Sufficiency Economy Philosophy for Community Driven Development Approach on Sustainable Local Development, Lessons Learned from Thai Case Studies

and

The Impact of Community-Driven Development Approach On Rural Development: The Case of Cambodia



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Report of Thailand

Sufficiency Economy Philosophy for Community Driven Development Approach on Sustainable Local Development, Lessons Learned from Thai Case Studies

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Table of Contents

Report of Thailand0
1. Abstract
2. Background and Context
3. Theoretical Debate
4. Research Objectives
5. Analytical Framework
6. Expected Research Outcomes
7. Methodology
7.1 Key Informants
7.2 Research Tools
7.3 Data Collection
7.4 Data Analysis
8. Research Results and Discussion
8.1 Sufficiency Economy Philosophy (SEP) Principles, and Criteria and Indicators of Sufficiency Economy Villages (SEVs) Models
8.2 General Information of Case Studies
8.2.1 Hong Village, Phearam Sub-district, Mueang District, Surin Province
8.2.2 Tenmee Village, Tenmee Sub-district, Mueang District, Surin Province
8.3 Lessons Learned and Success Factors
8.3.1 Lessons Learned 22
8.3.2 Success Factors
8.4 Best Practices
9. Conclusions
10. Recommendations
11. Acknowledgements
12. Biography
13. References

1. Abstract

Sufficiency Economy Philosophy (SEP), initiated by His Majesty the late King Bhumibol Adulyadej (Rama IX) of Thailand, can be applied as an important guideline for Community Driven Development (CDD). The SEP is seen as an approach for sustainable local development. The objectives of this research were: 1) to investigate the SEP principles, and the criteria and indicators used for evaluating Sufficiency Economy Villages (SEVs) models, and 2) to study the lessons learned and success factors of sustainable local development approach using the SEP (case studies of Hong Village, Phearam Sub-district, Mueang District, Surin Province, Thailand; and Tenmee Village, Tenmee Sub-district, Mueang District, Surin Province, Thailand). The sampling groups included three governmental officials, who mainly work for community development; three community leaders, who apply the SEP to the village; and three model villagers, who implement the SEP in each case study. The research tool was an in-depth interview form, developed from the relevant SEP concepts. The results showed that the SEP principles consist of three components: moderation, reasonableness and self-immunity, as well as two conditions: knowledge and morality. There are four criteria and 23 indicators for the SEVs models' evaluation. Besides, there were four success factors contributing to the SEVs models, comprising: leadership qualities of village leaders (leaders must have knowledge, skills, competencies and experiences, must have effective and systematic administration and work as a teamwork, and must be a good coordinator), villagers' cooperation (villagers must have cooperative and volunteer mind for community development, and must believe in and apply the SEP to daily life), community development network (governmental organizations must support and provide knowledge, and governmental officials must be mentors for community development), and academic learning resources (villages must have learning centers and local wisdom experts about the SEP principles and knowledge. Besides, the best practices found in this research were the program of Village Health Volunteer (VHV) and the project of One Tambon (Sub-district) One Product (OTOP). These concepts can be applied to drive the community to be a Community Driven Development Village model in other countries.

Keywords: Community Driven Development, Criteria and Indicators, One Tambon One Product, Sufficiency Economy Principle, Village Health Volunteer

2. Background and Context

For developing Thailand to be modernized, Thai society has been being changed in every aspect, i.e. economy, politics, culture, community and environment. The development creates positive outcomes, e.g. raised economic growth rate, material modernization, information and communication technology (ICT), disseminated education, etc. However, the development has not been disseminated to the societal levels in all the country, especially local people in rural areas, who lack an opportunity to develop themselves in Thai society, need to rely on a middleman in marketing system, and lack an ability of entrepreneurship skills. These problems increasingly create the gap between the poor and the rich.

Sufficiency Economy Philosophy (SEP) was initiated by His Majesty the late King Bhumibol Adulyadej (Rama IX) of Thailand in 1974 and was formed to the concept of SEP in 1994 (Office of the Royal Development Projects Board, 2009). The SEP encourages an adoption of the Middle Path of practice. There are three main components, i.e. moderation, reasonableness, and self-immunity. Additionally, there are two conditions attached to these components, i.e. knowledge and morality (Barua and Tejativaddhana, 2019; Kansuntisukmongkol, 2017). The SEP can be applied to be a guideline for people's living and implementation in every level including family, community, organization and government.

The population of Thailand was 67.2 million people in 2019. Poor people are defined as "the poor" for the income lower than 30,000 Baht per year (986 US Dollars per year) and "the nearly poor" for the income ranging from 30,000-100,000 Baht per year (986-3,290 US Dollars per year). From the registration data of state welfare cards, 5.3 million people are the poor and 11.4 million people are the nearly poor. The Thai government has supported 300 and 200 Baht per month (10 and 6.7 US Dollars per month) to the poor and the nearly poor, respectively, for their consumer goods since 1 October 2017. In order to attain the SEP, especially in communities or villages, which still have a poverty problem, it is needed to study communities' contexts for developing them in the right directions appropriately following their needs, using Community Driven Development (CDD) in order to empower them in poverty alleviation by making investments and taking responsibilities for decision making in their hands for sustainable local development approach.

The Department of Local Administration (DLA) under the Ministry of Interior, established in 2002 as the main organization to work on CDD, which mainly promotes and supports the local administrative organizations (LAOs), has started to apply the SEP to Sufficiency Economy Villages (SEVs) since 2006. In Thailand, there are totally 76 provinces, 878 districts, 7,255 sub-districts, and 75,032 villages; however, 8,780 villages were selected to be the SEVs models as calculated for 11.7% (Matichonweekly, 2020). The DLA supports the budget to develop the project of the SEVs models in order to develop their economies and improve their qualities of life with public participation applying the SEP for sustainable local development. These SEVs models can be extended to other villages in development aspects including psychology, society, economy, learning, and natural resource and environment, as well as knowledge management, learning network development, and community administration.

Surin Province, located in Northeastern Thailand and having 1,556 villages, has participated in the project of the SEVs models since 2017, that there are totally 12 villages in Mueang District, being selected to be the SEVs models from 289 villages. Therefore, it is very crucial to investigate the SEP principles, and the criteria and indicators used for evaluating the SEVs models as classified into three levels, i.e. 1) Por Yu Por Kin (Subsistence Village: emphasizing on households' self-reliance for decreasing their households' expenses, increasing their households' incomes, and saving their households' money), 2) Yu Dee Kin Dee (Better Living Village: emphasizing on group development management, increasing their groups' incomes, and extending their development opportunities for community people), and 3) Mung Mee Sri Sook (Wealthy Village: emphasizing on network development management, improving their qualities of live for community people, extending the occupational opportunities in communities, and providing welfare for community people). And, we studied the lessons learned and success factors of sustainable local development approach using the SEP (case studies of Hong Village, Phearam Sub-district, Mueang District, Surin Province; and Tenmee Village, Tenmee Sub-district, Mueang District, Surin Province, which were selected to be the SEVs models in 2015 and 2016, respectively). All of the 12 SEVs in Surin Province are at the same level of Por Yu Por Kin; then, we chose Hong Village and Tenmee Village by random sampling.

For Hong Village, there are 126 households, 525 people (male 232 people, female 291 people), one primary school (named Ban Phearam School) and one secondary school (named Phayaramwitthaya School). Villagers' occupations are mainly farmers, including sericulture, cloth weaving, natural dying for silk, bamboo basketry, local food and dessert cooking etc., and there is the conservation of traditions, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc.

For Tenmee Village, there are 132 households, 473 people (male 220 people, female 253 people), and one primary school (named Ban Tenmee School). Villagers' occupations are mainly farmers, including sericulture, cloth weaving, silk processing, bamboo basketry, local food and dessert cooking etc., and there is the conservation of traditions, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc.

3. Theoretical Debate

CDD approaches mainly aim to empower people or villagers in poverty by making investments and taking responsibilities for decision making in their hands. It is principally based on the community participation in local development, which works for building opportunities and strengthening people's voices to demand a greater accountability of related institutions that are relevant to their livelihoods and sustainable local development. In short, CDD is one of the best approaches to create the community participation in sustainable local development for perspectives and/or infrastructures on their needs.

In Thailand, the DLA under the Ministry of Interior was established in 2002 as the main organization working on CDD, which mainly promotes and supports the LAOs, e.g. provincial

halls, district offices, provincial administrative organizations, municipalities, and sub-district administrative organizations. The missions of the DLA are as the followings.

- Develop the DLA and the LAOs to be modern and high-performance organizations, and enhance the competency and professionalism of their personnel.

- Adopt innovation and develop information technology (IT) database system in order to improve the administrations of the DLA and the LAOs in accordance with "Thailand 4.0", which is an economic model that aims to unlock the country from several economic challenges resulting from the past economic models, which place emphasis on agriculture (Thailand 1.0), light industry (Thailand 2.0), and advanced industry (Thailand 3.0). These challenges include "a middle income trap", "an inequality trap", and "an imbalanced trap" (Royal Thai Embassy, Washington D.C., 2020).

- Promote collaborative governance and public participation in the administration of the DLA and the LAOs in order to strengthen them.

- Consult, support, and facilitate the LAOs to efficiently manage and provide public services according to their roles and functions under the principles of good governance.

- Develop public administration in the democratic system with the King as Head of the country and adhere to the SEP.

Then, CDD approach in this research was based on the SEP as the principles for sustainable local development.

His Majesty the late King Bhumibol Adulyadej (Rama IX) of Thailand initiated the SEP in 1974 and formed to the concept of SEP in 1994, then it has become a popular sustainable local development since 1997 (Barua and Tejativaddhana, 2019). His Majesty stated the word of sufficiency as "a state of being that enables individuals, families, organizations and nations to enjoy, at a minimum, a comfortable existence and, if conditions permit, a reasonable degree of luxury that balances economic, social, cultural and environmental conditions" (Bergsteiner and Dharmapiya, 2016).

The SEP encourages an adoption of the Middle Path of practice. There are three main components, i.e. moderation (or self-reliance, or avoiding extreme and overindulgence), reasonableness (or reasoning analysis, or causal connection between actions and consequences), and self-immunity (or prudence, or sufficient protection to cope with the like impact arising from internal and external changes) (Barua and Tejativaddhana, 2019; Kansuntisukmongkol, 2017). Besides, there are two conditions attached to these components, i.e. knowledge and morality. These components and conditions are explained as the followings and illustrated in Figure 1. (Barua and Tejativaddhana, 2019)

- Moderation: A moderate mind-set to avoid extremes and try to balance between selfdeprivation and over-indulgence, between tradition and modernization, and between fullsufficiency and dependency (Bergsteiner and Dharmapiya, 2016). Additionally, it is a balance between a person's physical (i.e. need) and psychological (i.e. want) characteristics.

- Reasonableness: It means causal connections between actions and consequences. The action or decision must be made rationally with critical factors involved and carful anticipation

of the outcomes that may be expected from such action not only on oneself but also on society and the environment in the short and long terms. The reason to make that action or decision must be beneficial, justifiable and fair.

- Self-immunity: It needs to have sufficient protection to cope with likely impacts arising from internal and external changes in various aspects by considering the probability of future situations. In order to attain self-immunity, one needs to apply prudence combined with available knowledge and morality.

- Knowledge: It is simply what is known. Different terms of knowledge, e.g. explicit, tacit or non-expressed, and skills and life experience, are essential to make informed and wise decisions.

- Morality: It is the positive values of a person. The moralities may be inherited, learned or taken place through discernment or intelligence. Shared moralities held by a group are called norms or ethics. It is noted that having moralities is insufficient to maximize sustainable outcomes unless knowledge is present; moreover, having moralities without knowledge does not work in practice.

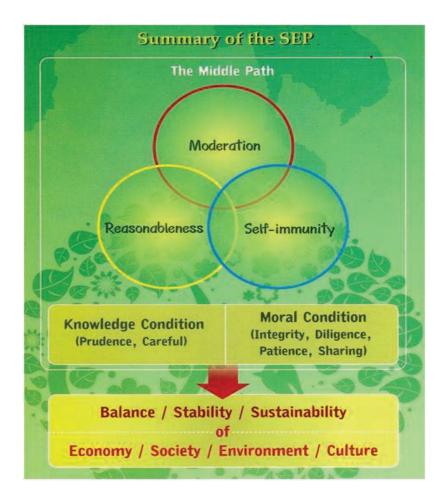


Figure 1. Summary of Sufficiency Economy Philosophy (Source: Royal Thai Embassy, Doha Qatar (2015))

Therefore, morality coupled with knowledge cooperates to moderation, reasonableness and self-immunity in order to maximize sustainable outcomes. Proper implementation of these principles, i.e. three components and two conditions, leads to the achievement of sustainable outcomes: self-reliance, resilience, immunity through balancing life in four dimensions: economic, social, cultural and environmental (Ministry of Foreign Affairs Thailand, 2020). Besides, the quote from His Majesty the late King Bhumibol Adulyadej provides the excellent advice for being moderate for our lives:

"Being moderate does not mean being too strictly frugal; consumption of luxury items is permitted.....; however, should be moderate according to one's means." (Royal Speech, given at Dusit Palace, 4 December 1998)

The SEP concept is resembled to the Buddhist philosophy called "Middle Path" that teaches ones avoiding greed and overindulgence, especially in pursuing economic development in the era of globalization (Kittiprapas, 2020). Mainstream economies have failed to address global economic crises and fluctuations, natural resource depletion, environmental degradation, income inequality and poverty. Hence, the SEP concept is seen as an approach to solve these problems (Mongsawad and Thongpakde, 2016).

For the evaluation to be the SEVs models as classified into three levels, i.e. 1) Por Yu Por Kin (Subsistence Village: emphasizing on households' self-reliance for decreasing their households' expenses, increasing their households' incomes, and saving their households' money), 2) Yu Dee Kin Dee (Better Living Village: emphasizing on group development management, increasing their groups' incomes, and extending their development opportunities for community people), and 3) Mung Mee Sri Sook (Wealthy Village: emphasizing on network development management, improving their qualities of life for community people, extending the occupational opportunities in communities, and providing welfare for community people), the DLA under the Ministry of Interior sets the criteria and indicators as illustrated in Table 1.

Criteria	Indicators
1. Mind and society (7 indicators)	1. Unity and cooperation among villagers
	2. Executing of village regulation
	3. Implementing of village funds for villagers' well-being
	4. Believing in democracy
	5. Moralistic practice
	6. Desistance of all vices
	7. Regular practice of the SEP
2. Economy (5 indicators)	8. Practice of household bookkeeping
	9. Practice of reducing expense and increasing income
	10. Being member of occupational groups
	11. Practice of savings as a group

Table 1. Criteria and Indicators for Evaluating to be Sufficiency Economy Villages (SEVs) Models

	12. Managing of community capital through community
	enterprises
3. Learning (7 indicators)	13. Surveying of community information
	14. Utilizing of community information
	15. Conserving of local wisdom
	16. Having of learning centers
	17. Utilizing of appropriate technologies
	18. Networking with concerned agencies
	19. Practice of self-reliance
4. Natural resource and the	20. Practice of natural conservation
environment (4 indicators)	21. Having of actively natural conservation groups
	22. Practice of alternative energy
	23. Adding of values into natural resources and the
	environment

<u>Remark:</u> Levels of the SEVs models:

Por Yu Por Kin (Subsistence Village) level: passing 10-16 indicators Yu Dee Kin Dee (Better Living Village) level: passing 17-22 indicators Mung Mee Sri Sook (Wealthy Village) level: passing all 23 indicators

4. Research Objectives

The research objectives were as the followings.

- To investigate Sufficiency Economy Philosophy (SEP) principles, and the criteria and indicators used for evaluating Sufficiency Economy Villages (SEVs) models.

- To study the lessons learned and success factors of sustainable local development approach using the SEP (case studies of Hong Village, Phearam Sub-district, Mueang District, Surin Province; and Tenmee Village, Tenmee Sub-district, Mueang District, Surin Province).

5. Analytical Framework

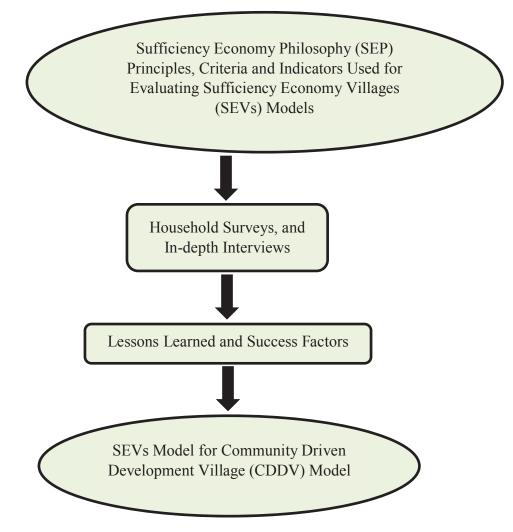


Figure 2. Analytical Framework

6. Expected Research Outcomes

The SEP principles, the criteria and indicators used for evaluating the SEVs models, and the lesson learned and success factors contributing to the SEVs models can be applied to drive a community to be a CDDV model in other countries.

7. Methodology

We designed to use the qualitative research to collect data and in-depth evidences as the followings.

7.1 Key Informants

We firstly searched key informants by criterion based selection and purposive sampling. The key informants comprised three governmental officials, who mainly work for community development; three community leaders, who apply the SEP to the village; and three model villagers, who implement the SEP in each case study.

7.2 Research Tools

We designed the questions for in-depth interviews for CDD approach based on the SEP principles by household surveys and key informants' talks; then, we used the relevant concepts of the SEP to define the questions' direction as an in-depth interview form. It was used for in-depth interviews as the research tool, checked using the triangulation method by considering times, places and personal groups, and we changed observers and interviewers for justifying the data. The data collection for the same replies or answers was observed together with questions.

7.3 Data Collection

There were secondary data from the internet, journals, books, research articles and relevant literature concerning the SEP and CDD, and primary data from household surveys by creating good relationship communities and villagers including key informants, and then indepth interviews from 9 key informants in each case study in order to get their ideas, attitudes and experiences how to approach the SEP and CDD, including their challenges and success factors how to improve their lives and contribute to the SEVs models.

7.4 Data Analysis

The collected data were analyzed using the content analysis and frequency to explain in descriptive data mainly from the key informants for using the case studies' lessons learned to create a CDDV model. These were challenges for other villages in every country.

8. Research Results and Discussion

8.1 Sufficiency Economy Philosophy (SEP) Principles, and Criteria and Indicators of Sufficiency Economy Villages (SEVs) Models

The SEP has been included since the Ninth National Economic and Social Development Plan (NESDP) (2002-2006) and continue to be adhered in the Twelfth NESDP (2017-2021). Over the period of the Twelfth NESDP, Thailand has prepared the country to accommodate a form of long-term development that aims to build on existing strengths and confronts underlying weakness, delivering continuous development within the 20-year National Strategy Framework (2017-2036). The Twelfth NESDP shares the vision on the 20-year National Strategy Framework, which is "Thailand as a developed country with security, prosperity, and sustainability in accordance with the principles of the SEP". The targets and indicators of the Twelfth NESDP have been set according to the targets of the 20-year National Strategy Framework, which are with in line with economic, social and environmental objectives as sustainable development goals. The SEP principles have significantly contributed to balanced and sustainable development in Thailand. (Office of the Prime Minister, 2017)

The SEP principles can be applied for CDD starting from creating knowledge of villagers with planning their lives with morality and consciousness based on sufficiency and promotion of villagers to have three components, i.e. moderation, reasonableness and self-immunity, and two conditions, i.e. knowledge and morality. These three components and two conditions can support families' warmth and their qualities of life, which are much related to human development process towards right living, and right interaction with other beings including mind and society, economy, learning, and natural resource and the environment. The SEP provides a practical tool to develop the necessary components and conditions and to develop human mind. With the Middle Path of practice and ethics, villagers use natural resources efficiently and ethically because the SEP places importance of the future needs and sustainability of all beings. Natural resource and environmental management emphasizes on ethics and efficiency in resource allocation and utilization. Both ethics and efficiency principles represent a public-minded attitude. It is contrast to business practice. The SEP emphasizes on fairness, good governance, honesty and moderation and non-harmful actions, and on a need for balance, people participatory approach, national security and independence of basic factors of production. All decisions must be knowledge-based or wisdom-based with fairness and participatory process. Then, the DLA under the Ministry of Interior sets the criteria and indicators used for evaluating the SEVs models as illustrated in Table 2.

