products now are garlcs, fried bananas, organic Pgazkoenyau rice and multi-purpose liquid. This process can extend and can be adjusted to other networks. The main concept is self-reliance without the need to rely on external factors. And the profits from selling products will be contributed to the fund to take care of natural resources conservation. The community realizes that the nature gives their life, therefore, it needs to be preserved and restored at the same time with the cooperation from human beings.

Social Dimension

This dimension is divided into two main categories as follows;

1. Home School

Home School education management is one of the centers of learning and action planning for economic self-sufficiency center of Phra Borommathat Doi Pha Som Temple, is established to resolve problems and improve quality of life and sustainability of the community and to ensure that learners can study in order to comply their lifestyle with economic, social and environmental aspects of the community. Focus on improving the quality of people to have knowledge, moral, moderation, self-known and community deeply and support the community development properly according to the on-going world evolution and society for all

ages but still keeps the value of identity and culture of the community. In 2014, there were 12 students in Home School, the main concept is the students are meant to study by taking action. The students have a chance to do the projects that they can be capable of and want to be an expert in. Basically, they will study in the classroom twice a week. Development and assessment will be considered according to individual capability and apparent results. Most importantly, Home School focused on behavior and disciplinary development rather than theory, altogether called “Integrated Education” that addressed on individual requirement.

2. Four Requisites

The locals like to find food from the forest or plant vegetables, fruits and herbs in the home area. And if they would like to build home, they could also find the wood from the forest, their houses were built with the natural materials, majorly teak and wood but they need to be replaced by planting the trees. When they have to participate in special occasions or festivals, they will wear in traditional Northern style clothes. In the community, there is one health care service for the locals with natural medication. However, most people in the village generally grow herb for their own medication for healing basic symptoms.

Environmental Dimension

It also was found that many activities are done regularly to maintain the upstream forests to always be abundant by reforestation, protecting and fighting the forest fire and checking dams building. Last 10 years, Huay Bong was very arid and short of water. Currently, Huay Bong is a Learning Center of Sufficiency Economy of the Royal Initiative (BORWORN), this area is the prototype of natural resources conservation with a full implementation as the forest in Samoeng District, it is also the headwater of Ping River in Chiang Mai province. The abbot has followed the forest rehabilitation and development King’s theory set up by pioneering group of people participated in reforestation program until present.

In order to get the sustainable development at Baan Omlong, the research finally realized that the factors influencing the community achievement in terms of economic dimension are 1) Community can be self-reliant and create

multiple careers in community 2) Community create natural local products that are safe and affordable for everyone and 3) The garlic enterprise group becomes a high potential product of community. In terms of social dimension, the community succeeded by 1) The community's leader and spiritual leader are courageous 2) Community participation 3) The temple is the spiritual center of the locals 4) There is Sufficiency Economy Learning Center in community and 5) There is a holistic health clinic in the community. In terms of environmental dimension, there are 1) The community owns an abundant nature 2) The locals realize the importance of natural resources conservation and 3) The community has the activities' plans.

On the contrary, the factors obstructing the community development in terms of economic dimension are 1) The quality of the rice products 2) A lack of distribution channels of products 3) The difficulty in transportation 4) The confidence in using the community products and 5) Self-esteem and community identity realization. In terms of social dimension, there are 1) The quantity of local teachers are not enough 2) Conflict within the community 3) The influence from the development under the globalization era and 4) The community lacks of local wisdom, culture and traditions inheriting. The obstacles of community development for environmental dimension are 1) The working procedure of the headman, community's board members and the Subdistrict of Administration Organization (SAO) are not well coherent with the community 2) Inadequate budget for the forest conservation 3) The problem with the forest fire in drought season and 4) The community still lacks of the evaluation after activities finished.

The most obvious finding to emerge from this study is that there are 38 out of 112 households that participate in this project with some of participants being debt-free after following H.M. King Bhumibol's theory. One interviewee expressed that there will be more participants joining the project as they saw the results from others who faced the same problems. Although, one informant reported that there is a small group of people who are against this project, as they still believe the modern ways of agriculture are the best.

Returning to the hypothesis posed at the beginning of this study, it is now possible to state that the components of BORWORN principle are the key components for Baan Omlong community development because all three elements are main pillars of community as the complete set of mechanism. They have to work together in order to meet their objective, which is community's capability in living in self-sufficient way along with moral. Meanwhile, The Philosophy of Sufficiency Economy is the key components to drive the sustainable development of community, talking about this issue an interviewee said "I did as what the King taught us; to stand on our own legs as much as possible, then I stopped creating more debt and followed the King's initiatives and stay self-sufficient as much as possible. Eventually in my third year, all of my debt was paid. From then on, I have been free from debt". Another interviewee expressed that "I used to be a farmer who uses chemical in farming, did monoculture by using pesticides and chemicals every year. But the more I grew agricultures, the more I suffered from stress because of debts as it was a vicious circle. After the abbot suggested me to start Three Types of Plants for Four Benefits project, it was being applied in a year and the result was satisfying. This seemed to be the right way to solve the problems".

Recommendation

The research suggested that the community should have their own management plan to incorporate sustainability into the area. The guidelines of conservation or tourism management plans in the future were also formed and presented to the community for a lifelong development and management.

The proposed initiative program is a tourism home-stay and/or farm-stay program, directed at tourists interested in sustainable or "slow" tourism. The tourists can participate in the community activities while supporting the community products in order to increase more income to help the conservation fund. In the meantime, the tourists can learn about the cultural traditions as well as the social and spiritual life of the community.

This is an important issue for a future research. Finally, if the community could manage themselves by tourism development, this could help generate more community revenue which could support the local economy, home school project and forest conservation fund in order to maintain the community identity for further.

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