Criteria	Indicators	Evaluating Principles	Evaluating	Evaluating
			Units	Results
1. Mind	★ <u>1. Unity and</u>	□ 1. Meetings among villagers at	1. Village/	\Box Pass 2
and society	cooperation among	least 12 times per year.	community	items
(7	villagers.	\square 2. Villager or community	2.	□ Not pass
indicators)	1.1 Meetings of	participation in villager activities	Household	
	villagers to solve village	by considering the following		
	problems or	items (must pass 2 sub-items).		
	development.	□ At least 1 household member		
	1.2 Villager or	being a member/members of		
	community participation	public		
	in villager activities.	organization/organizations		
		founded in this village's sub-		
		district (must have at least 95		
		percent of all households in this		
		villager).		
		□ At least 1 household member		
		participating in public activities		
		of village within the past 1 year,		
		e.g. workforce volunteer,		

Table 2. Criteria and Indicators for Evaluating to be Sufficiency Economy Villages (SEVs) models

		1		1
		donation of money or equipment		
		(road construction or repair,		
		canal dredging, solid waste		
		disposal, wastewater treatment,		
		etc.) at least 1 thing (must have		
		100 percent of all household in		
		this village).		
	★2. Executing of village	□ 1. Villagers or community	1.	\Box Pass 2
	regulation.	having a community regulation	Household	items
	Having an agreement for	or social values or cultures or	2. Village/	□ Not pass
	villagers or community	traditions as evidence paper.	community	-
	to perform village	\square 2. Villagers or community	5	
	regulations and/or	performing the village		
	prohibitions, following	regulations (must have at least		
	social values, cultures	70 percent of all villagers in this		
	and traditions for village	village).		
	peace.	vinage).		
	** <u>3. Implementing of</u>	□ 1. Villagers or community	1. Village/	\Box Pass 2
	village funds for	having at least 1 village fund and	community	items
			5	
	villagers' well-being	members having opportunities to access the fund.	2. Village/	□ Not pass
	3.1 Village having		community	
	welfare fund for	\square 2. Poor, outreach, and		
	community members.	problem-facing villagers		
	3.2 Providing welfare	receiving the helps from the		
	in village for poor,	welfare fund (must have at least		
	outreach, and problem-	50 percent of all poor, outreach,		
	facing people.	and problem-facing villagers in		
		this village).		
	★ <u>4. Believing in</u>	\Box 1. Villagers or community	1. Village/	\square Pass 2
	<u>democracy</u>	having election's right and living	community	items
	Villagers or community	in the village (must vote in the	2. Village/	\square Not pass
	being active and	last election at least 90 percent of	community	
	knowing their rights and	villagers having the lection's		
	duties, and having	right).		
	political freedom as	□ 2. Having a public meeting		
	national citizen.	(must have a household		
		representative participating in		
		the meeting at least 70 percent of		
		all households in this village).		
	** <u>5</u> . Moralistic practice	\square 1. Villagers or community	1. Village/	Pass 3
L				

Villagers or community	practicing in a religious activity	community	items
insisting on moralistic	together (all villagers in the	2. Village/	□ Not pass
practice, and doing good	village) at least 3-4 times per	community	
things individual and	year.	3. Village/	
cooperative for living.	□ 2. Villagers or community	community	
	practicing following Thai	4.	
	cultures, traditions and manners.	Household	
	□ 3. Having activities of	5. Village/	
	honoring people, having	community	
	moralistic practice and being		
	moralistic model in the villager.		
	□ 4. Having villagers'		
	cooperation, sharing, assisting		
	and paying respect to other		
	people.		
	□ 5. Villagers or community		
	being able to eliminate conflicts.		
6. Desistance of all vices	□ 1. Villagers or community	1. Village/	\Box Pass 3
Villagers or community	desisting drugs in the past year	community	items (must
performing for	round (must have 100 percent of	2.	past items 1
decreasing, desisting and	all villagers).	Household	and 2, and
escaping all vices.	\square 2. Villagers or community	3.	another
	having a promoting process to	Household	item)
	decrease, desist and escape all	4.	\Box Not pass
	vices at least 1 activity in the	Household	
	past year round.	5. Village/	
	□ 3. Villagers or community	community	
	having no alcoholism (must have	6.	
	100 percent of all villagers).	Household	
	□ 4. Villagers or community		
	having no smoking (must have at		
	least 90 percent of all villagers).		
	\Box 5. Villagers or community		
	having no gambling (must have		
	100 percent of all villagers).		
	□ 6. Having warm families (in		
	the past year round, 100 percent		
	of all households living together,		
	paying respect to each other and		
	having consultation, as well as		

	7. Regular practice of the	 no one living alone or escaping from their families). □ 1. Villagers or community 	1. Village/	□ Pass 2
	<u>SEP</u> Villagers or community understanding and applying the SEP to regularly practice in living.	 applying the SEP to arrange learning activities at least 6 times per year. 2. Households having regular practice of the SEP (must have at least 70 percent of all households). 	community 2. Household	items □ Not pass
2. Economy (5 indicators)	* <u>8. Practice of</u> <u>household bookkeeping</u> Household member regularly doing the household bookkeeping for income and expense.	 Households regularly doing the household bookkeeping (must have at least 50 percent of all households). 	Household	□ Pass □ Not pass
	* * <u>9. Practice of</u> reducing expense and increasing income Villagers or community having activities to reduce expense and increase income.	 Households producing the consumer goods for daily life (plant all things that can be eaten, and produce all things that can be used) (must have at least 75 percent of all households). 	Household	□ Pass □ Not pass
	* <u>10. Being member of</u> <u>occupational groups</u> Villagers or community learning, improving and developing occupational groups in production and capital for increasing products' quantity and quality.	 1. Household member being members of villagers' or community's groups (at least 1 household member being membership of village fund or specific fund or village organization, and must have 95 percent of all households in the village) 2. Groups or village organization or community having occupational skill development and knowledge management process. 	1. Household 2. Village/ community	 □ Pass 2 items □ Not pass
	* * <u>11. Practice of</u> savings as a group Village promoting	□ 1. Households practicing in savings (must have 80 percent of all households).	1. Household 2. Village/	□ Pass 2 items (must past item 1)

	villagers being members	\Box 2. Village or community	community	□ Not pass
	of saving groups	having saving groups and/or	3.	- 1.00 Pubb
	or switting groups	monetary funds at least 3 groups.	Household	
		□ 3. Households having savings		
		in other patterns, e.g. 1 Baht		
		saving every day.		
	12. Managing of	\square 1. Village or community	1. Village/	\Box Pass 2
	community capital	enterprise groups or community	community	items
	through community	enterprises in the village at least	2. Village/	□ Not pass
	enterprises	1 group.	community	I I I I I I I I I I I I I I I I I I I
	Village managing a	\square 2. The mentioned group in	5	
	community capital	number 1 having activities		
	through enterprise	providing services and creating		
	groups or community	income or decreasing expense of		
	enterprises.	members at least 1 activity,		
		emphasizing on the production		
		for sufficient consumption in the		
		community and the poverty		
		alleviation (e.g. community rice		
		mill, community shop,		
		community gas station, etc.).		
3.	* <u>13. Surveying of</u>	□ Village or community having	Village/	□ Pass (all
Learning	community information	all the process of data surveying,	community	the process)
(7	Having the process of	collection, analysis and synthesis		\Box Not pass
indicators)	data surveying,	for community information, i.e.		
	collection, analysis and	- having the meetings of		
	synthesis for community	villagers' understandings		
	information.	- data collecting from volunteers		
		- data recording and processing		
		- public meetings for approval		
		- information collecting at		
		learning center of village or		
		community.	1 87'11 /	
	★ ★ <u>14. Utilizing of</u>	□ 1. Village or community using	1. Village/	\square Pass 2
	community information	the information for decision-	community	items
	Utilizing the community	making in village or community	2. Village/	□ Not pass
	information for setting	development e.g. community	community	
	the community plan,	planning, group or organization		
	being the direction,	development, etc.		
	guidelines and problem-	\square 2. Village or community		

solving methods for village development.	applying community plans or activities to real performance (must have at least 30 percent of all community plans or activities).		
15. Conserving of local wisdom Village having the process of searching, collecting, grouping, and learning of local wisdom, then applying to increase values.	 Village or community having the process of searching, collecting, grouping an learning of local wisdom, then applying to increase values, i.e. recording the local wisdom collecting and grouping the local wisdom having activities to inherit the local wisdom applying the local wisdom to community activities (must have at least 1 activity). 	Village/ community	 □ Pass (all the process) □ Not pass
* <u>16. Having of learning</u> <u>centers</u> Village having learning centers for people inside and outside the village for knowledge searching, learning, body of knowledge, and surviving knowledge.	□ Village or community having learning centers for giving benefits to people inside and outside the village.	Village/ community	□ Pass □ Not pass
* 17. Utilizing of appropriate technologies 17.1 Having learning activities, and passing new technologies and innovations by people inside or outside the village totally 4 activities. 17.2 Applying technologies to use appropriately and valuably.	 1. Village or community having learning activities, and passing new technologies and innovations by people outside or inside the village (must have at least 4 activities). 2. Villages learning and applying technologies to use appropriately and valuably (must have at least 50 percent of all the learners). 	1. Village/ community 2. Household	 □ Pass 2 items □ Not pass

	<u>18. Networking with</u> <u>concerned agencies</u> Village having learning networks in group or village levels for information exchanging, cooperating, and activity working.	□ Village or community having learning networks in group or village levels for learning exchanging among villages, communities, organizations or educational institutes.	Village/ community	□ Pass □ Not pass
	* * <u>19. Practice of self-</u> reliance Villagers having abilities of thinking, doing, and problem-solving.	 1. Village or community having abilities of self-reliance at least 2 incidents in the past year round. 2. Village or community making community plans using community learning process. 	1. Village/ community 2. Village/ community	 Pass 2 items Not pass
4. Natural resource and the environme nt (4 indicators)	*20. Practice of natural conservation Village creating consciousness and practicing in natural resource and environmental conservation in the village.	 1. Village or community having activities providing the knowledge of natural resource and environmental management. 2. Village or community having plans of natural resource and environmental conservation 	 Village/ community Village/ community 	 □ Pass 2 items □ Not pass
	*21. Having of actively natural conservation groups Village having groups or organizations of natural resource and environmental conservation, linking with other groups or organizations of natural resource and environmental conservation.	 1. Village or community having natural resource and environmental conservation groups, holding the principles of public participation (e.g. water conservation group, forest conservation group, etc.) 2. Village or community having networks with other groups of natural resource and environmental conservation. 	1. Village/ community 2. Village/ community	□ Pass 2 items □ Not pass
	** <u>22. Practice of</u> <u>alternative energy</u> Village having the	 1. Households having activities of energy conservation, e.g. using energy-saving lamps, 	 Village/ community 2. 	 Pass 2 items Not pass

1	process promoting	using bicycle instead of	Household	
x	villagers to learn,	motorcycle, etc. (must have at	3.	
6	experiment and select	least 25 percent of all	Household	
6	alternative energy	households).		
6	appropriately to village's	□ 2. Households having		
6	environment and	alternative energy production		
e	economy.	and usage, e.g. biodiesel, biogas,		
		biomass, solar cell, etc. (must		
		have at least 25 percent of all		
		households).		
		□ 3. Village or community		
		having activities of energy		
		conservation and alternative		
		energy production and usage		
		(must have at least 1 activity per		
		year).		
	23. Adding of values into	□ Village or community using	Village/	Pass
1	natural resources and the	benefits of natural resources and	community	□ Not pass
6	environment	the environment for creating		
	Village having the	sustainable income (e.g. tourism		
	process of learning,	village, handicraft, agricultural		
	development and	product, product processing,		
1	management of natural	fertilizer making, pyroligneous		
1	resources and the	acid making, etc.).		
6	environment for creating			
5	sustainable income.			

Remarks:

- The main indicators having *, **; comprising 1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 14, 16, 17, 19, 20, 21, and 22.

- Levels of the SEVs models:

1) Por Yu Por Kin (Subsistence Village) level: passing 10-16 indicators, passing at least 10 indicators, comprising 1, 2, 4, 8, 10, 13, 16, 17, 20 and 21, having *.

2) Yu Dee Kin Dee (Better Living Village) level: passing 17-22 indicators, passing at least 17 indicators, comprising 1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 14, 16, 17, 19, 20, 21, and 22, having $\star, \star \star$.

3) Mung Mee Sri Sook (Wealthy Village) level: passing all 23 indicators - Evaluating results:

PassindicatorsNot passindicatorsLevel of the SEV model:

□ Por Yu Por Kin (Subsistence Village)

□ Yu Dee Kin Dee (Better Living Village)

□ Mung Mee Sri Sook (Wealthy Village)

- Informants comprising: 2 village committees, 2 community leaders, 2 members of sub-district administrative organization, totally 6 persons.

- Evaluators comprising: 2 community development district officers, and 2 community development provincial officers, totally 4 persons.

8.2 General Information of Case Studies

8.2.1 Hong Village, Phearam Sub-district, Mueang District, Surin Province

Hong Village has a lot of natural resources, i.e. forest, big water pool and fertile land. In the past, there were a lot of swans (called "Hong" in Thai language) using this water pool; then, this village has been called "Hong" Village. Hong Village is far from Mueang District about 30 kilometers from the North. There are one primary school (named Ban Phearam School) and one secondary school (named Phayaramwitthaya School).

Population: There are 126 households, 525 people (male 232 people, female 291 people) Administrative Board:

Mrs. Suwannee Krasaesom	Headman of Village
Mr. Akkaradetch Yuenyong	Headman Assistant of Village
Mrs. Amporn Ruksakeat	Headman Assistant of Village
Mr. Keerati Sumruamjit	Member of Sub-district Administrative Organization
Mr. Chatchapol Yuenyong	Member of Sub-district Administrative Organization
Mrs. Marisa Polkumsee	Committee
Mr. Pattana Chumpuang	Committee
Miss Pongsri Yuenyong	Committee
Mrs. Orapin Korkaew	Committee
Mrs. Sujitra Saejettana	Committee
Mr. Suthon Korkaew	Leader of Community Development Volunteer
Mrs. Umporn Ruksakeat	Leader of Community Development Volunteer
Mr. Sutus Sumruamjit	Community Development Volunteer
Mrs. Wassawan Charoensiri	Community Development Volunteer

Local wisdoms: Hong Village relies on the SEP and villagers' occupations are mainly farmers, including sericulture, cloth weaving, natural dying for silk, bamboo basketry, local food and dessert cooking etc., and there is the conservation of traditions, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc.

Community economy: 75 households have practiced in household bookkeeping. Villagers generally plant rice and organic vegetables and domesticate animals for their consumptions. If the products are exceeded from household consumption they will sell in local markets. They have practiced savings as a group called the village fund, and in the end of the year, there are beneficial sharing and welfare arrangement from elderly people and children. Their average income is 39,200 Baht per year (1,307 US Dollars per year). There are trainings of occupational

groups, e.g. sericulture, natural dye for silk, silk weaving, organic fertilizer, mulberry tea, mulberry wine, and so on.

Natural resources and the environment: There is an appropriate natural resource and environmental management; especially, villagers conserve natural forest and help to plant community forest totally 300 trees each year. There is the project called community-environmental development, which villagers participate in this project 2 times per month. Every household has their own solid waste separation, solid waste container, flower plantation in front of their houses, and so on.

Healthcare system: All villagers have their healthcare rights and can access the public health information in order to take-care their health and prevent diseases or outbreaks. There is a body checkup system from sub-district healthcare promotion hospitals every year, and there is an exercise promotion that is aerobic dance every day.

Religion, culture and tradition: Most of the villagers believe in Buddhism and always perform following Buddhist principles and there are the conservations of traditions and cultures, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc. They help each other; for example, if someone is sick or has an accident, village fund will be provided for transportation cost to a hospital totally 300 Baht per time (10 US Dollars per time).

Development of community people: There are many activities for knowledge exchanges and trainings, i.e. cloth and silk weaving, natural dyeing for silk, organic fertilizer composition, sericulture, basketry and so on.

Administration: There is the community information system that villagers can add new information or can ask for information to be used for benefits. Villages have participated in making the community plan, which the committee comprises community leaders, representatives from sub-district administrative organizations and local philosophers. The administrative board promotes believing in democracy that villagers know their rights and duties, can participate in all activities arranged in the village.

Community security and safety: Villagers have cooperation and help each other in community security and safety as village health volunteers (VHVs).

Learning centers: There are 4 learning centers comprising bamboo basketry (by Mr. Ruen Sumruamjit), silk weaving (by Miss Pattaraporn Yuenyong), vegetable plantation (by Mr. Keerati Sumruamjit), and community rice (by Mr. Sutus Sumruamjit).

8.2.2 Tenmee Village, Tenmee Sub-district, Mueang District, Surin Province

Tenmee Village has a lot of natural resources, i.e. forest, many water pools and fertile land. In the past, there was the hunter named "Preanmee" making animal traps on the hill, which is now the area of Tenmee Village, because this area had plentifully natural resources. Then, he invited his relatives and neighbors resettling and possessing the lands. Then, this area was called Tenmee Village. Tenmee Village is far from Mueang District about 12 kilometers from the East. There is one primary school (named Ban Tenmee School).

Population: There are 132 households, 473 people (male 220 people, female 253 people) Administrative Board:

Mrs. Chonthicha Samanso	Headman of Village
Mr. Sonthaya Srimala	Headman Assistant of Village
Mr. Weerachai Kosulwat	Headman Assistant of Village
Mr. Prathom Wannatrong	Member of Sub-district Administrative Organization
Mr. Suken Welakerd	Member of Sub-district Administrative Organization
Mrs. Pikul Srimala	Committee
Mrs. Nuanjan Maklue	Committee
Mrs. Wanna Muangngam	Committee
Mrs. Piyaluk Wannatrong	Committee
Mrs. Chuenchom Pensook	Committee
Mrs. Umporn Welakerd	Committee
Mrs. Suchada Chuesay	Committee
Mrs. Supot Kumpanu	Committee
Mrs. Sompong Samanso	Committee
Mrs. Paikum Sungkomon	Committee
Miss Saway Jeamrum	Committee
Mr. Somkeat Somkla	Leader of Community Development Volunteer
Mr. Thairat Tronteang	Leader of Community Development Volunteer
Mrs. Chutikarn Kabuandee	Community Development Volunteer
Miss Kannika Welakerd	Community Development Volunteer

Local wisdoms: Tenmee Village relies on the SEP and villagers' occupations are mainly farmers, including sericulture, cloth weaving, silk processing, bamboo basketry, local food and dessert cooking etc., and there is the conservation of traditions, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc.

Community economy: 80 households have practiced in household bookkeeping. Villagers generally plant rice and organic vegetables and domesticate animals for their consumptions. If the products are exceeded from household consumption they will sell in local markets. They have practiced savings as groups called the village fund, the saving group for production, and the Sajja saving group. Their average income is 95,066 Baht per year (3,169 US Dollars per year). There are trainings of occupational groups, e.g. sericulture, natural dye for silk, silk weaving and processing, drinking water production, agricultural products for green markets, rice production, local food and dessert, carpenters and mechanics and so on.

Natural resources and the environment: There is an appropriate natural resource and environmental management; especially, villagers conserve natural forest. There is the project called community-environmental development, which villagers participate in this project once a month. Every household has their own solid waste separation, solid waste container, flower plantation in front of their houses, and so on.

Healthcare system: All villagers have their healthcare rights and can access the public health information in order to take-care their health and prevent diseases or outbreaks. There is a

body checkup system from sub-district healthcare promotion hospitals every year, and there is an exercise promotion that is aerobic dance every day.

Religion, culture and tradition: Most of the villagers believe in Buddhism and always perform following Buddhist principles and there are the conservations of cultures and traditions, e.g. San Don Ta tradition (for Khmer ethnicity), candle procession, Songkran festival, etc. There is the integration for working and learning among house, temple and school.

Development of community people: There are many activities for knowledge exchanges and trainings, i.e. cloth and silk weaving, silk processing, sericulture, and so on.

Administration: There is the community information system that villagers can add new information or can ask for information to be used for benefits. Villages have participated in making the community plan from 2017 to 2021, which the committee comprises community leaders, representatives from sub-district administrative organizations and local philosophers. There are totally 30 projects created by villagers. The administrative board promotes believing in democracy that villagers know their rights and duties, can participate in all activities arranged in the village.

Community security and safety: Villagers have cooperation and help each other in community security and safety as VHVs.

Learning centers: There are 9 learning centers comprising silk weaving (by Mrs. Supoj Kumpanu), sericulture (by Miss Chalom Yaemsri), silk processing (by Miss Kannika Welakerd), local food and dessert (by Mrs. Umporn Welakerd), herbal products (by Mrs. Prayong Jeamrum), mechanics (by Mr. Taworn Kumpanu), basketry (by Mr. Suken Welakerd), natural dyeing for silk (by Mrs. Chean Jainueng) and community occupations (by Miss Kunnika Welakerd).

8.3 Lessons Learned and Success Factors

In this research, we firstly studied the community information from the community information systems both of Hong Village and Tenmee Village. After that, we created the relationship with the leaders and villagers in the villages. Then, we in-depth interviewed the key informants comprising three main groups: three governmental officials, who mainly work for community development; three community leaders, who apply the SEP to the village; and three model villagers, who implement the SEP, for proposing the ideas and attitudes and giving their experiences how to approach the SEP and CDD, including their challenges and success factors to improve their qualities of life and contribute to the SEVs models in each case study. The collected data were analyzed using the content analysis and frequency to explain in descriptive data mainly from the key informants.

8.3.1 Lessons Learned

For the lessons learned to improve their lives and contribute to the SEVs models of Hong Village and Tenmee Village, the key informants of the 3 main groups in both Hong Village and Tenmee Village expressed their opinions, which all were consistent as the followings.

1. The village leaders have knowledge, skills, competencies and experiences for developing their villages. From the interviews of governmental officials (community development officials) of both villages, they were agreed that the leadership qualities of village

leaders are very important to develop their villages and villagers. Each leader has different knowledge and skills and the leaders need to have experiences and be enthusiastic to learn and develop their villages. For examples, their important skills are agricultural practice, public speaking, team working, governmental organization cooperation, and so on as illustrated as the following interviews.

"The leaders in the village can do a lot of things, some are very good in public speaking, some are very good in agriculture, and some are very in marking, commerce, and e-commerce. Then, when they work together they can share and cooperate in working and developing the village quite well." (The 1st Community Development Official of Hong Village, Interview, 5 March 2013)

"The leaders of Hong Village have specific knowledge from their own experiences; for example, occupational leaders have agricultural knowledge, especially organic farming and have applied the SEP to the village, and they are good models for villagers." (The 2nd Community Development Official of Hong Village, Interview, 5 March 2013)

"The leaders of Tenmee Village have knowledge, potentials, skills and abilities in their specific fields and experiences; for example, each leader has different knowledge, e.g. organic farming, Thai dessert cooking, baking, detergent making, Effective Microorganism (EM) making, and so on." (The 1st Community Development Official of Tenmee Village, Interview, 12 March 2013)

"There are a lot of smart leaders in this village. The leaders are an important factor to develop the village. Therefore, Tenmee village should be the SEVs Model for extending the lessons learned to neighbor villages led by the leaders." (The 3rd Community Development Official of Tenmee Village, Interview, 12 March 2013)

Besides, from the interviews of community leaders in both villages, they were agreed that the leadership qualities of village leaders are an important factor to the success of communities as shown in the interviews.

"Our village leaders have a lot of knowledge, especially local wisdom, and they can be speakers or trainers, and whatever occupations or subjects they can teach by themselves." (The 1st Village Leader of Hong Village, Interview, 5 March 2013)

"Our village leaders have different skills; for examples, some are good in agriculture, some are good in culture, and some are expert in wood processing. For me, I am good in EM making and they can be trainers for other villagers." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

"The leaders of Tenmee Village can teach their knowledge and skills to villagers, especially organic farming, according to the SEP." (The 3rd Village Leader of Tenmee Village, Interview, 12 March 2013)

Moreover, from the interviews of the model villagers of both villages, the leadership qualities of village leaders can transfer knowledge to villagers, especially occupational creation and performance following the SEP.

"We have the leaders having knowledge about the SEP, and then they transfer the knowledge to villagers. These are good examples of leadership qualities to develop our village" (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"The chairman of organic farming group is the leader of our village. He is a role model of our village in agriculture and can be self-reliant with happiness." (The 3rd Model Villager of Hong Village, Interview, 6 March 2013)

"The leaders can transfer knowledge to villagers and are very good speakers about community development, especially the content of the SEP. Therefore, all knowledge is clear and can be applied to us." (The 1st Model Villager of Tenmee Village, Interview, 13 March 2013)

"How do we live with our sufficient life? We can live with happiness using the SEP, transferred from the community leaders. They transfer, teach and suggest us about living according to the SEP." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

"Now, we plant vegetables for our households, we don't need to buy from markets because we learn from the leaders about organic farming." (The 3rd Model Villager of Tenmee Village, Interview, 13 March 2013)

In summary, the village leaders of Hong Village and Tenmee Village have a lot of knowledge, skills, competencies and experiences as the followings.

- The village leaders have knowledge, skills, competencies and experiences about organic farming. They plant herbs and vegetables that can be used and consumed in households. The occupational leaders can be the household models that decrease household expenses, and transfer the knowledge and experiences to villagers. The excess of herbs and vegetables can be given to neighborhoods and this can create moderation of the SEVs models.

- The village leaders have speaking skill and can be speakers to transfer the SEP knowledge and perform the activities following the criteria and indicators of the SEVs models, especially practices of expense reducing, income increasing, saving, learning, natural resource and environmental conservation, and self-reliance. They can also help to transfer their knowledge and provide guidelines to villagers and households inside or outside the villages for sustaining the SEVs models.

2. The administrative boards and village committees of both Hong Village and Tenmee Village have good administrative systems. There are the systematically working divisions, and responsible persons and committees in each working division. In the village board, there are main positions, which are chairman, vice-chairmen, treasurer, secretary, public relations officer, and so on. They work as a team for planning their works and projects, and then communicate to every committee for consensus. After that, they work together with villagers for achieving their plans and unity of village's cooperation. The evidences are illustrated as the following interviews.

"The administrative board is very vigorous and has the unity of team cooperation. We can talk and consult with the committees in every problem or aspect. Their aims and directions are always the same then every project can be achieved easily and effectively." (The 2nd Village Leader of Hong Village, Interview, 5 March 2013)

"Our village committees have their responsibilities in each position depending on their abilities and competencies. They work as teamwork then our village and villagers can be developed together to our plans." (The 1st Village Leader of Tenmee Village, Interview, 12 March 2013)

"There are always the administrative board meetings. All committees have power and intention to participate in the meetings. We have more time to talk in order to understand and for creating the unity of our administrative board." (The 3rd Village Leader of Tenmee Village, Interview, 12 March 2013)

These village leaders' quotes are consistent with the interviews of the community development officials that the administrative boards of Hong Village and Tenmee Village have divided the works as village committees to take responsibilities in each task appropriately according to their abilities and competencies. When they have activities or projects they can invite villagers to work and participate in those activities or projects smoothly and achievably. The interviews' results are illustrated as the followings.

"Whatever projects have been initiated, there are the meetings to vote the village committees as following positions, which are chairman, vice-chairmen, treasurer, secretary and so on for dividing the important tasks. This is a very well systematic system for working as team in the village." (The 3rd Community Development Official of Hong Village, Interview, 5 March 2013)

"For community development works, the most important thing is cooperation as group and there is an administrative board to divide works and to assign responsibilities to the group committees." (The 2nd Community Development Official of Tenmee Village, Interview, 12 March 2013)

"When each group in the village has its administrative committee to work according to committees' abilities and competencies, they will work attentively and effectively. Besides, the group can select the right person to work in the right job." (The 3rd Community Development Official of Tenmee Village, Interview, 12 March 2013)

Moreover, the village leaders expressed their opinion that teamwork can cooperate villagers, help each other to learn and exchange knowledge, and work effectively because they work following their abilities or capabilities. The village leaders gave quotes to support working as the administrative boards or village committees as the followings.

"When the leaders or committees work as teamwork they will teach new members or villagers who have never got experiences. Then, they help each other for creating the unity of village" (The 1st Model Villager of Hong Village, Interview, 6 March 2013)

"Each committee has his responsibility or task. If we would like to consult which work we can contact to the committee who is specific or professional in that work." (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"The administrative board always has a meeting before starting or working on those projects." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

To summarize, the administrative boards of Hong Village and Tenmee Village have very good systematic administrations. They have divided works following the committees' abilities and competencies, which create the unity to drive the villages' projects for the SEP. The administrative boards of both Hong Village and Tenmee Village aim to practice following the criteria and indicators for being the SEVs models for villages' sustainability. Besides, a teamwork is very important to support consensus, create mutual understandings, reduce conflicts, help community planning, and set development targets. This is a success factor for CDD in sustainable way.

3. The village leaders have abilities to create good cooperation with villagers. From the interviews, the leaders are centered to co-operate villagers when there are activities, projects or public meetings. Villagers need to believe in and are willing to co-operate with the leaders when they ask for cooperation to work for the villages. The leaders need to have public mind, sacrifice and volunteer to work for community development. These characteristics can attract villagers to work for community as illustrated in the interviews' results as the followings.

"Village leaders must have volunteer mind. If the leaders are willing to work for community and villagers realize that, they will intend to work with us wholeheartedly." (The 1st Village Leader of Hong Village, Interview, 5 March 2013)

"When we persuade and appoint villagers for community development, they will join us wholeheartedly" (The 1st Village Leader of Tenmee Village, Interview, 12 March 2013)

"Because we are willing to work for our community and give our hearts to villagers, they always join us even though they don't have any compensation." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

Furthermore, the community development officials expressed their opinions that when they work with the leaders of Hong Village and Tenmee Village, they can ask for a cooperation from villagers simply and completely. Then, all governmental projects or activities can be achieved following the objectives and indicators of the projects completely. The interviews' results of the community development officials are shown as the followings.

"The leaders of Hong Village are easily accessible and have public mind. We don't need any official documents at the first meeting; the villagers understand the works and duties of officials. Hence, they make us work together quickly because the leaders can help to cooperate with villagers and manage works in the village." (The 1st Community Development Official of Hong Village, Interview, 5 March 2013)

"If we have any projects we can ask for the village leaders' helps. They help us to find data and information that we request and the due date; after that, the will find them to us." (The 3rd Community Development Official of Hong Village, Interview, 5 March 2013)

"Many leaders in Tenmee Village are friendly, generous and open-minded to cooperate with governmental organizations. It is very easy to work with them and villagers." (The 3rd Community Development Official of Tenmee Village, Interview, 12 March 2013)

In summary, the village leaders of Hong Village and Tenmee Village have the cooperative ability. They are mediators to connect villagers to participate in every project or

activity, arranged in the villages. And, they can cooperate with organizational organizations and other villages easily and work with us wholeheartedly. These can drive the SEVs models from cooperation with other organizations, villagers, and other villagers and all parties are willing to support the villages' works, aiming to drive and sustain the SEVs model continuously.

4. The villagers have cooperated and volunteer mind for community development. From the interviews of the village leaders, the villagers of Hong Village and Tenmee Village have cooperative and volunteer mind to participate in the villages' activities. Sometimes, they have to sacrifice their time from working but they always think about the villages' benefits first. For examples, there are the every month meeting, public meeting for village planning, the SEV meeting, occupational meeting, and so on. The interviews' results are shown as the followings.

"When we announce to make an appointment for meeting the villagers always participate in the meeting; for instance, they always participate in the every month meeting, even though they have some businesses to do but they always sacrifice their times." (The 2nd Village Leader of Hong Village, Interview, 5 March 2013)

"The villagers of Tenmee Village always sacrifice and cooperate with the village leaders. For example, the activities of the SEP are well supported and performed following the plans and objectives, and they are interested in community development because they understand the objectives and benefits from the SEP." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

"The villagers in our village are totally volunteered and cooperated when there are village's activities. For instance, if there is a public meeting, they all participate in the meeting and talk together to solve problems and create ideas with consensus." (The 3rd Village Leader of Tenmee Village, Interview, 12 March 2013)

These interviews' results are consistent with the interviews of the community development officials, regarding to the cooperation of villagers when there are governmental projects for developing their villages. For examples, the DLA supported the SEVs models in the past, they have cooperated with the community development officials, villages' leaders, and other villagers to propose their ideas, design the plans activities of the villages, and perform following the plans and activities. The interview results are illustrated as the followings.

"I would like to say that the villagers of Hong Village have volunteer mind to participate in and work with us. Some projects needed only 10 villagers but 20 villagers came to participate in the project. It means that the villagers have public participation mind for community development." (The 1st Community Development Official of Hong Village, Interview, 5 March 2013)

"The villagers of Hong Village always cooperate with and participate in the meetings of community development. For example, when we had the meeting for making the community plans there were a lot of villagers participating in the meeting and they proposed their ideas and voted and requested some interesting projects." (The 2nd Community Development Official of Hong Village, Interview, 5 March 2013)

"For the SEVs from the DLA in the past, there were many villagers participating to be the households' models and they helped each other to evaluate the village according to the criteria and indicators. Then, the unity and cooperation is very important; if there was no cooperation in those times, Tenmee Village would not be the SEVs model." (The 2nd Community Development Official of Tenmee Village, Interview, 12 March 2013)

Besides, the model villagers of Hong Village and Tenmee Village expressed their opinions that the villagers always participate in the activities, arranged by the village leaders and/or governmental organizations. For example, the every month public meeting, occupational training projects, community planning meetings, and so on because they are interested in new things and would like to learn and know new knowledge, rights and benefits of themselves and the villages. Then, they always cooperate with the leaders and governmental organizations, and are ready to learn new things for developing themselves. The interviews' results of both model villagers are shown as the followings.

"The activities created by the village leaders are quite good. If I have time I always participate in those activities." (The 1st Model Villager of Hong Village, Interview, 6 March 2013)

"I would like to learn new things and develop myself. When there are training courses I would like to participate in them because I would like to have knowledge and help the village for community development." (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"I like when they taught to make the household bookkeeping. I applied this knowledge to calculate our incomes and expenses for considering our monetary balance and try to save money from buying unnecessary things, and try to be self-reliant." (The 3nd Model Villager of Hong Village, Interview, 6 March 2013)

"Whatever activities in the village have been arranged, I always participate in because I think that all activities are beneficial to our village. If I don't participate in any activity, I won't know anything in our village." (The 1st Model Villager of Tenmee Village, Interview, 13 March 2013)

"If I have free time I always participate in village activities because it will make our village have unity and strength." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

"When there are the meetings for community development I always participate in the meetings because I am a villager of the village then I have to help and work for village development." (The 3rd Model Villager of Tenmee Village, Interview, 13 March 2013)

In conclusion, the villagers of Hong Village and Tenmee Village have participated in the projects or activities for community development, led by the village leaders and the officials from governmental organizations because they are interested in self-development and the village development using the SEP. They would like to learn new things and knowledge, and to know their benefits and rights. Then, for the community development, it is crucial to have the cooperation of villagers and if the villages aim their villages' plans according to the SEP, they can develop their knowledge and mind with understanding of the SEP. Additionally, they can

understand the principles of moderation, reasonableness and self-immunity from cooperating and participating in the villages' activities, which is a success factor to achieve the SEVs models.

5. The villagers of Hong Village and Tenmee Village believe in the SEP for their daily life performance. From the interviews of the community development officials, when there are the projects in village level, especially the projects promoting sustainable local development and self-reliance, the villagers are ready to be trained with wholeheartedly and would like to develop themselves using the SEP. The governmental organizations, especially the DLA, have promoted the knowledge of the SEP, agriculture, occupation, household bookkeeping, and so on. When they are ready to be trained they are ready to perform following the governmental plans. Hence, the governmental occupations can work achieving the objectives or targets following the projects' criteria and indicators and the villagers are trained for learning system and process four sustainable local development. The interviews' results are illustrated as the followings.

"As the governmental organizations have arranged the training projects in the village and the villagers are ready and eager to learn the knowledge and perform following the projects' plans. They of course will take knowledge and skills to apply in daily life." (The 2nd Community Development Official of Hong Village, Interview, 5 March 2013)

"When we train the occupations for the villagers, they are interested to participate in the training courses. For example, the project of Thai dessert making was interested by many villagers that they would like to learn and would like to make the dessert for sale in the future." (The 3rd Community Development Official of Hong Village, Interview, 5 March 2013)

"When the villagers learn new things and knowledge, they will apply their knowledge to make the products for occupations. If the villagers are ready to learn and can see the benefits in the future, we will not waste budget for training them." (The 3rd Community Development Official of Tenmee Village, Interview, 12 March 2013)

The interviews' results from the village leaders are also consistent about the adherence to the SEP and the readiness of villagers to learn new things and knowledge. The villagers of Hong Village and Tenmee Village can be self-reliant from daily life activities, e.g. household bookkeeping, performance of reducing expenses and increasing incomes, household vegetable plantation, household animal domestication, etc. They try to less rely on outside factors, creating expenses and to be sufficient in daily life with happiness.

"Villagers in some household's plant herbs and vegetables for using themselves such as bean sprouts, glory morning, cabbage, and so on." (The 1st Village Leader of Hong Village, Interview, 5 March 2013)

"When villagers make household bookkeeping they know their expenses and incomes, then they try to manage and balance their money. They also know themselves, limitations, and planning in the future, and try to know sufficiency, moderation, and reasonableness." (The 2nd Village Leader of Hong Village, Interview, 5 March 2013)

"When we get in the houses that practice following the SEP, they have many activities to reduce expenses and increase incomes, e.g. household vegetable plantation and household animal domestication. These houses show that they can be self-reliant then can really be households' models for the SEP. They are the most important parts making our village got justified to be the SEVs models." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

Additionally, the model villagers gave their consistent opinions that the villagers of Hong Village and Tenmee Village can be the SEVs models because many households have performed following the SEP from many activities, e.g. household bookkeeping, expense reducing, income increasing, and so on. These households' models at least 30 households in each village can teach and transfer their knowledge and skills to interested villagers or households that would like to implement the SEP. The interviews' results of the model villagers are illustrated as the followings.

"My house is one of the 30 households' models of the SEP for the SEVs models. After we have applied the SEP to our house, all household members have spent lives sufficiently. When we would like to buy things we always think about the balance of incomes and expenses." (The 1st Model Villager of Hong Village, Interview, 6 March 2013)

"We can apply the SEP to real life. We just know yourselves what things are important and beneficial for our lives, think before buying, and are sufficient. All of these are enough to be sustainable for our lives and families." (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"We always think about the activities to increase incomes and decrease expenses. If our neighbors would like to do something that we can do, we just tell, teach and suggest them." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

To conclude, the villages of Hong Village and Tenmee Village have applied the SEP to daily lives and for developing themselves be the households' models of the SEP. They have performed following the criteria and indicators as much as they can, that are reducing expenses, increasing incomes, self-reliance, self-immunity, and clinging to the SEP, for being households' models to other households. If most of the households in the villages have performed following us in accordance with the SEP, the villages will have been the SEVs models perfectly and can co-operate each other to develop other perspectives.

6. The governmental organizations support community development activities and knowledge in the villages. From the interviews of the model villagers of Hong Village and Tenmee Village, the governmental organizations, especially the DLA, the LAOs, universities, etc., have arranged the seminars and training courses about the SEP. Firstly, they invited the villagers or households who are enthusiastic to implement the SEP and would like to be the households' models in the project of SEVs models. They were trained and described for the criteria and indicators to be justified for the SEVs models. After that, there were focus groups' discussions how did they achieve the households' models, which the villagers would participate and their households would be evaluated and justified to be the households' models. They had to present the processes and performances to achieve the SEVs models according to the criteria and indicators. For examples, the performances of practicing household bookkeeping, reducing expenses, increasing incomes, desistance of all vices, creating occupations and so on were

presented and discussed among the villagers, governmental officials, lecturers and interested people, etc. Then, the governmental organizations are very important to drive the community development according the SEP, as illustrated from the interviews of the model villagers as the followings.

"When the governmental officials from the LAOs arranged the meeting to train the SEP in the village, I thought it was interesting and I would like to know how to implement the SEP. Then, I have participated in the project since the kick-off meeting." (The 1st Model Villager of Hong Village, Interview, 6 March 2013)

"When the village headman told us that the LAOs would promote and support our village to be the SEVs models, I was delighted. Then, I wholeheartedly joined this project because it is very beneficial to our village." (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"When the governmental officials came to our village, they told us your village was appropriate to be the SEVs models and asked us what did we have and we want to develop according the criteria and indicators of the SEVs models. They also told us that we could do, and what plans would you like to develop your village; then, they would support." (The 3rd Model Villager of Hong Village, Interview, 6 March 2013)

"We are households' models of the SEP, we can transfer our knowledge to other neighbors who are interested in the performances following the SEP." (The 1st Model Villager of Tenmee Village, Interview, 13 March 2013)

"After the governmental officials trained us to make the dish detergent, we have still made and used it that can save our expense." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

"The community development officials helped and trained us to be sufficient following the SEP, they could motivate and drive our village until the village could be evaluated to be the SEVs models." (The 3rd Model Villager of Tenmee Village, Interview, 13 March 2013)

Besides, the village leaders of Hong Village and Tenmee Village gave the consistent opinions that the DLA is mainly the organization, leading the SEP concepts and principles to train the villagers. And, the relevant organizations, e.g. universities, District-agricultural Office, and Bank for Agriculture and Cooperatives, trained the villagers to practice bookkeeping, occupational trainings, agricultural plantation, and so on. The interviews' results of the villagers are shown as the followings.

"Community development officials agreed that our village was well organized and appropriate to be the SEVs model. However, in the past, we didn't know about the criteria and indicators. After, we had seen the evaluation process for evaluating the SEVs models, we knew that what subjects or things should we develop to achieve the criteria and indicators of SEVs models." (The 3rd Village Leader of Hong Village, Interview, 5 March 2013)

"I would like to say that the community development officials are very important to motivate us to practice following the SEP. They always provide knowledge and new things to us *about community development, technology, including the SEP.*" (The 1st Village Leader of Tenmee Village, Interview, 12 March 2013)

"Before being the SEVs model, the DLA, the LAOs, and the District-agricultural Office had given the knowledge about the SEP. And, the community development office is the main organization that teaches us about the criteria and indicators of the SEP, as well as teaches us how to evaluate ourselves and to be sustainable for local development." (The 3nd Village Leader of Tenmee Village, Interview, 12 March 2013)

Moreover, the community development officials, who are responsible for Hong Village and Tenmee Village, have worked following the national policy defined by the Ministry of Interior, mainly supporting and working in communities. Also, the DLA has supported occupational groups for developing to be One Tambon One Product (OTOP); Department of Agricultural Promotion (DAP) has promoted agricultural production, organic farming and drought solution; Ministry of Public Health (MPH) has supported healthcare, promoted exercise and campaign for mosquito larvae eradication in rainy season; and so on. Many governmental organizations have their own policies to give to the villagers to perform. Then, the villages have been supported by the governmental policies as the following interviews.

"The DLA has the policies to create occupation groups and promote the SEP in communities. We, community development officials, have the main duties to drive the policies to the villages and try to encourage villagers to perform with willingness." (The 1st Community Development Official of Hong Village, Interview, 5 March 2013)

"When we have started to drive the SEVs models project, we needed to survey which villages are well organized and appropriate to be the SEVs models. Tenmee Village was one of the most appropriate villages in Mueang District, Surin Province, and was our target. Then, we gave the SEP concepts and knowledge to them and trained them how to achieve the SEVs models. And, we encouraged them to create occupational groups." (The 1st Community Development Official of Tenmee Village, Interview, 12 March 2013)

"It is one of the governmental policies because the government emphasizes on the SEP, coving all the areas in Thailand. The main governmental organization that drives the SEP to Thai villages is the DLA; however, other organizations also help to support. For examples, the DAP promotes the agricultural production, the MPH promotes the healthcare, and so on." (The 2nd Community Development Official of Tenmee Village, Interview, 12 March 2013)

In short, the governmental organizations, e.g. the DLA, the LAOs, the DAP, the MPH, universities, and so on, have driven and supported the community development projects, aiming to sustainable local development by applying the SEP. They give ideas and knowledge to develop the villages, according to the criteria and indicators of the SEVs project, e.g. household bookkeeping, desisting all vices, reducing expenses, increasing incomes, creating learning centers, applying appropriate technologies, etc., led by the DLA, and other projects, e.g. practicing savings as a group, creating occupational groups, organic farming, health-caring, practicing self-reliance, practicing natural resources and environmental conservation, etc., led by the other organizations.

7. The governmental officials are the mentors for village leaders and villagers. From the interviews of the village leaders of Hong Village and Tenmee Village, the governmental officials of the DLA and other governmental organizations have cooperated with the villages and consulted with the village leaders about the SEPs and how to achieve the SEVs models according to the criteria and indicators. For instances, there are the activities of expense reducing, income increasing, vice reducing, occupational creating, and so on; besides, when there are other villages or communities come to learn and exchange knowledge the governmental officials always come to help, give willpower, and support ideas according to the SEP concepts and the community development procedures. The interviews' results of the village leaders of Hong Village are illustrated as the followings.

"When we have made the activities of bookkeeping, expense reducing, income increasing, and so on by ourselves, the community development officials always comes to give us the suggestions, supporting, and willpower. They always tell us that if you have any inquiries or helps, don't hesitate to contact them." (The 2nd Village Leader of Hong Village, Interview, 5 March 2013)

"When our villages have arranged any activities, traditions, occupational meetings, or public meetings, the governmental officials always come to participate in the activities. This creates our relationship between the government and villagers and they always encourage and give willpower to us in community development working; besides, they are like our mentors and supporter when we have any problems or would like to have ideas or concepts." (The 3rd Village Leader of Hong Village, Interview, 5 March 2013)

"When there have been other villages or communities coming to learn the SEVs model of our village, I am a speaker of the village. However, there are always the community development officials come to help us since preparation of presentation, preparation of village atmosphere, and sight-seeing in the village." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

These interviews' results are in the same directions of the interviews of the community development officials that the main duties of community development officials are mainly to support and suggest the works and processes of village committees, village leaders and villagers. They trained and clarified the criteria and indicators of the SEVs models. Also, they encourage village leaders and villagers to work for the village as community development and sustainability. The interviews' results of the community development officials who look after Hong Village and Tenmee Village are appeared as the followings.

"Community development works are needed to get in the village. The community development officials have academic principles so we have to suggest and drive the community development works for sustainable local development." (The 1st Community Development Official of Hong Village, Interview, 5 March 2013)

"From my viewpoint, if we would like to drive the project of SEVs models to success we have to always in get in the village, talk to the villagers to encourage and motivate them to *realize the importance of the project, which is mainly for sustainable local development.*" (The 1st Community Development Official of Tenmee Village, Interview, 12 March 2013)

"The community development officials are very important to give community development knowledge and processes to villagers. We have to always get in the village in order to make the relationship to the village leaders and villages. If they have anything to consult with us or we would like to add some aspects to them, it is easy to work according to the policies or projects' objectives." (The 2nd Community Development Official of Tenmee Village, Interview, 12 March 2013)

Besides, the village leaders of Hong Village and Tenmee Villages expressed the opinions that governmental organizations always come to the villages to give willpower to the village leaders and villagers, participate in village committees in the positions of consultants. Besides, when there are the meetings, they come to the villages to inform news or information of the organizations; besides, when there are activities of traditional or cultural events, they always come to the villages to participate in and give willpower to them. For the SEP, they helped to train, suggest, prepare and drive all important things for justifying the SEVs models. These can drive the villages completely as seen in the following interviews' quotes.

"When there are meetings, there are also many governmental officials participating in the meetings. They always inform new things and projects that are beneficial to our village." (The 1st Model Villager of Hong Village, Interview, 6 March 2013)

"When our village has arranged the events, there are many governmental officials participating in the events. They come to talk and suggest the village committees and villagers with familiarity." (The 3rd Model Villager of Hong Village, Interview, 6 March 2013)

"I feel that governmental officials are very familiar with the village leaders and villagers. When there is any event in our village, they always come and join it." (The 1st Model Villager of Tenmee Village, Interview, 13 March 2013)

"When governmental officials work with us, we feel warm and they support us in every aspect. Then, the villagers are willing to work with them." (The 2nd Model Villager of Tenmee Village, Interview, 13 March 2013)

To summarize, governmental officials are the mentors of the villages and villagers. Hong Village and Tenmee Village are always supported from them. For the SEVs models, they came to the villages to train, suggest and give willpower to them for doing activities and works for community development. The village leaders and villagers have enforcement to drive any activity to reach all targets and accomplish the community development according to the SEP.

8. The learning centers are important to gather villages' data or information. From the interviews' results of the village leaders of Hong Village and Tenmee Village, there are 4 and 9 learning centers at Hong Village and Tenmee Village, respectively. Besides, local wisdom experts are important persons who have sustained their lives successfully. The learning centers and local wisdom experts can transfer knowledge to villagers following the SEP, which are silk weaving, sericulture, silk processing, local food and dessert, herbal products, basketry, natural dyeing for silk, and so on. And, there are other villages coming to Hong Village and Tenmee

Village to learn from the learning centers and local wisdom experts. These are academic and human resources of the villages, which are illustrated from the interviews' results as the followings.

"The learning centers are in the houses of local wisdom experts. These are local wisdom and knowledge of our village. These learning centers are very good to our villagers and other villagers from other villages, who would like to learn from our village." (The 1st Village Leader of Hong Village, Interview, 5 March 2013)

"I am a local wisdom expert in the village. My house is a learning center of the village for the SEP. I always teach the villagers inside or outside the village, who would like to learn with me, and I will give them knowledge wholeheartedly because they will have knowledge to find their money and might be their jobs in the future." (The 2nd Village Leader of Hong Village, Interview, 5 March 2013)

"In our village, there are many learning centers, which are located in the houses of local wisdom experts. These learning centers are supported people who would like to practice according to the SEP. All of the knowledge can be used for creating the jobs, taught by these local wisdom experts." (The 2nd Village Leader of Tenmee Village, Interview, 12 March 2013)

These interviews' results are consistent to the interviews of the community development officials in Hong Village and Tenmee Village. The learning centers and local development experts are valuable not only in the villages themselves but also for villagers outside the villages, who would like to learn local wisdom and knowledge of the villages. The villages can develop themselves to be the SEVs models and can transfer knowledge to other villages. The interviews' quotes of the community development officials are illustrated as the followings.

"For sustainable local development, the learning centers and local wisdom experts are very important to make villagers realize the importance and knowledge of the village. If villagers have knowledge, especially about local wisdom and occupational creation, their incomes will be increased and they can be self-reliant. Then, they don't go to work outside the village; all things will be better including the family warmth, village unity and so on." (The 2nd Community Development Official of Hong Village, Interview, 5 March 2013)

"Many villages always come to visit Tenmee Village and would like to know about creating occupations in the village. These are created from various local wisdom experts, who are experts in agriculture, organic farming, silk processing, etc." (The 2nd Community Development Official of Tenmee Village, Interview, 12 March 2013)

"There are a lot of local wisdom experts and learning centers in Tenmee Village. They can transfer local wisdom and knowledge for achieving the SEP. When there are any projects concerning community development, especially occupational groups, we firstly think about this village." (The 3rd Community Development Official of Tenmee Village, Interview, 12 March 2013)

Moreover, the interviews' results of the model villagers of Hong Model and Tenmee Village gave opinions that if there are learning centers of the SEP at the villages they can give local wisdom and knowledge to the villagers in their villagers, which they do not need to find the knowledge about the SEP outside of the villages. Besides, there are many villagers or people of other villages coming to learn the SEP in the villages, and they have incomes from making food and desserts for accepting the villagers from other villagers. The interviews' results of the model villagers are shown as the followings.

"For my idea, it is very good to have the learning centers in our village because villagers inside or outside our village can learn by themselves and from local wisdom experts." (The 2nd Model Villager of Hong Village, Interview, 6 March 2013)

"Local wisdom experts and learning centers are very good academic and human resources of the SEP. They can teach and transfer local wisdom and knowledge to the villagers both inside and outside the village." (The 2nd Model Villager of Tenmee Village, Interview, 6 March 2013)

"I am a person who cooks food and makes dessert for villagers outside the village, who come to our village to learn local wisdom and knowledge about the SEP and how to achieve or succeed the SEVs models." (The 3rd Model Villager of Tenmee Village, Interview, 13 March 2013)

To conclude, learning centers and local wisdom experts are very important as academic and learning sources of the SEP for villagers inside and outside the villages. The SEVs models of Hong Village and Tenmee Village can extend the SEP and create the networks for local development to other villages. Besides, the learning centers of the SEVs models can create incomes to the villages from educational trips from other villages and can be the indicators for the SEVs models as sustainable local development.

8.3.2 Success Factors

From the in-depth interviews of the key informants comprising 3 main groups comprising 3 governmental officials, 3 community leaders, and 3 model villagers of Hong Village and Tenmee Village, the interviews' results were analyzed into 4 success factors for achieving the SEVs models as the followings.

1) Leadership qualities of village leaders

The village leaders need to have knowledge, skills, competencies and experiences for developing their villages according to the SEP. The village leaders of Hong Village and Tenmee Village have knowledge, skills, competencies and experiences about the SEP, e.g. household bookkeeping, activities' creation for reducing expenses and increasing incomes, organic farming, EM production, detergent production, and so on. Saongoen (2017) suggested that the village leaders must have knowledge and competencies about the SEP and can be a public speaker to transfer knowledge to the villagers inside and outside the village. Besides, Treenetr (2014) propose that village leaders have the important roles of community development and must be the good models for other villagers in developing and sustaining their lives according to the SEP.

The administrative boards and village committees need to have good administrative systems. The administrative boards and village committees of Hong Village and Tenmee Village work as a team for planning their works and projects, and then communicate to every committee for consensus. Hence, they work together with villagers for achieving their plans and unity of village's cooperation. These are consistent with the research of Treenetr (2014), suggested that the good governance and systematic administration as village committees are very important matters to drive the villages into the accomplishment of SEVs models. Furthermore, Sunyawiwat (1998) said that the community development principle for strengthening the community to success is the cooperation of village leaders and villagers in the forms of group, committee or organization, which are the centers for community development in many aspects including creating and sharing knowledge and abilities, empowering, and increasing the community working efficiency and fruitfulness.

The village leaders need to have abilities to create good cooperation with villagers. The village leaders of Hong Village and Tenmee Village have public mind, sacrifice and volunteer to work for community development, and can work with the villagers very well and effectively. These are agreed with the research of Palakri (2007); if the village leaders have ability to creation the cooperation among other village leaders and villagers, the village will be the unity and the villagers can practice following the SEP. They are the main persons, who drive all projects and activities and lead the villagers for developing themselves and village to accomplish the sustainable community development.

2) Villagers' cooperation

The villagers need to have cooperation and volunteer mind for community development. The villagers of Hong Village and Tenmee Village have cooperative and volunteer mind to participate in the villages' activities. This is consistent with the research of Kerdsri (2010), the cooperation of villagers as a group is very important for them to work together, share all information and knowledge, and solve their problems of the village, which is one of the success factors to apply the SEP to the village.

The villagers need to believe in the SEP for their daily life performance. The villages of Hong Village and Tenmee Village have applied the SEP to daily lives and for developing themselves be the households' models of the SEP at least 30 households in each village. Maneechom (2015) found that the villagers at Kokpri community, Srakaew Province, Thailand apply the SEP to daily life, and participate in studying and searching the village's problems, analyzing and ordering the problems, planning and performing the plans, as well as monitoring and evaluating the developing results continuously. Besides, Sangsuwan (2012) proposed that if villagers believe and apply the SEP in daily life, they can be self-reliant based on their descended local wisdom and ways of life.

3) Community development network

The governmental organizations need to support community development activities and knowledge in the villages. The governmental organizations, e.g. the DLA, the LAOs, the DAP, the MPH, universities, and so on, have driven and supported Hong Village and Tenmee Village for the community development projects, aiming to sustainable local development by applying the SEP. In addition, the governmental officials need to be the mentors for village leaders and villagers. They are willing to train, suggest and give willpower to the village leaders and villagers in Hong Village and Tenmee Village for doing activities and works for community development. The village leaders and villagers have enforcement to drive activities to reach all targets and accomplish the community development according to the SEP. These are agreed with the research of Kingkum (2012); the supports of governmental organizations are very important for achievement of the success of Monhinkaew Village, Lampang Province, to be the SEVs model. They always arrange the meetings and trainings for the villagers concerning the SEP and how to apply the SEP in real life, and promote additional occupations to them for increasing their incomes and give the knowledge to be self-reliant.

4) Academic learning resources

The villages need to have the learning centers and local wisdom experts about the SEP. The learning centers and local wisdom experts of Hong Village and Tenmee Village are very important as academic and learning sources of the SEP for villagers inside and outside the

Community	Driven	Development	
villages. These are concordant to the researches of Sittichan (2011) and Treenetr (2014); they			
suggested that learning centers in villages are very important to educate and provide knowledge			
about the SEP in the villages and sub-districts. These are learning sources and practicing areas			
for villagers inside or outside the villages, and are the centers of local wisdom experts. The			
learning centers are also the places where villagers come to learn and exchange knowledge and			
ideas to develop themselves.			

Furthermore, we could sum up the contexts of the SEVs models in both case studies, Hong Village and Tenmee Village, according to CDD as shown in Table 3. Hence, CDD in the communities of the SEVs models is a development process for empowering the communities, i.e. village committees, local wisdom experts, village health volunteers (VHVs), occupational groups, and poor rural households, in poverty alleviation by making investments and taking responsibilities for decision making in their hands for sustainable local development approach with self-sufficiency and self-reliance.

Table 3. Application of CDD to the Contexts of the SEVs Models

Village	Communities can make	Village development to be the SEVs models
committees,	decision what kind of	and the project "One Tambon (Sub-district)
local wisdom	occupations they would like	One Product (OTOP)" development for
experts, village	to practice and plan to	increasing villagers' income, through
health	develop their villages. The	capacity building of community leaders,
volunteers	SEP concepts as well as the	community development workers, and the
(VHVs),	SEVs criteria and indicators	SEP model families; establishing the model
occupational	can be applied to be an	households and community learning
groups, poor	important guideline for	centers; and teaching by consulting and
rural	CDD, and drive communities	demonstrating to other families to adopt the
households	for sustainable local	SEP for villagers' cooperation and
	development.	community development network. The
		ultimate goals of the program are self-
		sufficiency and self-reliance for the Thai
		people to "Live Well and Happily".

Besides, the SEP works for CDD as classified in the following aspects. 1. Efficiency

The SEP mainly encourages villagers to practice the Middle Path, which can be applied to be a guideline for people's living with three components (moderation, reasonableness and selfimmunity) and two conditions (knowledge and community). And, the SEVs criteria and indicators are very important to apply to CDD because they cover the main four items of sustainable local development, comprising society, economy, education and environment. The SEVs models are promoted by the DLA of Thailand for developing their economies and improving their qualities of life with public participation in sustainable local development. The SEP creates a decision making on villagers' hands. And, when villagers have cooperative and volunteer mind to work and develop mainly for their villages, they avoid corruption and leakages from systematic administration as teamwork.

2. Equity

Villagers in the SEVs models involved in the SEVs project implementation because they have cooperated and volunteer mind for their communities' development. They are interested in self-development and the villages' development using the SEP. The villagers would like to learn new things, have new knowledge, and to know their benefits and rights. Besides, the villagers get resources equally because many organizations including the DLA, the LAOs, the DAP, the MPH and universities have driven and supported CDD, aiming to sustainable local development by applying the SEP. They provide their right to the funds in favor of their needs upon the communities' contexts.

3. Empowerment

The SEP can be applied as an important guideline for CDD and is seen as an approach for sustainable local development. Villagers get stronger voice and have more public participation of

their rights and benefits, accompanying with communities' development in sustainable ways. For example, they have performed following the SEVs criteria and indicators as much as they can, which include reducing expenses, increasing incomes, self-reliance, self-immunity, and clinging to the SEP. Administrative boards and village committees have good administrative systems, and there are systematically working divisions; then they work together with the villagers for achieving their plans and unity of villages' cooperation. Besides, the success factors of the SEVs models are leadership qualities of village leaders, villagers' cooperation, community development network, and academic learning resources.

Furthermore, the sustainability of the SEVs can be concluded that the DLA, the LAOs, the DAP, the MPH and universities always work with village headmen and villagers for developing, and the LAOs evaluate the SEVs every year. Villagers have self-evaluated among households for improving their villages. Besides, the learning centers and local wisdom experts are important as academic and learning sources for villagers inside and outside the villages. Villagers are proud to have other villages coming to learn from them then it is cross-checked among villages for improving their villages.

8.4 Best Practices

Thai government plays an important role in the economy, as the market alone sometimes cannot function efficiently, effectively or properly. The concerns about market functions that can impede development, e.g. asymmetric information, imperfect and missing markets, and law enforcement problems, still require government action. The optimal role of government in building strong institutions and in deepening and facilitating market functions is the key. (Mongsawad, 2010) With the concepts of the SEP as illustrated in Figure 1, the government aims at maximizing the welfare of people following the Middle Path. Policymaking should be done with prudence and vigilance, and subjected to experience and knowledge assimilation. No policy is launched without careful evaluation in order to avoid a detrimental impact on the economy. Then, the economy will be able to withstand any kind of malign shocks from the outside world.

The government has applied the SEP in designing policies, especially those that help to alleviate poverty and encourage communities to be strong and self-reliant. For instances, the government encourages communities to employ as the followings.

- Projects to reduce expenses through more home production, use local materials, energy savings, elimination of costly local entertainment and promotion of local markets.
- Projects to increase income by encouraging community enterprises, and producer groups.
- Programs for local savings.
- Programs of local leadership and volunteers and use of community plans.
- Activities to preserve and protect the environment.

Good governance is also a product of the SEP, which relates to the principle of morality. It can be applied at both individual, household, community and government levels, and can enforce good conduct, resulting in good governance and a culture of honesty in the government. This good governance can create trust in communities and societies. When people have faith and trust in their government, civic and economic activities will be successfully accomplished and will consequently contribute to the development goals of the nation.

From those projects, programs and activities, the best practices from our case studies that can be applied to other countries are as the followings.

1. Village Health Volunteers (VHVs)

Much of Thailand's ability to deal successfully with health threats including Corona Virus Disease 2019 (COVID-19) in rural and suburban areas is due to the program called Village Health Volunteer (VHV). In this research both Hong Village and Tenmee Village have VHVs. In 2020, there are totally 1,054,000 VHVs that can help Thailand to defend against illness and can rank the top five countries in the world to cope with COVID-19 pandemic. The VHVs implement a primary health care approach that is practical, community-based and participatory as CDD. These VHVs are trained as health communicators and health mobilizers who work as an extension of the professional staff of the MPH, giving the ministry a valuable implementing arm that reach into every village in Thailand. The cost-effective program has attracted international attention with World Health Organization (WHO), Japan, United States of America and so on recently announcing that they would like to learn from the program of VHV.

The program of VHV was formally launched in 1977, the VHVs were trained by the MPH, providing a crucial link to all villages in Thailand (Thailand International Development Cooperation Agency, 2010). The VHV policy is managed by the following policy management structure as illustrated in Figure 3. The government aims at recruiting enough VHVs so there is one for every 10-15 households in rural areas and for every 20-30 households in more populated areas. The criteria for selection as a VHV includes as the followings.

- Acceptance by the other villagers at a meeting of the whole village.

- Willingness to stay in the village and serve for at least a two-year term.
- Sufficient free time.
- Ability to read and write.
- Providing a good example of healthy living.
- Not currently a civil servant.

The VHVs are offered discounts on their own health care and their children's education, but most of them seem motivated by the opportunity to help their neighbors. They did not have salary in the past. The government has decided to give them the salary amount 1,000 Baht per month (33.4 US Dollars per month) since March 2019, and planned to increase to 1,500 Baht per month (50 US Dollars per month) by the end of 2020.

The VHVs are trained at Sub-district Health Promoting Hospitals. The trainings cover both health theory on a broad range of issues and the practical actions expected of them as VHVs, such as promoting good health, gathering health information, coordinating with local officials and referring patients for treatment. Besides, the training is customized to the particular health problems of each locality. During the COVID-19 pandemic, the VHVs arrange the check points covering the areas of villages all over the country in order to check villagers' body temperature and contact with police officers for people who do against the law of quarantine.

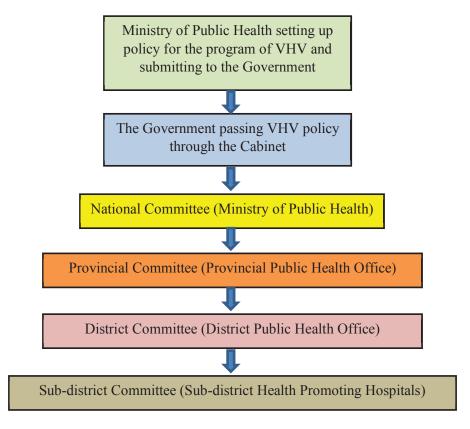


Figure 3. Village Health Volunteer Policy Management Structure

Once the VHVs have completed their training, they are assigned responsibility for specific households. Their performance is monitored by the village committee and government health officers. The critical role of the VHVs is providing information for both health promotion and disease prevention. They give villagers correct, up-to-date information about health threats and provide the government with details of the spread of diseases in rural areas. This two-way information role is particularly important since the government studies showing that some 70% of rural health problems are due to misunderstanding of health dangers or attempts at self-treatment. (Thailand International Development Cooperation Agency, 2010) The VHVs encourage villagers to seek proper treatment at the government's sub-district health promoting hospitals, but they don't provide treatment themselves.

2. One Tambon One Product (OTOP)

From our research results, Tenmee Village participated in the project of One Tambon (Sub-district) One Product (OTOP) for increasing villagers' income as the best practice in local and community product promotion. OTOP is a local entrepreneurship stimulus effort for supporting locally made products from each Tambon (Sub-district). OTOP aims at strengthening

a grass-root economy by creating collaboration with public and private sectors. OTOP has successfully improved the quality of community products to standards certified by the Department of Community Development (DCD) under the Ministry of Interior. OTOP is based on the idea that each village has at least one native product, providing a basis for small business. OTOP products often reflect local knowledge that has been passed down through generations. The OTOP project has become a key source for increasing villagers' income with OTOP products sold at villages or at OTOP outlets across the country. (Thailand International Development Cooperation Agency, 2010)

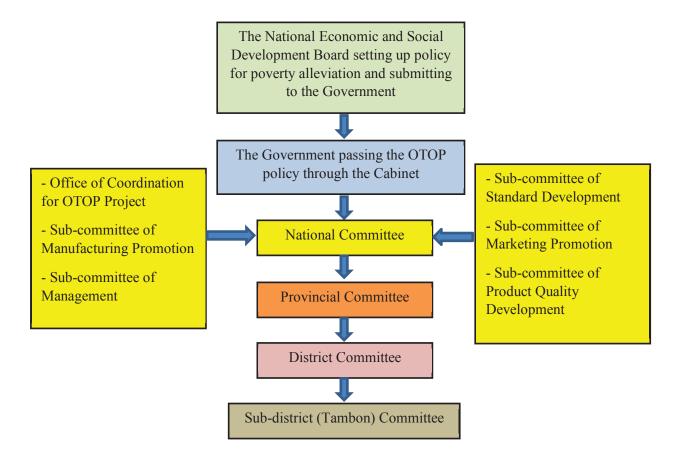


Figure 4. One Tambon One Product Policy Management Structure

The two key elements of OTOP are entrepreneurs and high quality products from local materials and local expert skills. There are mainly two steps as the followings. The first step is to survey and register qualified OTOP producers. They are categorized into three groups: community enterprises, community level sole proprietorships and Small and Medium Enterprise (SME) producers. The second step is product selection. OTOP products should reflect local traditional knowledge, and their production should employ inherited skills and use raw materials from the local area.

One of the special features of OTOP is the government's oversight of the project's marketing side, providing advertising budgets to market OTOP products, organizing marketing events, and creating a system of information exchange among producers, buyers and consumers through a website at www.ThaiTambon.com (Thailand International Development Cooperation Agency, 2010). Besides, the OTOP policy is managed by the following policy management structure as illustrated in Figure 4 and the distribution of duties among government agencies as shown in Table 4.

Tenmee Village got an OTOP award for silk products at three stars, classified by the DCD into five levels of stars, i.e. five star (90-100 marks for the highest quality, can export in international level), four stars (80-89 marks for high quality, accept in national level), three stars (70-79 marks for medium quality, can develop to four stars), two stars (50-69 marks for medium to low quality, can develop to three stars), and one star (less than 50 marks for low quality, scarcely develop to two stars). There are three main criteria including brand equity and strength of community, marketing and story of product, and product quality. OTOP induces greater community involvement, which lead to stronger communities. OTOP utilizes traditional, local knowledge of local wisdom experts, and then creates values of the community and villagers. For raising locally available income and poverty alleviation, OTOP reduces the incentive for villagers to leave the village in search of jobs. Then, OTOP helps to keep families in the village together and provide a more stable and happy home environment for children.

No.	Duty	Responsible Agency	
1	Searching for star products and	- Ministry of Interior (Province, District,	
	strengthening people and community.	and Sub-district)	
2	Strengthening production of goods, raw - Ministry of Agriculture and Cooperatives		
	materials, food process, and product	- Ministry of Commerce	
	development.	- Ministry of Industry	
3	Defining standards and criteria for product	- Ministry of Industry	
	selection.	- Ministry of Public Health	
4	Overseeing marketing and product	- Ministry of Commerce	
	promotion, product distribution, and	- Tourism Authority of Thailand	
	intellectual property right, e.g. trademarks.	- Office of Small and Medium Enterprises	
5	Research and development of products,	- Ministry of Science and Technology	
	packaging, and design		
6	Public relation	- The Prime Minister's Office	
7	Monitoring and Evaluation	- Ministry of Education	
		- National Economic and Social	
		Development Board	
8	International cooperation on technology	- The Prime Minister's Office	
	transfer		

Table 4. Distribution of Duties among Government Agencies for OTOP

(Source: Thailand International Development Cooperation Agency (2010))

9. Conclusions

Sufficiency Economy Philosophy (SEP) mainly encourages villagers or communities to practice the Middle Path, which can be applied to be a guideline for people's living in every level including household, village and community. Additionally, the SEP can be used as an important guideline for Community Driven Development (CDD). In this research, we studied the SEP principles, criteria and indicators for justifying Sufficiency Economy Villages (SEVs) models, the lessons learned and success factors contributing to the SEVs models from Hong Village and Tenmee Village, which are the SEVs models at Surin Province, Thailand. Then, these research results were analyzed and criticized to apply for CDD Village (CDDV) model as illustrated in Figure 5.

Firstly, villagers have to realize from their mind following the SEP principles, i.e. 3 components: moderation (self-reliance and avoiding extreme and over indulgence), reasonableness (reasoning analysis and causal connection between actions and consequences) and self-immunity (prudence and sufficient protection to cope with the like impact arising from internal and external changes), as well as knowledge (explicit, tacit, skills and life experiences) and morality (positive values, perceptions, and precepts). Then, morality coupled with knowledge cooperates to moderation, reasonableness and self-immunity in order to maximize sustainable outcomes on their mind.

After that, the SEVs criteria and indicators are very important to apply in CDD because they cover the main 4 items of sustainable local development, comprising society, economy, education and environment. They are composed of 4 criteria and 23 indicators, used to justify the SEVs models as the following levels: Por Yu Por Kin (Subsistence Village) level (passing 10-16 indicators), Yu Dee Kin Dee (Better Living Village) level (passing 17-22 indicators), and Mung Mee Sri Sook (Wealthy Village) level (passing all 23 indicators).

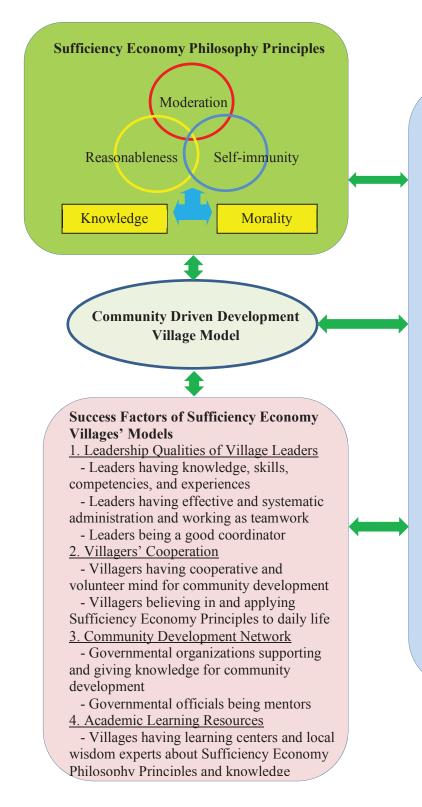
Besides, the success factors contributing to the SEVs models are real situations, which we studied how to achieve the SEVs models. The success factors comprise as the followings: leadership qualities of village leaders (leaders must have knowledge, skills, competencies and experiences, must have effective and systematic administration and work as a teamwork, and must be a good coordinator), villagers' cooperation (villagers must have cooperative and volunteer mind for community development, and must believe in and apply the SEP to daily life), community development network (governmental organizations must support and provide knowledge, and governmental officials must be mentors for community development), and academic learning resources (villages must have learning centers and local wisdom experts about the SEP principles and knowledge. These success factors are very important to drive the community to be the SEVs. Furthermore, the best practices found in this research were the program of Village Health Volunteer (VHV) and the project of One Tambon (Sub-district) One Product (OTOP).

Lastly, all of these (the SEP principles, the SEVs criteria and indicators, and the success factors of SEVs models, as well as the best practices) are covered to be applied for a CDDV model in other countries.

10. Recommendations

Challenges for applying the SEVs models for Community Driven Development (CDDV) model in other countries are as the followings. 1) Leadership qualities of village leaders are very important because they must be key persons who drive activities according to Sufficiency Economy Villages' (SEVs) criteria and indicators. Then, we recommended that other villages in other countries, which would like to be the CDDV model, the leaders must be qualified as: having knowledge, skills, competencies and experiences; having effective and systematic administration and working as teamwork; and being a good coordinator. There should be a plan for developing leaders' roles and competencies in order to increase their knowledge and skills, e.g. organic farming, knowledge transfer, public speaker and so on, as well as a guideline for creating an effective and systematic administration in order to work with villagers as the concept of understanding, accessing and developing for improving their villages. 2) Villagers' cooperation is very important. Governments in other countries should create a program or project to encourage cooperative and volunteer mind of villagers for community development. In Thailand, there is the program called Village Health Volunteer (VHV) as best practice, which firstly they did not have salary in the past. The government had seen their cooperative and volunteer mind for helping and developing their communities, then decided to give them the salary as a reward. And, 3) academic learning resources are important. We recommended that there should be the records of local wisdom from local wisdom experts in order to apply in villagers' daily life and occupation. Besides, there should be learning sources or centers at households of local wisdom experts for giving knowledge to other villagers, community networks, and villages, that are interested to develop themselves following Sufficiency Economy Philosophy (SEP) and Community Driven Development (CDD).

However, there are some difficulties for processing the SEVs as the followings. 1) Budget is very important for driving the process of SEVs. The government has provided the budget inappropriately and lately, then the villages' leaders and committees must pay money in advance for some urgent works. Therefore, we recommended that the government or governmental organizations should support the budget appropriately and on time according to each village's context for effective processing. And, 2) community development officials, who mainly supervise and follow-up the villagers' works, have to look after many projects and many areas. Their follow-up tasks are sometimes not continued and late and most of villagers are farmers who normally do not have knowledge in management, accounting and marketing. Hence, we recommended that Department of Community Development (DCD) should recruit community development officials, staffs or volunteers to supervise, look after, follow-up and evaluate the villages continuously, appropriately and punctually, covering all areas with appropriate number.



Sufficiency Economy Villages' Criteria and Indicators

1. Mind and Society (7 indicators)

- Unity and cooperation among villagers
- Executing of village regulation
- Implementing of village funds for villagers' well-being
 - Believing in democracy
 - Moralistic practice
 - Desistance of all vices
- Regular practice of the SEP

2. Economy (5 indicators)

- Practice of household bookkeeping
- Practice of reducing expense and
- increasing income
 - Being member of occupational groups
 - Practice of savings as a group
- Managing of community capital through community enterprises
- 3. Learning (7 indicators)
 - Surveying of community information
 - Utilizing of community information
 - Conserving of local wisdom
 - Having of learning centers
 - Utilizing of appropriate technologies
 - Networking with concerned agencies
- Practice of self-reliance

<u>4. Natural Resource and the Environment (4 indicators)</u>

- Practice of natural conservation
- Having of actively natural conservation groups

- Practice of alternative energy

- Adding of values into natural resources and the environment Lastly, we expected that the CDDV model in Figure 5 (the SEP principles, the SEVs criteria and indicators, and the success factors of SEVs models, as well as the best practices) are beneficial to be applied in other countries for sustainable local development approach.

Figure 5. Principles, Criteria, Indicators and Success Factors for Achieving

Community Driven Development Village Model

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The 2nd Village Leader of Tenmee Village. (Interview, 12 March 2013). Interview.
The 3rd Village Leader of Tenmee Village. (Interview, 12 March 2013). Interview.
The 3rd Village Leader of Tenmee Village. (Interview, 12 March 2013). Interview.
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In-depth Interview Form

Research Title: Sufficiency Economy Philosophy for Community Driven Development Approach on Sustainable Local Development, Lessons Learned from Thai Case Studies

Part 1: Key informants
1. Name and surname
2. Ageyears
3. Position
Part 2: Lessons learned and success for being Sufficiency Economy Villages (SEVs) model
1. For being the SEVs model, how does it affect the sustainable local development in the
village?
2. How village leaders have knowledge about Sufficiency Economy Philosophy (SEP),
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village? 3. How do the village leaders practice and proceed to the success of being the SEVs
and why do they apply the SEP to develop the village?
and why do they apply the SEP to develop the village? 3. How do the village leaders practice and proceed to the success of being the SEVs

4. What skills do the villagers need to have for the success of the SEVs model?
5. How do villagers prepare to develop their village to be the SEVs?
6. How do villagers' knowledge, abilities and skills affect to the success of being the SEVs?
······
7. How do the villagers have learning process?
8. Are there enough resources to support the development of the village for being the
SEVs model? How?

9. How do the capitals (social, economic and natural resource) affect the success of being SEVs model? 10. How do the organizations or groups of the village affect the success of being the SEVs model? 11. In the development process of the SEVs, what do organizations have main roles to encourage and help to develop the village? How? _____ 12. Does the village have network with other village or organization? If yes, how does the village proceed? 13. Other _____

Joint Research Program on "The Impact of Community-Driven Development Approach on Rural Development of LMC Countries"

Country Research on "The Impact of Community-Driven Development Approach On Rural Development: The Case of Cambodia"

Prepared for

Poverty Reduction Fund, Ministry of Agriculture and Forestry, Lao PDR Under Lancang-Mekong Cooperation Special Fund

> By Mr. Promloma Van Mr. Tolakham Vann

December 29th, 2020

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Table of Contents

ΑϹΚΝΟͶ	VLEDGEMENTS	?	
ACRONY	′MS	5	
ABSTRAG	ст	7	
1. Bac	1. Background10		
1.1	Statement of the Problem)	
1.2	Research Purpose and Objectives11	L	
1.2.1	Purpose of the Study11	L	
1.2.2	Objectives of the Study11	L	
1.3	Expected Outcomes	<u>></u>	
1.4	Research Questions	<u>></u>	
1.5	Justification and Motivation of the Study12	2	
1.6	Significance of the Study13	3	
1.7	Assumptions of the Study13	3	
2. Theoretical, Conceptual, and Analytical Framework			
2.1 2.1.1 2.1.2 2.2	- ····	5	
2.3	Analytical Framework18	3	
3. Res	earch Methodologies20)	
3.1 R	Research Design)	
3.2 C 3.2.1 3.2.2 3.2.3	2 The Selection of Secondary Case Sites	2 2	
3.3 3.3.1 3.3.1 3.3.1 3.3.1	1.2 Direct Observation and Participant Observation	3 3 4	
4. Pres	sentation, Discussions and Analysis of Findings26	5	
4.1	Introduction	5	
4.2 Primar	Demographic Characteristics of Beneficiaries of CDD Projects in Kampong Chhnang for the Case Studies		

4.3	Prin	ary Case 1 – Partnership Between Kraing Leav Agriculture Cooperative an	d AMRU
Rice	Сотра	ny	27
	4.3.1	Descriptions: The Community and the Cooperative	27
	4.3.2	Objectives of the Cooperative	27
	4.3.3	CDD Approaches	27
	4.3.4	Findings from the Field	28
	4.3.5	CDD Interventions	30
	4.3.6	Impact	
	4.3.7	Facilitating Factors	32
	4.3.8	Lessons Learned	32
	4.3.9	Recommendations	32
4.	4 Pr	imary Case 2: Boeng Leach Sambophal Agricultural Cooperative	33
	4.4.1	Descriptions: The Community and the Cooperative	33
	4.4.2	The CDD Approaches	33
	4.4.2.1	Training Programs	33
	4.4.2.2	Chicken Farming and Vegetable Growing	34
	4.4.2.3	Profile of Selected Beneficiaries	35
	4.4.2.4	Innovations / Good Practices	36
	4.4.2.5	Outcomes/ Impact	36
	4.4.2.6	Facilitating Factors / Challenges	37
	4.4.2.7	Lessons Learned	37
	4.4.2.8	Recommendations	37
5. Tr	ong Dist	condary Case 1: The Lemongrass Project in Sambo Village, Sopheas Commune, Strict, Kampong Cham ckground and Descriptions	39
		jectives	
		D Approaches and Methodologies	
		idings on the Lemongrass Production in Sambo Village	
		cilitating Factors and Challenges	
		ssons Learned and Recommendation	
	5.2.6.1	Lessons Learned	
		Recommendation	-
5. Sa		econdary Case 2: Agriculture Coop Boosts Native Paddy Seedlings Production in F Ilage, Khnach Romeas Commune, Bavel District, Battambang Descriptions and Locations CDD Approaches and Interventions Post-Harvest Practices by Farmers and Issues Significance of paddy-quality improvement Problems/issues of paddy quality improvement Impact	 44 45 46 49
	5.3.8	Sustainability	49
	5.5.0	Sustainability Recommendations	49 51
	4 Seco	Recommendations	49 51 51 Udom
	4 Secon Oriya Con	Recommendations ndary Case 3: Chicken Raising and Vegetable Growing in Trapeang Roung Village, mmune, Tramkork District, Takeo	49 51 51 Udom 51
	4 Seco	Recommendations	49 51 51 Udom 51

	5.4.3	CDD Approaches and Findings	
	5.4.3.1		
	5.4.3.2	Facilitating Factors in Chicken Raising	
	5.4.4	Production of Natural Fertilizer	
	5.4.4.1	CDD Experiences of Smallholder Farmers	
	5.4.5		
6.	Discus	sions, Implications, and Conclusions	59
	6.1 Disc	ussions and Implications	59
	6.2 C	onclusion	61
RE	FERENCE	<u>-</u> S	62
	Websites/Other References		

ACRONYMS

ADES	Agence De Developpement Economique Et Sociale
AIMS	Accelerating Inclusive Markets for Smallholders
AFOSP-MTCP2	ASEAN Farmers' Organisations Support Programme
	Medium Term Cooperation Programme Phase II
AMRU	AMRU Rice Company Ltd.
ASEAN	Association of Southeast Asian Nations
BOD	Board of Directors
CDD	Community-Driven Development
CFAP	Cambodian Farmers Association Federation of Agricultural
	Producers
FAEC	Facilitation Association of Economy for Cooperatives
FNN	Farmer and Nature Network
GSTD	Global Sustainable Technology and Development
JICA	Japan International Cooperation Agency
KHR	Cambodian Riel
КОС	Khmer Organic Cooperative Co. Ltd.
Lao PDR	Lao People's Democratic Republic
LMC	Lancang-Mekong Cooperation
NGO	Non-Government Organization
PDAFF	Provincial Department of Agriculture, Forestry, and Fisheries
UNDP	United Nations Development Programme
USD	United States Dollars
VC	Value Chain
VCIF	Value Chain Innovation Fund
WB	World Bank

ABSTRACT

This Country Report explores community participation and empowerment within the framework of Cambodia's Community-Driven Development (CDD) parameters. Operating under the "principles of transparency, participation, accountability, and enhanced local capacity," the various projects and programs adopted by cooperatives, and community-based organizations in Cambodia have consistently shown an ability to deliver an enhanced livelihood, increase in access to quality infrastructure and services in a cost-effective manner, in ways that have broad community support.

Being inspired by the immanent process of community-driven development as a historical process of social change in rural development, the study focuses not only on the immediate outputs of certain projects implemented by some community-based organizations and supported by non-government organizations, such as Farmer and Nature Network (FNN), but also on the processes and outcomes in relation to the overall socio-economic, institutional, cultural and political milieu of Cambodia. Field work for collecting primary data was conducted in February to March 2020 in two (2) main projects of FNN in Kampong Chhnang, and three (3) secondary projects in the provinces of Kampong Cham, Takeo, and Battambang. The underlying assumption of using the Case-Study approach for this Country Report is that the best testimonies of beneficiaries of how successful the CDD approach in rural development can be qualified by how the quality of lives and livelihoods are ameliorated and if provided with adequate resources and information, they can organize themselves to manage responsibly for their ardent needs.

The proponents and beneficiaries of the CDD approach implemented in the various communities where FNN operates claim that this new type of participatory intervention bestows the participants with better control over the projects where they become 'makers and shapers' in local development. However, the study finds that this particular development intervention, and the way it has been managed, does not escape the legacy of the previous practices which have been termed as 'the tyranny of participation'. At the implementation level, project rules and guidelines, being infused with local socio-economic and political factors, encouraged the reproduction of pre-existing power structures instead of the radical transformation envisaged by the implementers, beneficiaries and other actors in implementing CDD projects.

In many instances the research findings indicate that the project intervention has initiated a process of community empowerment in terms of gaining access to local decision-making and resources within the existing, but evolving, socio-economic and political realities.

The five (5) CDD cases in Cambodia illustrates how cooperatives and community-based organizations support government's effort to reduce poverty through accelerated rural development by establishing smallholder farmers associations, physical infrastructures, improving socio-economic conditions, and enhancing rural livelihoods. In summary, the following are the interventions of the case studies:

• **Community Focus**: (i) Improve household food security in a sustainable manner, generate incremental household income for poor through improved on-farm productivity

and income-generating activities through rice and mixed vegetable production, chicken raising, lemongrass cultivation; (ii) Develop community capacity to utilize and manage scarce resources, and strengthen capacities of support institutions to respond to grassroots initiative introduced by FNN and other organizations; (iii) Plan, rehabilitate, establish and maintain public rural infrastructure that will improve living conditions of targeted rural population; (iv) Strengthen capacity of communities and institutions to identify, prioritize, plan, implement, coordinate, monitor, and maintain infrastructure investments; and (v) rural livelihood enhancement; involve and empower the beneficiaries; and establish small-scale infrastructure at the village level.

- Participatory Planning: In the various communities and villages in Kampong Chhnang, Kampong Cham, Battambang, and Takeo, the beneficiaries of the cooperatives organized groups of smallholder farmers that are actively participating in the project design and implementation of agricultural development activities (i.e. rice and vegetable production, lemongrass cultivation, poultry and chicken raising, fertilizer manufacturing, etc.). NGOs, cooperatives, FNN and training institutions worked together to assist in organizing, training, and empowering local communities in project sites, and to facilitate participatory planning and decision making within the framework of an overall community-driven development action plan and strategies.
- **Community Involvement in Implementation:** The various projects organized by FNN and other organizations in Kampong Chhnang, Kampong Cham, Battambang, and Takeo supported local communities in the management and use of their natural resources through rice farming, vegetable growing, natural fertilizer production, backyard chicken raising, lemon grass cultivation, and other agricultural activities.
- **Community-Based Monitoring and Evaluation:** Community dialogue were undertaken in all stages. The various projects introduced in the four provinces visited are expected to ensure that intended participatory process are followed by providing considerable input for implementing program of community dialogue and partnering, involving assistance in designing and implementing consultative processes and capacity building for the cooperative staff and smallholder farmers, village organizations, and communities for community-based improvements.

Through an analysis of the development interventions and impacts on local development, this Country Report contributes to the understanding of various socio-political and institutional factors of the local governance process in Cambodia. By positioning the development intervention within the broader framework of the immanent process of development, the research does not negate the transformative potential of CDD intervention, but rather suggests some context specific policy lessons which might be useful to adopt elsewhere.

This study in Cambodia agrees that communities can be effective channels of development if they receive a genuine delegation of powers and responsibilities (Platteau & Abraham, 2002). However, there are still several concepts within the ideology of CDD that must be addressed, as for instance, the issues that may arise when complex and highly contextual concepts such as "community" and "sustainability" remain largely undefined (Mansuri & Rao, 2004). The rubric for CDD analysis has some weaknesses in that it only ensures best practices on the side of the FNN or any NGOs and leaves very little recourse for ensuring equally good behavior on the side

of the beneficiary. A local or international NGO may receive a good CDD score, but still has significant weaknesses in the model (a large amount of community focus can allow for easy elite capture of a project, for example). The smaller organizations are providing their own safeguards, but the weakness in the smaller programs lies om M&E. They do not have the funds, personnel, or training to produce viable data. As a result, they have instituted strategies in the project planning and implementation phases to mitigate the lack of resources for M&E. However, the question remains: If organizations are only taking elements of CDD that apply to them and interpreting to fit their model, are the principles of CDD still viable?¹

The fact that organizations are able to customize the CDD approach is a necessary boon, but it also presents challenges in that there is no way to maintain and ensure the validity of approaches individual organizations choose to take. Thus, as shown by this study, when looking at organization performance in relation to CDD, it is essential to gauge not only the presence of CDD but also its quality. By doing this across multiple organizations and projects, we will begin to identify patterns and common elements that will aid in operationalizing and replicating productive CDD practices.²

In the five (5) cases presented in this Country Report of Cambodia, it was evident that the Royal Government of Cambodia has supported community-based organizations with clear and transparent rules, access to information, and appropriate technical and financial support, specifically for poor communities that enabled them to effectively organize to identify community priorities and address local problems by working in partnership with the provincial departments of agriculture, forestry, and fisheries; and the provincial departments of rural development; and other local government organizations to build physical infrastructure and deliver basic services. They also have provided support by providing agriculture extension workers to assist smallholder farmers in agricultural activities.

¹ https://ir.library.oregonstate.edu/downloads/th83m092x?locale=en

² https://studylib.net/doc/11691672/

1. Background

This Country Report of Cambodia explores community participation and empowerment within the framework of Cambodia's Community-Driven Development (CDD) parameters. Stemming from critiques against non-government organization and community-based organization models of development, a renewed interest in participatory development in recent years led a plethora of development agencies to implement projects using participatory mechanisms. This second wave of participatory development appeared to be influenced by broad-based social inclusion and empowerment theoretical constructs. More recently, participation has been related to the concept and practices of participatory local governance, aiming to bring about transformation in institutional dynamics within the local governance's sphere. Participation and empowerment are two concepts that have distinctive meanings depending on their usage and context. Hence, a judicious understanding of participation and the underlying processes of empowerment require a critical analysis of the spectra within which they take place.³

Community-Driven Development (CDD) program has been one of the most popular mechanisms used by community-based organizations, cooperatives, and non-government organizations in Cambodia. The CDD programs in these institutions refer to the development initiatives that provide control of the development process, resources and decision-making authority directly to the community groups. The initiatives enable poor rural communities to benefit from improved access to basic infrastructure services and harness the government's capacity to effectively and efficiently respond to critical situations.

This study in Cambodia covered different rural development projects in Kampong Chhnang, Kampong Cham, Battambang, and Takeo. In-depth interviews were carried out among residents of Boeung Leach Village, Sethey Commune, Samaki Meanchey District, in Kampong Chhnang; and Kraing Leav Commune, Rolea Pa'ear District as well as in Kampong Chhnang.

This joint research endeavor on the Impact of Community-Driven Development Approach on Rural Development was funded by Lancang-Mekong Cooperation Special Fund, with the following objectives: (a) To exchange and share policies and best practices on CDD among Lancang-Mekong Cooperation (LMC) countries (i.e. Cambodia, China, Lao PDR, Myanmar, Thailand, and Vietnam); (b) To develop useful steps and activities that will advance the concept on CDD; and (c) To discuss about new CDD that can be adapted for all the LMC countries.

1.1 Statement of the Problem

Some government-initiated community-driven development programs have been scrutinized for their weakness to properly identify the common objectives or the felt needs of beneficiaries and failure to base the planning and implementation on democratic procedures by involving the people adequately (Omoruyi, 2001).⁴ The major problem is that each government tends to have unique and varied philosophical inclination to whatever aspect of development it deems fit (Itari,

³ https://theses.flinders.edu.au/view/ad3724be-7fcc-474c-a8fe-1506ba611695/1

⁴ https://www.academia.edu/29430624/Dr_comfort_ochepo_real

2002).

It was likewise reported that most government programs fail because of administrative and structural factors. Similarly, it was further singled out that often developmental initiatives take top-down approach, whereby planning and implementation are done at the government circle without the involvement of the target population in the decision-making process of needs identification and project design (Ekom, 2002).

A good number of poverty reduction projects in developing countries was not sustainable because of their supply-driven and top-down nature which neglected community partnership and ownership of development projects (Dongier, 2001). United Nations Development Programme (2001) voiced out that programs commanding a sense of ownership by target beneficiaries and stakeholders have clearly performed better than those that did not, and unless the target beneficiaries are carried along, they will never have the commitment to make such development programs work.

In Cambodia, a lot of attention has been focused on rural transformation, envisioned to empower the rural dwellers politically, socially and economically. Several government development programs and policies have evolved over the years and were targeted at rural transformation. It was evidenced that the living condition and development in urban areas, especially in Phnom Penh, are totally different from the rural development. Indeed, there exists really a big gap between rural and urban developments in terms of service delivery from all aspects of development. Despite the fact that enormous new development projects are focused on rural development, many observers believe that the outcome from project implementation does not really respond to the demand of rural community. Some of them are not developed firm strong support and noble effort from local community involvement. Thus, this study will try to analyze if community-driven development is suitable development model for reducing the development gap between urban and rural areas.

1.2 Research Purpose and Objectives

1.2.1 Purpose of the Study

To determine and analyze the applicability of community-driven development (CDD) model for selected rural communities in Cambodia.

1.2.2 Objectives of the Study

- To investigate how Cambodia is applying community-driven development in selected provinces;
- To analyze the contribution of non-government organizations in pursuing communitydriven development initiatives in reducing the development gap between urban and rural areas;
- To identify the benefits derived by rural communities in implementing communitydriven development initiatives; and

• To contribute to the development of new policies on community-driven development for rural development in Cambodia and to other countries in the region.

1.3 Expected Outcomes

The outcomes of this research would be a comprehensive study on the evaluation of Community-Driven Development approaches in term of their actual impact on rural development work. It will also produce key findings that contributing to the sustainability of the work not only in Cambodia but also among other LMC Countries. These evidence-based results from the case studies will able to use to propose and encourage further integration into development plan of Cambodia and other LMC countries including policy recommendations.

The outcomes can also simplify into three as follows:

- i. The research outcome of each country will be shared among them, discussed, deliberate, and decide the best practices which are appropriately adaptable to the LMC member countries and should be in line with the defined objectives of the project study.
- ii. Policies and best practices decided among the LMC member countries will then be used to replicate to the rests of the countries. Impact on CDD should be properly defined, choose the appropriate and functional criterion for evaluating the CDD and how will it apply to the government development plan, establish a professional network for LMC countries for future research and cooperation and the key factors influencing the sustainability of this project.
- iii. The final report can then be used by the LMC countries, some kind of lessons learnt and the challenged faced while implementing Community Driven Development approaches.

1.4 Research Questions

This study was undertaken in order to answer the following research questions:

- How does Cambodia apply community-driven development initiatives in selected rural communities in the country?
- What strategies had been used by community-based organizations in applying the framework of community-driven development in reducing the gaps in urban and rural areas?
- What are the benefits that accrue to rural beneficiaries on CDD projects implemented by community-based organizations and sponsored by NGOs?
- What specific policies can be introduced by Cambodia on CDD in the region and the rest of the world?

1.5 Justification and Motivation of the Study

There are already several studies conducted on community-driven development in Cambodia. However, this study is just a follow-up research in order to strongly identify the level and quality of community-driven development in rural communities in the country, as well as to evaluate whether the programs implemented really match the demand of households in rural areas.

1.6 Significance of the Study

This study is expected to augment existing practices on community-driven development models in Cambodia and the ASEAN region, taking practical points of view from relevant stakeholders from the government, NGOs, local communities, farmers, and other researchers. For the Royal Government of Cambodia, the findings in this study will provide recommendations on how to modify basic implementation strategies of community-driven programs and projects, and take cognizance to enhance the quality of future project implementation.

To the community-based organizations and NGOs, the learning gathered from communities themselves in this study can be used to improve the strategies currently in use and improve the outcomes of their projects.

For the local communities that benefitted from the projects, the results of the study will serve as an eye-opener in further uplifting their traditional sources of income and means of livelihood. Additional findings can also guide them on how rural communities will have better access to markets and resources for additional capital.

1.7 Assumptions of the Study

In this Research Study, the CDD approach has been assumed to empower local communities to have a voice in decision making (Dasgupta and Beard, 2007; Dongier et al, 2001). This strategy operates in different ways from programs and projects that consider target beneficiaries as just a passive aid recipient (Labonne et al, 2007).⁵ According to Dasgupta & Beard (2007) and Labonne et al, (2007), most community-driven development (CDD) projects that focus on reducing poverty have been assumed to demonstrate five main characteristics that will also be used in this study:

- **Empower local communities and authorities:** Community-driven development (CDD) project gives power to local communities and local authorities to participate fully in decision making and gain control over their development priorities. This strategy also strengthens the capacity of the local community to manage planning and implementation of development projects.
- **Demand driven design:** Community-driven development (CDD) projects operate based on the needs of local communities and governments, which allow them to determine what types of development activities the project should include to make it effective for them as beneficiaries.
- **Social inclusion:** Most CDD projects fail to involve vulnerable groups, such as women, youth etc. into the mainstream of their activities. CDD projects that target large scale and successful farmers, for instance, do not include poor farmers into the framework of their activities. However, CDD projects focusing on poverty reduction normally include the poor and vulnerable sectors.
- Collective action: CDD projects are normally made to be implemented

⁵ http://zantworldpress.com/wp-content/uploads/2015/06/241-Umar_Adamu_Madu.pdf

collectively through community members by consensus rather than individuals (Binswanger and Aiyar, 2003; Dasgupta and Beard, 2007). CDD projects are also supported by public funding from central governments or donors that support the communities or local authorities.⁶ However, it is important to note that CDD projects may not be successful if the beneficiaries have significant income inequalities and other factors of poverty measures (Dongier et al., 2001; Labonne et al., 2007).

• **Support from external institutions and organizations:** Most CDD projects receive support from outside the communities (funding from governments and other donor agencies). This characteristic differentiates the CDD model from strategy used by community-based organizations (CBOs), which may not receive external support. The support includes empowering the beneficiaries to plan, implement, and take control over management of development activities. Others include access to services, and to strengthen the link with organizations, such as nongovernmental organizations (NGOs), traders among others (Dongier et al, 2001).

⁶ http://seahipaj.org/journals-ci/dec-2013/IJIABR/full/IJIABR-D-2-2013.pdf

2. Theoretical, Conceptual, and Analytical Framework

2.1 Theoretical Framework

Many countries that are agricultural-based, including Cambodia, has paid much attention to local areas and local community participatory approaches to involve rural communities in order to utilize the local resources as well as to improve the living standards of local people. The reason for using this approach is that rural communities know the problems they face in their community and they have the sense to look for required solutions regarding their experiences and collective activities. Based on their interest, they gather and band together to hear about the living problems and gradually they share their experiences and ideas to find the appropriate solutions and gaps.

"Community development begins in the everyday lives of local people. This is the initial context for sustainable change. In a process of action and reflection, community development grows through a diversity of local projects that address issues faced people in community (Margaret, 2005, p.1)."⁷

2.1.1 Rural Development

Poverty alleviation and hunger elimination are the most fundamental challenges which many less developed countries face. A large number of people are compelled to live on less than one dollar a day. Many people are going hungry, because they cannot afford to buy the food they and their families need. James D. Wolfensohn, President of World Bank Group (1997, p vii) states that: "Poverty reduction and ending hunger require focused attention on the rural economy." Therefore, paying attention to rural development programs is the way in which countries try to reduce poverty and prepare a better life for local communities.

The harmony between the qualitative and quantitative achievements of such development in a given context determines its sustainability (Chita, 2000, p.9). Development is a process of change involves various economic, cultural, social, political and physical dimensions of the society.⁸

Rural development is not a task solely for rural development professionals, but requires attention by specialists in private sector development, infrastructure, health, family planning, nutrition, education, and social development (World Bank Group, 1997, p.13). In general, rural development denotes the actions and initiatives taken to improve the standard of living in remote villages (Chita, 2000, p.10).⁹

⁷ https://books.google.com/books?id=3VimAwAAQBAJ

⁸ https://books.google.co.in/books?id=puwmy34ik7AC

⁹ https://books.google.com/books?id=puwmy34ik7AC

2.1.2 Community Empowerment

The concept of empowerment is mostly used for people capacity. The term is defined as the process of enhancing an individual's or group's capacity to make purposive choices and to transform those choices into desired actions and outcomes (Alsop, et al, 2006, p.1). ¹⁰Community empowerment is meant working collectively, which is about people and government, working together to make life better. Empowerment means real control by communities over resources, project/program design and selection, implementation, and monitoring and evaluation (Hans & Swaminathan, 2003, p.10). The key actors within the community are needed to be involved in decisions about their life, it ensures that the people taking responsibility to deal with problems that they face. Importantly, community empowerment means that it is difficult for government to solve all the problems by itself. The poor and the relatively powerless may become "empowered" to participate more effectively in particular development projects and programs (Mayo & Craig, 1995, p.6).

Some community organizations have been formed spontaneously (Rahman, 1995, p.3). According to Janelle (2000, p.35) "Men and women will often have different views and perspectives on infrastructure problems and requirements and it is important that these different views are known and are incorporated into project planning. Local community involvement in decision-making regarding their development issues at the rural area is generally considered a core value in community development.¹¹

Participation of communities in designing and implementing projects is important for a number of reasons, to wit --- it empowers communities and enhances their sense of ownership of development outcomes, communities are convinced that their views are important and that they have a right to decide how resources are utilized for their benefit, and communities become highly aware that they have certain "collective" responsibilities to ensure overall well-being.

In order to empower communities to be responsible and responsive for their own priority development, they need to be formed as representative institutions and be involved in project or program activities. The activities in the grassroots institution are mostly mobilizing internal resources of the people supplemented by resource and knowledge support from outside to undertake income-generating activities (including the development of infrastructure to support these activities (Rahman, 1995). Capacity building needs to be an ongoing and flexible process that can be adjusted to suit the requirements of the villagers and the direction of the project (Janelle & John G, 2004, p.48). The term empowerment is an instrument that can be used in the process of a program for reaching the goals. As Alsop, et al (2006, p.59) state that: "Empowerment can be an objective of an intervention or program (an end in itself), or it can be an instrument in the process of reaching a project or program objective (a means to an end)."

¹⁰ https://books.google.com.au/books?id=AsTiBwAAQBAJ

¹¹ https://books.google.com/books?id=j7ldAgAAQBAJ

2.2 Conceptual Framework

A framework has been formulated by the researcher according to the description of mentioned approaches and concepts. This process is success with the help and participation of local governmental organizations, community elders, service agencies, local residents, and women group as well.¹² Farmers and Nature Net (FNN) in Cambodia is one of the leading NGOs that supports national priorities on community-driven development framework in rural development program efforts to work with communities. Initially, it has paid attention on the community mobilization concept to be used for enabling the community to solve their own problems and initiate their own projects. In terms of situation analysis, an assessment of resources and identification of community needs must be relevant to the problems that communities face in their residential areas.

Communities need to be encouraged to participate in discussions regarding their local issues. Their discussion is important for consideration and identifying appropriate solutions against problems in its various complex aspects and perspectives. Certain leaders or coalitions of actors are most important to activate and foster the community mobilization process ahead. This role can be played by specific structure in the best functional manner for community development and problem resolution.

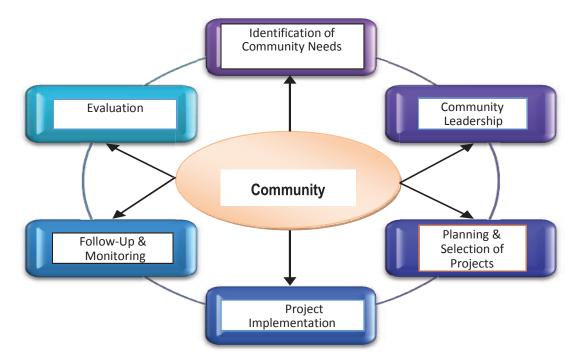


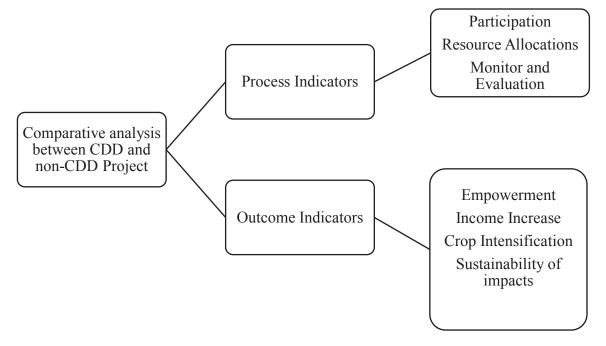
Fig. 1: Conceptual Framework 1

¹² http://www.nispa.org/files/conferences/2013/papers/201304291438210.Paper_Farzam.pdf?fs_papersPage=9</sup>

2.3 Analytical Framework

The analytical framework in this paper will be a comparative analysis between a CDD agricultural and a more traditional and centralized agricultural development project in Cambodia supported by Farmer and Nature Network (FNN). The analysis will be based on factors involved during the process as well as the outcome indicators. The process indicators will be analyzed based on participation, allocation of resources to the disadvantaged, and monitoring and evaluation. The outcome indicators include empowerment, increase in income, agricultural results, such as crop intensification, and the sustainability of project impacts.

Fig. 2: Analytical Framework for Comparative Analysis



The concept of empowerment is important in driving the ideas behind CDD projects, both as a process and as a result. According to Narayan-Parker (2002), empowerment is "the expansion of freedom, of choice and action, of assets and capabilities to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives" (p. xviii). Many of the rural poor population in this world rely heavily on farming as a means to their livelihoods. Because of this reason, they have an indivisible right to participate and shape decisions, resources, policies, etc. Other than measurable numerical results, empowerment is an indicator not to be neglected.

CDD is an approach that highly values the process of development and, thus, oftentimes, the results will not be observable in the short run. Other than looking at the immediate results after project completion, it is also important to look at the long-term impacts and the sustainability of CDD. Centralized projects may deliver immediate results, but are those results really sustainable when community members are treated as service recipients rather than acting agents? We argue that CDD is an approach that has the potential to have sustainable results.

We also contend that in a CDD project where the process is participatory, transparent, and where community members are free of norms and taboos that prevent them from speaking out. Elite capture is a risk for many types of development work, but the CDD approach does have the potential to lessen the problem when the rural poor and vulnerable groups.¹³

Given all that has been stated, the role of monitoring and evaluation is a crucial aspect in the development of CDD projects. Most often than not, results can be measured in numbers and figures, however, in order to evaluate a process, a specific set of monitoring strategies must be implemented alongside the project itself.¹⁴

In this study report, the analyses will be based on the implementation results as reported by beneficiaries and project officers of cooperatives, as well as completion reports for the two projects in Kampong Chhnang by cooperatives assisted by Farmers and Nature Net (FNN) and four additional projects in Kampong Chhnang, Takeo, Kampong Cham, and Battambang.

¹³ https://www.academia.edu/15409595/Community_Driven_Development_Agricultural_Projects_An_Analysis_of_the_Experience_in_Asia

¹⁴ https://www.academia.edu/15409595/Community_Driven_Development_Agricultural_Projects_An_Analysis_of_the_ Experience_in_Asia

3. Research Methodologies

3.1 Research Design

In this section, the research methodologies have been described, as well as the rationale for choosing the case study method for this assignment. Afterwards, the detailed discussion about data collection methods, selection of study area, data analysis process and ethical considerations are provided in detail. The section ends with describing the study's limitations.

This research explores how community-based organizations are implementing communitydriven development projects that are contributing to the development of participatory rural development governance practices in the context of Cambodia. Therefore, the study focuses not only on the immediate outputs of the project, but also the processes and outcomes in relation to the overall socio- economic, institutional, cultural and political backgrounds of Cambodia. Thus, this research has both explorative and descriptive purposes (Babbie 2007). It has an explorative purpose because this research is about understanding the political, social and institutional contexts at the local levels. It is also descriptive because this research is also about describing the functioning of the development intervention as well as that of a few other organizations in Kampong Chhnang and other civil society organizations working in Takeo, Kampong Cham and Battambang.

From the discussion of the previous sections of this paper, it becomes apparent that many of the key concepts of this research, for instance, participation and empowerment incur different meanings. Therefore, a precise comprehension of participation in communitydriven development projects and the underlying processes of empowerment requires a critical analysis of the spaces within which they take place. It is not about discovering the truth which is equally shared by various actors involved in the process (community people, local elites, local elected representatives and project officials etc.) but rather this is a process of identifying and understanding those actors (because some are apparently hidden actors), their roles and their context specific realities (partial truth). This is also about compiling and comparing those realities by blending with my subjective experience in the way of constructing a whole picture among many.

Thus, for this research, we have adopted a qualitative approach. By using ethnography, case study, grounded theory etc. the qualitative research approach enables the researcher to study social and cultural phenomena in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meaning people bring to them (Berg 2009). Adopting this approach has enabled the researcher to understand and also construct meanings of the lived realities of participatory local governance out of the experiences described by the research participants.

Hence, the qualitative approach is often seen to have an advantage over quantitative research in understanding the socially constructed nature of realities. Since social realities are constructed and, thus, sometimes contested, the qualitative research approach has challenged the researcher to understand those different realities in the way they are perceived by different actors and groups involved in the rural local governance process in

the study area.

Another reason for using the qualitative approach in this study is 'flexibility'. Since the researcher is not restricted by rigid 'predetermined categories of analysis, it offers the researcher the possibilities for exploring and understanding new ideas, events and phenomena which could be considered more important by the research participants. Therefore, this approach freed the researcher of the 'boxed idea' and encircled him to have better understanding of the situations during field study. We went to the field with a broader and relatively open theoretical framework and research flexibility which helped the researcher to consider research participants as the prime knowledge holders about their own realities.

3.2 Case Study Research Method

Berg (2009:317) defines the case study method as a method involving systematically gathering enough information about a particular person, social setting, and events.¹⁵ The character of this study requires a detailed case study for a deeper understanding of the research questions. The research problem is associated with the community-driven development process in rural development in Cambodia. It requires an understanding of the relationships among different actors and factors involved in the project intervention of Farmer and Nature Net (FNN) in the Cambodian context in the various communities in Kampong Chhnang as well as in Kampong Cham and Battambang. Hence, this study requires in-depth inquiry. Furthermore, this research assignment has been implemented for just barely three (3) months after the discussion meeting in Lao PDR for this joint research undertaking.

Despite the many obvious benefits of the case study method (more broadly with the qualitative research approach as a whole), one of its major drawbacks is the accusation of limited 'generalizability' (Bryman 1989). Lincoln and Guba (1985) discuss this problem under the heading of "the only generalization" is that there is "no generalization" (cited in Flick 2009:407). For many, the question is not even necessary to ask (Berg 2009:330) given that case studies are not sampled research. One of the main criteria of selecting a case is from which most can be learned. Learning potential is more important here than ensuring representation (Stake 1995).

This study is about understanding how CDD projects may contribute to the development of a participatory local governance process in a given context.

Like quantitative research, generalization in qualitative research draws on issues of the reliability and validity of research data. The researcher has followed 'data triangulation', where necessary, by attempting to get a 'true fix' on an issue by utilizing different sources (methodological triangulation) of data (interviews, observation and participant observation, and secondary documents) and also among different categories of respondents (sources of information) on important issues (Mathison 1988; Patton 2002). But, the use of data triangulation is obviously limited in the rigor of analysis by considering the goal and theoretical assumptions of this research project (Willis 2007). Selection of the Research Sites and Data Sources

¹⁵ https://quizlet.com/175992050/qualitative-comm-methods-final-flash-cards/

3.2.1 The Selection of Primary Case Sites

When research studies take place in natural or field settings, choosing a site for a study is probably one of the hardest parts of doing any research study (qualitative and quantitative) as the site finally chosen must be willing for the researcher to intrude on its territory (Tutty, Rothery *et al.* 1996). According to Marshall and Rossman (1995:51), the ideal site is one in which (1) entry is possible; (2) there is a high probability that a mix of the process, people, program, interactions, and structures of interest is present; (3) the researcher is likely to be able to build trusting relations with the participants of the study; and (4) data quality and credibility of the study are reasonably assured.

For this research, the selection of Farmer and Nature Net (FNN), as implementing organization, and the project areas in Kampong Chhnang as the primary research sites are based on the above guidelines. Most of the project components are well established and are mature enough to conduct field investigation on the process and impacts of the intervention.

The operation of the following projects in the following areas were considered to be ones of the high performing projects in Kampong Chhnang by FNN: (a) Kraing Leav Commune, Rolea Pa'ear District; and (b) Boeung Leach Village, Sethey Commune, Samaki Meanchey District.

3.2.2 The Selection of Secondary Case Sites

The selection of four other additional communities that have implemented community-driven development projects in rural communities were purposive in nature. The selection of these communities began with the researcher's discussion with local project officials of FNN regarding the content and purpose of the study.

The researcher has informed the officials of FNN that he was interested in studying community-driven communities (CDCs) where there was a high probability that a mix of the process, people and interactions were present. Limiting the number of CDCs to three (3) seemed sufficiently manageable by considering the research questions, budget and the research time-frame without compromising the quality of field inquiry.

The following were the selected secondary case sites:

- Sambo Village, Sopheas Commune, Steung Trong District, Kampong Cham;
- Prey Sangha Village, Khnach Romeas Commune, Bavel District, Battambang; and
- Trapeang Roung Village, Udom Soriya Commune, Tramkak District, Takeo.

3.2.3 Research Participants Selection Process

The main objective of the research is to understand the ways in which the intervention has been contributing positively or negatively to the development of participatory communitydriven development rural development practices in the context of Cambodia. According to the conceptual framework presented in section 1, participatory local governance is characterized by interactions between different kinds of public, semi-public and private actors, ranging from civil society to individual, within several societal domains and at different levels. Therefore, data have been collected from different categories of respondents. The first category includes at least ten (10) project beneficiary participants, who are members of the study community groups or cooperatives. The second category includes non-participant community residents to get their views regarding the project activities. The third category includes both local and national level project officials who are directly involved in managing the project. The fourth category includes provincial departments of rural development and agriculture, forestry, and fisheries, who may not be the actors in that sense, but provided useful information regarding the local governance system in the provinces where the projects are located.

Silverman (2005:130) reminds us that 'sampling in qualitative research is neither statistical nor purely personal.' According to Guba and Lincoln (1995:199), 'all sampling is done with some purpose in mind.' Again, Patton (2002) notes that the sampling strategy must be selected to fit the purpose of the study, the resources available, the questions being asked, and the constraints being faced. By considering these points, the researcher used purposive sampling to select the respondents.¹⁶ Purposive sampling focuses on selecting information-rich respondents, the study of whom will illuminate the area in question (Patton 2002). Employing purposive sampling allowed the researcher to do two things: firstly, to select unique information-rich respondents for in-depth investigation; and secondly, it enabled the researcher to select easily accessible respondents who are generally identified as 'difficult-to-reach-specialized population.'

3.3 Field Visit and Data Collection Process

3.3.1 Data Collection Methods

The researcher employed two types of qualitative methods to collect primary data during the field work: in-depth interview among project participants and community leaders; direct observation and participant observation that suit best with this research. In addition, we have also used document analysis method for secondary data.

3.3.1.1 In-depth Interview

The in-depth interview was selected as the most appropriate method for gathering primary data from individual participants. Interviews were aimed at exploring individual beliefs, perceptions, attitudes and opinions using questionnaires, specifically designed for different categories of respondents (see Appendices). The questionnaires were semi-structured. This means that rather than having pre-set, specific close-ended questions, the interviews were guided by mainly open-ended questions arranged by thematic order as, for example, group membership, developmental benefits, formal/informal institutional relationships, policy environment and local governance issues. Some of the themes were common to all categories of respondent. The semi-structured nature of the interviews meant that the participants were asked a sequence of questions but with the flexibility for adjustment in response to its development—questions could be altered and additional questions could be added when necessary (May 1997). All the interviews were conducted in the local language, Khmer. For this reason, the researcher had to translate the questionnaires from

¹⁶ http://www.academia.edu/24594557/Stimulating_Innovation_through_Public_Procurement_The_Level_of_Awareness_among_ Key_Stakeholder

English to Khmer. Interview sessions lasted from an hour to a maximum of two hours depending mostly on the category of the respondent.

All the interview sessions were recorded using an electronic voice recorder. At the beginning of every interview session, the researcher informed the interviewees that the session was going to be recorded. After completing a couple of interviews, the researcher started transcribing the interviews into Microsoft Word documents in Khmer while listening to the recorded conversations. Though the researcher offered the participants the opportunity to review the transcription of the session before giving their final consent to use them in my research, none took up the offer.

Interviewing community members who are direct beneficiaries of the projects was more challenging than other categories of respondents for some practical reasons. Firstly, despite giving them an in-depth introduction regarding the research project, we have noticed that many of the participants initially thought that he had at least some kind of connection with the FNN, and that he was interviewing them with some kind of hidden intention other than the stated purpose. This false perception created two potential problems. Some started to think that the researcher could solve many of their problems and started to respond in that direction, rather than focusing on the thematic questions. On the other hand, the researcher also observed that some interviewees became reluctant to share information out of some kind of fear that revealing sensitive information might create personal problems. In most cases, he was able to manage their false perceptions regarding the research purpose by explaining more about himself and the research project. However, it did extend the interview time. Secondly, in the given social setting, sometimes it was very difficult to interview a participant alone. In a few cases, people besides the main interviewees were present during the interview sessions, and in many occasions, they were also participating in the discussions. In extreme cases, it happened that the other participants were more vocal than the main participants. In such cases, the researcher had to allow them to speak up in a manageable way by considering this an opportunity for gathering diversified information.

3.3.1.2 Direct Observation and Participant Observation

Observation means seeing with purpose. It is a close look or view of situations with some definite purpose. It does not end with mere seeing, but calls for the recording of data as noticed by the observer. However, observing human activities is not straight-forward. There is an ongoing tension between 'overt' and 'covert' observations. People may behave quite differently when they know they are being observed (overt observation) compared with how they behave naturally when they do not think they are being observed (covert observation) (Patton 2002; Flick 2009). By considering the ethical tensions around 'covert' observation, the researcher followed the 'overt' observation method (where applicable) being aware of some of the potential effects (for example, the number of participants in group meetings which were observed). Some of such potential effects were further reviewed during interview sessions.

Participating and observing research participants' activities provided the researcher with a great understanding of the scenario. As a researcher, he participated in a few of the group events in all of the study CDCs which gave an in-depth idea about the groups' activities.

3.3.1.3 Document Analysis of Secondary Sources

The documentary analysis method has been used to analyze secondary data. This method was seen as appropriate because it offered quick and inexpensive data which would answer many of my questions during the research project.

Data sources in this study are:

- **Paper-based and electronic sources.** These include: books, academic journal papers, newspapers, research reports and conference papers.
- **Official documents.** These include: a number of Cambodian government official publications (e.g. Rectangular Strategy, the National Strategic Development Plan; the Industrial Development Plan; Project Reports of FNN.
- Manual techniques were used for organizing secondary data. Secondary data were organized in order to identify patterns so that the research questions posed in the study could be answered. Secondary data complimented by primary data have been used extensively.

4. Presentation, Discussions and Analysis of Findings

4.1 Introduction

This part of the report presents a critical analysis of the study findings. It probes the extent to which the community-driven development (CDD) project, a supposedly a demand driven development project aspect in improving the lives of people living in the rural communities. It looks at the CDD projects implemented by community-based organizations and non-government organizations supported by Farmer and Nature Net (FNN) in Kampong Chhnang, as well as other projects implemented in Kampong Cham, Takeo, and Battambang.

For this part of the study, it presents the case studies from the primary case sites from those projects funded and managed by the Farmer and Nature Net (FNN) in Kampong Chhnang. Upon consultation with Mr. Pan Sopheap, Executive Director of Farmer and Nature Net, the project case sites were recommended because "most of the project components of CDD interventions in Kampong Chhnang are well established and are mature enough to conduct field investigation on the process and impacts of the intervention."

The study team presents the results of case studies from the high performing projects in Kampong Chhnang by FNN: (a) Kraing Leav Commune, Rolea Pa'ear District; and (b) Boeung Leach Village, Sethey Commune, Samaki Meanchey District.

4.2 Demographic Characteristics of Beneficiaries of CDD Projects in Kampong Chhnang for the Primary Case Studies

A purposive sampling of ten (10) beneficiaries for each of the two (2) CDD projects in Kampong Chhnang were undertaken by the researcher for the following:

- Kraing Leav Agricultural Cooperative, Kraing Leav Commune, Rolea Pa-ear District, Kampong Chhnang; and
- Boeng Leach Sambophal Agricultural Cooperative, Boeng Leach Village, Sethey Commune, Samaki Meanchey District, Kampong Chhnang.

The sampling strategy used is only purposive in nature and does not intend to come up with generalizations of findings, but only present a case in point on the situation of selected beneficiaries of the project. Table 4.1 below depicts the demographic profile of respondents for this face-to-face interview:

Table 4.1: Demographic Characteristics of Respondents (n=20)								
Variables	Description	Kraing Leav		Boeng Leach				
		Frequency	Percentage	Frequency	Percentage			
Gender	Male	4	40%	8	80%			
	Female	6	60%	2	20%			
Age	18-25	0	0%	0	0			
	26-35	2	20%	2	20%			

Table 4.1: Demographic Characteristics of Respondents (n=20)								
Variables	Description	Kraing Leav		Boeng Leach				
		Frequency	Percentage	Frequency	Percentage			
	36-45	3	30%	3	30%			
	46 and above	5	50%	5	50%			
Marital Status	Single	1	10%	1	10%			
	Married	9	90%	9	90%			
	Divorced	0	0%	0	0			
Education Level	Grade 11 or lower	10	100%	10	10%			
	Grade 12 or over	0	0	0	0%			

4.3 Primary Case 1 – Partnership Between Kraing Leav Agriculture Cooperative and AMRU Rice Company

4.3.1 Descriptions: The Community and the Cooperative

Paddy rice farming is majority source of living of the residents of Kraing Leav Commune, Rolea Pa'ear District, Kampong Chhnang. However, despite production of a single crop, the farming practices vary from one family to another. Because of this predicament, the Kraing Leav Agricultural Cooperative was organized on 15 September 2012 and had been registered officially by the Provincial Department of Agriculture, Forestry and Fisheries (PDAFF) of Kampong Chhnang with 97 members, of whom 61 were females and with a total capital of KHR 10 million (Cambodian riels) (USD 2,418) with a par value of KHR 20,000 (USD 5) per share. As of today (since June 2019), the members of the cooperative increased to 232 (81 are females) with a total of 847 shares at KHR 38,800,000 (USD 9,383).¹⁷

Since the establishment of the Cooperative, the number of people living in the community has increased because of improved availability of on-farm employment, brought about by the increased prices of paddy rice and availability of market. However, despite the increased livelihood and employment opportunities, the roads leading to the community remained the same. The usual modes of transport are usually public bus and minibus (taxi). Housing facilities are adequate and has improved because of additional income generation and more employment opportunities. The quality of life in the community has improved because of better infrastructures and access to market for their agricultural produce.

4.3.2 Objectives of the Cooperative

The initial objective of the cooperative is to (1) help provide loans to farmers in their farming with a joint share investment (one share is KHR 20,000), and; (2) produce organic paddy for domestic supplies and overseas export.

4.3.3 CDD Approaches

• **Community Characteristics:** After the Cooperative was formed in 2012, about 250 to 500 households have moved into the community from 2012 to present because of the improved livelihood conditions and employment opportunities brought about by

¹⁷ http://www.asiapacificfarmersforum.net/cambodia-fnn-kraing-leav-agricultural-cooperative/

improved paddy rice production, as well as mixed vegetables. The quality of life in the community has improved because of better infrastructure, improved access to the market of agricultural produce, and greater access to finance.

- **Principal Services:** About half of the households in the community are provided with electrical services. However, the streets do not have proper lighting facility up to this date. On the other hand, the community does not have full water supply coverage, and the condition of potable water remains poor. The public sewage and garbage collection systems were also considered poor in the community, and these can be possible CDD interventions in the village in the future. The primary education system has been considered adequate in the communities visited. However, health facilities were not enough to accommodate treatment of dengue, fever and diarrhea. CDD interventions in the area of health must also be introduced in the future.
- Environmental Issues: There are several issues reported in the villages visited. It was reported that most of the communities do not have junk yard, there are stagnant water and stagnant pools, slaughter houses dump waste in public places, and there are repair shops that dump waste oil in soil and water. Thus, additional CDD intervention on environmental concerns must be introduced, specifically in educating community on hygiene, sanitation, and the establishment of dump site.
- **Training and Investment:** The members receive training on agricultural techniques, specifically in the production of organic paddy rice from the PDAFF - Kampong Chhnang, in cooperation with Farmer and Nature Net (FNN) and Neang Kangrei Organization. To achieve the production targets for organic paddy rice, the Kraing Leav Agricultural Cooperative has established production groups. The Cooperative has selected 40 volunteer families to produce organic paddy rice for the community as well as for the domestic markets. Chim Soky, community committee in charge of training and a member of organic paddy production, echoed that --- "Before joining the cooperative, I also did organic paddy farming but it didn't provide much yield. Before, two hectares of land yielded only 4 tons, but now it increased to 6 tons. I can sell the paddy to the cooperative at a higher price than that offered by middlemen. When the cooperative buys paddy from me and sell it for profits, I also gain from the profits through dividends."¹⁸ She complements that --- "Joint investment with a cooperative is better than sole investment because we have the chairperson, treasury, committee in charge of each area, we have members and we can get the information from the outside markets so the middlemen cannot price down our paddy."19

4.3.4 Findings from the Field

Aside from selling white and red Phka Rumduol Angkor rice, the cooperative also sells wet paddy to Amru Rice Cambodia Co., Ltd, a rice processing company, for export. The company needs around 23 tons per year, but the quantity of rice produced by the cooperative is well below this. Right now, the cooperative is enhancing the quality of organic paddy productivity to supply as much as 50 tons per year to meet the demand of Amru Rice.²⁰

¹⁸ https://m.facebook.com/AsianFarmers/posts/1828711473926536

¹⁹ https://www.youtube.com/watch?v=fo4HChO6w20

²⁰ http://ze5y2yvtu1.fam.cx/1.html

"Prior to placing the purchase order from Amru Rice, the company will do a site visit at the rice field and bring the paddy for laboratory tests to ensure that the paddy is produced organically. Thus, the cooperative, through its committee, checks the technical specification of each member," explains Chairperson Mao.

Furthermore, to increase employment in the cooperative, the community committee installed a rice mill machine worth USD 20,000 through a loan from the Rural Development Bank with the aim of supplying organic rice to a number of supermarkets in Phnom and for selling within the province and the community itself.

"Selling the paddy is one source of income, but because of the rice milling machine, we generate rice bran or rice residuals that we can sell for KHR 5,000,000 to 6,000,000 (USD 1,209 - 1,451)," shares Khim Sokunthea, treasurer of the cooperative.²¹

Amid their success, the cooperative also faces challenges such as the lack of paddy dryer as the community depends on solar drying. At times, they experience a loss due to the unavailability of sunshine to dry their paddies resulting to spoiled paddies. Nevertheless, the community committee has made efforts to mill spoiled paddies and sell them at lesser price and supply to animal feed processing companies to ensure minimal loss for their members.

Kraing Leav Agricultural Cooperative is an outstanding cooperative in Kampong Chhnang in terms of organic paddy and rice production. The cooperative is planning to expand cultivating land and production members in order to ensure sufficient supplies at the demands of communes.²² In Kampong Chhnang Province, Cambodia, the price of rice is very low that farmers are discouraged to produce rice for commercial purposes. To help rice farmers in the area, Farmer and Nature Net (FNN) communicated with AMRU Rice Company, which was then looking for organic jasmine rice, to partner with Kraing Leav Agriculture Cooperative in Kraing Leav village, Kraing Leav commune, Rolea Phear District.

To facilitate this partnership, FNN did the following:

- Organize ICS training workshop
- Follow-up booklet filed by BOD of cooperative
- Report ICS training to AMRU and Union control
- Accompany Union Control to file monitoring before getting an organic certification

AMRU Rice agreed with the partnership and guaranteed the price of organic rice with the following premiums:

- A price of over 30 riels (USD 0.0074) per kilogram
- AMRU will offer 30 riels per kilogram for the agricultural cooperative to pay for the working days of those in charge of filing the Internal Control System (ICS) booklet, based on the policy/regulation of AC

²¹ https://ne-np.facebook.com/notes/asia-pacific-farmers-program/cambodia-coop-boosts-organicrice-production/1229597920579014/

² http://www.fao.org/family-farming/detail/en/c/1259433/

• AMRU also offers some part of the 30 riels per kilogram to FNN as a fee in facilitating the partnership between the farmers and the Control Union unit.

As a result, Kraing Leav Cooperative met with AMRU and agreed to sell 45 tons of organic jasmine rice to the company. In 2018, Kraing Leav Agricultural Cooperative mobilized seven farmers to produce the jasmine rice in an area of 15 hectares with a yield expectation of around 45 tons. Because of the success of the farming contract between the two parties, in 2019, the cooperative increased its production for selling to AMRU from 45 tons to 70 tons.

4.3.5 CDD Interventions

Innovative Feature

FNN facilitated the meeting between the farmers and the AMRU at the farm site; helped farmers document and share about the difficulties they faced; signing of contract farming; setting of stable and premium price for the produce, and; helping the company to ensure production standard.

It is important to have a good communication between the company and the cooperative. The two parties did not know about each other so they did not have a high level of trust. Thus, it is important to help both sides first to establish trust by communicating with each other effectively. FNN played an important role in facilitating this partnership by providing training on ICS and making sure the rice produce gets an organic certification from the Control Union.

Profile of Selected Beneficiaries

- **Membership in CDD Project:** Face to face interviews were undertaken among the beneficiaries of the project and all of them claimed they were full-time members of the cooperative. 60% started membership in 2016; while the others joined the cooperative in 2017, 2018, and 2020. Most of the beneficiaries joined the cooperative because they know the head of the cooperative; some were invited by neighbors and friends; while the rest were asked by FNN.
- **Goal of the CDD Program:** According to the members, their cooperative is supporting the following goals of CDD: (a) income generation; (b) improvement of living standards; and (c) business creation.
- **Types and Involvement of Beneficiaries in CDD Sub-Projects:** For this cooperative, members are involved in chicken raising, paddy rice production, mixed-vegetable growing, investments in Community Fund. The cooperative is providing the following assistance to the beneficiaries of CDD sub-projects relative to (a) chicks to be raised; (b) training on agriculture extension programs; and (c) lectures on vaccination and finding markets.
- Attendance in Meetings: All beneficiary participants are attending regular meetings of the cooperative that are mostly held 1 to 3 times a month to discuss and resolve constraints, agriculture productivity and marketing consulting; increase monthly income; and creation of non-agriculture work during off season.

- Impacts of CDD activities and projects on youth in the village: The beneficiaries of the cooperative have been attracted to participate in the community-driven activities because of the opportunities offered by the sub-projects in increasing their monthly income and livelihood from agriculture-related CDD interventions, including work creation and improvement in agricultural techniques of the farmers.
- Approaches of the Community in Implementing CDD projects: The cooperative has been instrumental in providing team motivation, models for marksmanship and hard work, and participation in Community Fund contribution.
- Changes in Behavior/Attitudes and Involvement: Because of the initiative of the officers and members of the cooperative, majority of the youth in the community has changed their attitude to learn more, and demonstrated encouraging behavior to gain additional learning. Most of the youth in the community have become involved in CDD activities, specifically in knowledge sharing, persuading other youths to join, provided additional strategies and concepts in profit generation and in sharing vital information in the community.
- Challenges in Implementing CDD activities and Possible Solutions: According to the • beneficiaries, so far, there is no evidence or claims of any conflicts with local authorities during implementing the project and local empowerment activities such as direct allocation of resources to the community. The community-based organization, the established cooperatives, do not have any legal risks or obstacle in all these selfempowerment activities but instead, the community received a well-shared support from multiple parties including the Provincial Department of Agriculture, Forestry, and Fisheries in term of agricultural techniques, trainings, and other legal documentation and procedures. However, some major challenges for the beneficiaries in implementing CDD agriculture sub-projects include: water shortage; outbreak of pests and diseases; lack of modern machineries; and deficiency in marketing their agricultural produce. When asked for possible interventions, they said that there should be a water reservoir that must be constructed in the community, vaccination of chickens, introduction of pesticides and herbicides, and assistance in community market improvement.
- Other Projects Currently Participating: The participants informed that aside from agriculture-based sub-projects, they are also involved in housing, brick-making, and sanitation projects. However, all of them are still involved in livestock infrastructure and fencing construction, and gardening.
- Average Income from CDD Sub-Projects: On the average, majority of the beneficiaries are earning from \$101 to \$150 per month, while others are getting \$251 to \$300 per month. This average monthly income is enough to address the needs of about 60% of participants, while 40% said it is inadequate for their livelihood requirements.

4.3.6 Impact

Small holder farmers and the company had a win-win deal. The cooperative will be able to sustain development through the premium price for their produce. FNN also received an income from the deal to be used to sustain their projects.

The farmers also had access to quality seeds to improve their production. They also got more income because they made their own compost instead of buying organic fertilizer from the market.

Before, farmers generate the following income:

- a) 1,300 riels per kilogram x 3,000 Kg/Ha = 3,900,000 riels (USD 958)
- b) After the contract with AMRU:
- c) 1,590 riels per kilogram x 3,000 kilogram per hectare = 6,770,000 riels (USD 1,663)
- d) Farmers will now get an increase of 870,000 Riels (USD 217) in their income per hectare.

By implementing organic rice farming, the community helps create a better environment and supports sustainable development.

4.3.7 Facilitating Factors

- AMRU RICE Company has a good background on working with small holder farmers. The company understands farmers' issues and they purchase both organic rice and SRP rice (EU-standard Sustainable Rice Platform).
- Farmers are organized so they easily maintain production standards
- Good communication between the parties involved
- The BOD and controller committees are efficient so it is easy to get an organic certification from the Control Union

4.3.8 Lessons Learned

- The contract farming signed by company with BOD and FNN is critical to make sure the farmers produce what is expected of them
- Conducting ICS training for Controller committees before the production of organic rice helps greatly to fill in information in the ICS booklet for CU

4.3.9 Recommendations

- The company should prepare trucks to transport the produce on time²³
- The company can advance cash money for farmer leaders responsible for collecting rice for payment to the farmers
- Agricultural cooperatives in the target areas must keep available cash in case the company lacks money to give in advance.

²³ http://www.asiapacificfarmersforum.net/cambodia-a-promising-partnership-between-an-agriculturalcooperativeand-a-rice-company/

4.4 Primary Case 2: Boeng Leach Sambophal Agricultural Cooperative

4.4.1 Descriptions: The Community and the Cooperative

The residents of Boeng Leach Village, Sethey Commune, Samaki Meanchey District, Kampong Chhnang mostly grow rice and crops, and raise animals for a living. Their farming basically relies on traditional methods. There is only limited use of modern techniques and, therefore, the yields are minimal. This has made it almost impossible for some farmers to provide for their families. Furthermore, agricultural product market prices often fluctuate at the whim of the middlemen and sometimes the merchants lower the price of farming products.

On 31 December 2012, with support from the Farmer and Nature Net (FNN), the national implementing agency of the AFOSP-MTCP2 Program in Cambodia, the Boeng Leach Sambophal Agricultural Cooperative was established and registered officially under the Law on Agricultural Cooperatives. The cooperative was registered initially with 53 members, of whom 39 were females. The cooperative aims to (1) look for markets that can sell farming products at higher prices; (2) provide organic agriculture training, and; (3) encourage farmers to work as a team to produce agricultural products to meet market demands. The cooperative seeks to understand what exactly consumers need and want from farmers' products in order to cater to these needs.

- **Community Characteristics:** Since the establishment of the Cooperative in 2012, there were 500 to 750 households that moved into the community because opportunities in the agriculture sector, specifically in chicken raising, as well as in paddy rice production. Aside from on-farm employment, most community members are also engaged in off-farm employment such as in garments and construction sector. Road conditions and other infrastructures in the community has tremendously improved for more than five years now.
- **Principal Services:** The households in the villages visited have 100 percent coverage of electricity. However, public lighting services, specifically street lights, have worsened. Thus, may be the cooperative can establish a CDD intervention for street lights.
- Although water supply services are available in the community, the condition has not improved and remained the same. The cooperative can introduce piped-water supply system that are safe to drink as a CDD intervention in the future.
- Initial Investment: At the initial establishment of Boeng Leach Sambophal Agricultural Cooperative, they had KHR 25 million (Cambodian riels) (USD 6,083) in capital (each member contributes a share of KHR 50,000 or USD 12). So far, there are 288 members of whom 164 are females and their total capital has risen to KHR 865 million (USD 210,470) consisting of 905 shares (a share with a par value of KHR 50,000).

4.4.2 The CDD Approaches

4.4.2.1 Training Programs

Since its establishment, many relevant organizations, particularly FNN as well as the Provincial Agricultural Department, have offered training courses for community members about techniques on growing crops and raising animals. Notably, these partners also sponsored tools for farming and animal raising. To add, the cooperative built a paddy storehouse, paddy drying field, and provided pre-and-post cultivation techniques with the support of an Indian project.

Chak Thoeun, Chairperson of the Community Board, articulates that --- "At present, what we focus on is increasing organic vegetable yield and raising Khmer chickens, and to work on the community plan to ensure the supply chain to the market. As for vegetables, we sell to KOC Supermarket and Family Market, while Khmer chickens are sold to KOC Supermarket and Picnic Resort."²⁴

4.4.2.2 Chicken Farming and Vegetable Growing

Currently, as chicken farming and vegetable growing in the community cannot meet market demands due to the varying weights of the chickens, it is impossible to ensure the supply chain. To solve this problem, the cooperative established its own market to sell products not wanted by consumers in Phnom Penh by developing their products into a range of different menus, such as grilled chicken for sale in the community.

"At first, I raised only a few chickens and the raising method was to release them to find food themselves. However, this did not provide a good yield. And then I joined the community and I was taught about chicken raising techniques. I implemented what I learned and the number of my chickens kept increasing. Nowadays, I have around 150 chickens and earn an average of KHR 200,000 to 300,000 (USD 49 – 73) per sale, which is once or twice a month," shares Im Sarath, member of the cooperative.

Farmer Ry Yei, a member of the organic vegetable growing team, is speeding up her vegetable growing to meet the demands of supermarkets in Phnom Penh and the community-based market. The income from the growing of organic vegetables can ensure her children's education at a university in Phnom Penh.

"The vegetables grown organically can be sold at better prices compared to inorganic ones. I grow vegetables as per the demand of the community and I cultivate the vegetables twice a week. Each time it yields 50 to 60 kilograms on average," she says. "When we lack growing techniques, the community offers training directly on our site."

Despite facing some minor problems with markets that are based in Phnom Penh, organic vegetable growing and chicken raising members of the cooperative do not face a shortage of market demand. As the cooperative established their own market, sometimes the 32 chicken raising families cannot even sufficiently supply the demand in the cooperative itself. On average, the cooperative sells 500 to 600 grilled chickens per month, and this is excluding the chickens made into other products.²⁵

As for the vegetables, the cooperative does self-arrangement whereby the growing members bring their cultivated vegetables for sale at stalls in the cooperative. As the market demand for processed chicken keeps progressing, the cooperative is now capable of hiring three staff to provide services for the cooperative.²⁶

²⁴ http://www.fao.org/family-farming/detail/fr/c/1259427/

²⁵ http://www.fao.org/family-farming/detail/es/c/1259427/

²⁶ https://m.facebook.com/AsiaPacificFarmers/posts/1261292367409569

The cooperative is set to increase its members in order to produce sufficient yields to meet market demands.²⁷ The cooperative also plans to expand its chicken and vegetable market to another location.²⁸

4.4.2.3 Profile of Selected Beneficiaries

- **Membership in CDD Project:** Face to face interviews were undertaken among the beneficiaries of the project and all of them claimed they were full-time members of the cooperative. There were 60% that started membership in 2012; while the others joined the cooperative in 2013, 2014, 2017 and 2020. Most of the beneficiaries joined the cooperative because they knew the head of the cooperative; some were invited by neighbors and friends; while others were asked by FNN.
- **Goal of the CDD Program:** According to the members, their cooperative is supporting the following goals of CDD: (a) income generation; (b) improvement of living standards; and (c) business creation.
- **Types and Involvement of Beneficiaries in CDD Sub-Projects:** For this cooperative, members are involved in chicken raising, paddy rice production, mixed-vegetable growing and investments in Community Fund. The cooperative is providing the following assistance to the beneficiaries of CDD sub-projects: (a) chicks to be raised; (b) training on agriculture extension programs; and (c) lectures on vaccination and finding markets.
- Attendance in Meetings: All beneficiary participants are attending regular meetings of the cooperative that are mostly held 1 to 3 times a month to discuss about problem solving, agriculture productivity and marketing consulting; increase monthly income; and creation of non-agriculture work during off season.
- Impacts of CDD activities and projects on youth in the village: The beneficiaries of the cooperative have been attracted to participate in the community-driven activities because of the opportunities offered by the sub-projects in increasing their monthly income and livelihood from agriculture-related CDD interventions, including work creation and improvement in agricultural techniques of the farmers.
- Approaches of the Community in Implementing CDD projects: The cooperative has been instrumental in providing team motivation, models for marksmanship and hard work, and participation in Community Fund contribution.
- Changes in Behavior/Attitudes and Involvement: Because of the initiative of the officers and members of the cooperative, majority of the youth in the community has changed their attitude to learn more, and showed positive decision to gain additional learning. Most of the youth in the community have become involved in CDD activities, specifically in knowledge sharing, persuading other youths to join, provided additional strategies and concepts in profit generation and in circulating information in the community.

²⁷ http://www.asiapacificfarmersforum.net/cambodia-fnn-boeng-leach-sambophal-agriculturalcooperative/

²⁸ http://www.fao.org/family-farming/detail/en/c/1259427/

- Challenges in Implementing CDD Activities and Possible Solutions: According to the beneficiaries in this case, there is no claim of conflicts or issue in community empowerment activities of the CDD project. The cooperatives also acknowledged the assistance received from the provincial department of related ministry in term of Agricultural training and knowledge, training on animal vaccination, and support in any legal documentation for a smooth operation and implementation of the project. However, the community still faced some major challenge during the implementation, for instance, the need of water storage for vegetable plantation, seasonal outbreak of pests and animal diseases, lack of modern machineries, insufficiency in marketing of the agricultural products. When questioned for probable solutions, they said that there should be a water reservoir that must be constructed in a strategic location of the community, perform regular vaccination of chickens, introduction of pesticides and herbicides, and since they already have of community market in the community, the cooperative will only need market expansion and improvement.
- Other Projects Currently Participating: The participants in the communities visited informed that they are only involved in the construction of livestock infrastructures and facilities, including fencing project for their chicken farm.
- Average Income from CDD Sub-Projects: On the average, majority of the beneficiaries are earning from \$101 to \$150 per month, while others are getting \$251 to \$300 per month. This average monthly income is enough to satisfy about 60% of participants, while 40% alleged that it is not sufficient for their livelihood requirements.

4.4.2.4 Innovations / Good Practices

In the past, the members of the cooperative are practicing differently from traditional chicken and mixed vegetable production with low quantity and quality. With assistance from FNN and PDAFF in Kampong Chhnang, innovative agriculture extension practices were introduced, that responded also to the market needs and provided profit margin of over 20% to the farmerbeneficiaries. The innovative practices for chicken that were introduced are the following:

- Change behavior to follow new technic to answer the needs of the market;
- Set up the market calendar acceptable with market;
- Adaptable to the new techniques of GIC enterprise;
- Diversify production by rotation and shelter raising; and
- Diversify products -sub-products/products processing/ parent stocking/selling.

4.4.2.5 Outcomes/ Impact

After the provision of FNN to the cooperative, particularly B2B, majority of the beneficiaries of the cooperatives were able to sign agri-business contracts with some buyers. With business contracts facilitated by the cooperative and FNN, some beneficiaries claimed that they were able to make their business better and stable with an assured market for at least 220 kilograms per week supplied regularly within Kampong Chhnang and Phnom Penh. They plan to scale up their business operation by expanding to other businesses such as selling two brands of fertilizer and three animal feeds in her distribution outlets. Moreover, they also wished to improve collection, processing and packaging eggs, ducks and chicken by establishing a proper slaughter house with

cleaning machine. Fortunately, under FNN support and facilitation they were able to gain more knowledge and experience in chicken raising in cooperation with public and private companies and organizations such as the Provincial Department of Agriculture, Forestry and Fisheries and Medivet company.

4.4.2.6 Facilitating Factors / Challenges

- **Producer/Farmer:** The local farmers still have limited capacity to produce chicken responding to market demand both in terms of quantity and quantity. Building business trust among producer and buyers, climate change, disease outbreak, and lack of market and price information are the main challenges that need to have further action.
- Local buyer/collector: Limited supply from producers responding to high demand from market and consumers. Quality of produce from farmer not yet fully matched the requirements of the market. Competition with other buyers and breaking business trust are also the big challenges.

4.4.2.7 Lessons Learned

Despite the fact that several target beneficiaries of the cooperative have been successfully running their business operation, there are several issues that need to be further addressed: (1) functional linkages with producer and buyer, as well as organizing to buy inputs or sell collectively, (2) training support to producers, not just on techniques, but also management support in forming and maintaining active backyard chicken producer cluster within existing cooperatives (3) lack of market system (facilitate competitor outside of cluster) and open more chicken shop in local communities; and (4) better access to better financial services to enlarge their business.

4.4.2.8 Recommendations

- **Capacity building:** The farmers must be provided training on market-oriented approaches in agri-business operation, strategies on entrepreneurship and financial management. Technical capacity building workshops and training should also be provided to producers.
- **Building Business Trust:** FNN support should continue and concentrate more on building business trust by providing more support to smallholders in having agribusiness agreement and/or contract farming among Value Chain (VC) actors, particularly producers and buyers.
- **Financing support/Resources:** Facilitate and support producers and other VC actors to get better financial services and access to capital for improving and running their business. FNN should ask the assistance of AIMS Project (Ministry of Commerce) and ASPIRE Project (Ministry of Agriculture, Forestry, and Fisheries) to provide Value Chain Innovation Fund (VCIF) to the cooperative and line of credit approaches and procedures should be reviewed to suit real requirements in the field.
- **Policy Intervention Support:** The Law on Agriculture Cooperative has been very supportive to small producers in the provision of incentives for economic development,

and it is expected that the Ministry of Commerce will continue supporting the AC's business operation under FNN, with financial support of the AIMS Project.

5 The Secondary CDD Case Sites

5.3 Introduction

The selection of three (3) additional communities that have implemented community-driven development projects in rural communities used purposive sampling method. The selection of these communities began with the researcher's discussion with local project officials of Farmer and Nature Network (FNN) regarding the content and purpose of the study. They shared their existing case studies that the researcher of this study started to work on.

The researcher has informed the officials of FNN that he was interested in studying community-driven communities (CDCs) where there was a high probability that a mix of the process, people and interactions were present. Limiting the number of CDCs to three (3) additional case studies seemed sufficiently manageable by considering the research questions, budget and the research time-frame without compromising the quality of field inquiry. The final selection was based on the following criteria: firstly, in all communities selected, the project had been working for more than two years; secondly, all the project components had been introduced in all the CDCs; thirdly, expected interesting variations in group activities; and fourthly, variation in group composition in terms of gender.²⁹ The criteria also followed the tenet of 'generalizability' as a whole.

The following were the selected secondary case sites:

- Sambo Village, Sopheas Commune, Steung Trong District, Kampong Cham;
- Prey Sangha Village, Khnach Romeas Commune, Bavel District, Battambang; and
- Trapeang Roung Village, Udom Soriya Commune, Tramkak District, Takeo.

5.4 Secondary Case 1: The Lemongrass Project in Sambo Village, Sopheas Commune, Steung Trong District, Kampong Cham³⁰

5.2.1 Background and Descriptions

One hundred fifty kilometers from Phnom Penh is the village of Sambo Village Sambo Village in Sopheas Commune, Steung Trong District, Cambodia. Most of the villagers grow paddy and cassava for a living. Additionally, they also grow a few bushes of lemongrass for family consumption.

Seeing the growth of the collaborative work of agricultural cooperatives in other areas, a group of farmers in the village initiated the establishment of an agricultural cooperative. Sambo Meanchey Agricultural Cooperative was officially registered on 10 December 2010 with an initial membership of 88 of which 45 were females. They had a total of 117 shares with a par value of KHR 50,000 (Cambodian riels) (USD 12) per share or KHR 5,850,000 (USD 1,415) in

²⁹ http://flex.flinders.edu.au/file/ad3724be-7fcc-474c-a8fe-1506ba611695/1/Thesis-Huq-2013.pdf

³⁰ The case from FNN was original accessed at: http://www.asiapacificfarmersforum.net/cambodia-small-holder-organic-vegetable-farmers-gain-support-through-contract-farming/ and http://www.fao.org/family-farming/detail/en/c/1259428/ but were augmented with additional research.

total. In recent years, the cooperative has seen an increase in membership and shares. Currently, the cooperative has 364 members of whom 224 are females and a total capital of KHR 1,177,000,000 (USD 284,655).

5.2.2 Objectives

The objectives of the establishment of the Sambo Meanchey Agricultural Cooperative are to (1) solve issues of farmers and find a market for their agricultural produce; (2) collect member products to supply the market; (3) negotiate agricultural product prices with merchants; (4) provide agricultural loans to members, and; (5) offer technical skills and share and disseminate latest information to members.

5.2.3 CDD Approaches and Methodologies

The cooperative receives support from other organizations to strengthen the capacity of the cooperative committee, including support from GSTD in providing paddy seeds production techniques and building paddy storehouses for storing paddy seedlings. A food production project aids the construction of paddy seedlings storehouse. The community is also supported by the Cambodian Farmers Association Federation of Agricultural Producers (CFAP) through the AFOSP-MTCP2 Program.

The village has marginal climate area whose sandy soils and annual rainfall of 400-700 mm limits the range of possible crops and economic activities. Main crops grown include paddy rice and cassava. In an attempt to redress economic problems in Sambo Village, different groups have tried diverse options to diversify its main income crops such as paddy rice and cassava. One option tried under auspices of a partnership brought together by Farmer and Nature Network (FNN) is cropping of lemon grass which is considered as a high value crops with potential to generate income for small holder farmers. The crop is not labor intensive and enjoy benefits of not being palatable to livestock, and can be easily produced by men, women and the youth while they produce essential oils with proven demand in local, regional and international markets in the making of soap and perfumery. The crop, at the time of the formation of the Sambo Meanchey Agricultural Cooperative was relatively new in the village and the district and farmers lacked enough planting materials as well as the knowledge and skills of production and processing. This called for mobilization, sensitization, capacity building and technology transfer activities among members of the cooperative in 2010.

5.2.4 Findings on the Lemongrass Production in Sambo Village

For the past few years, there had been a high market demand for lemongrass in Cambodia and the crop has proved to be profitable. It is an easy crop to tender compared with other crops. Chheng Thong, Chairperson of the Board of Sambo Meanchey Agricultural Cooperative, started the analysis on the lemongrass growing market to see how many tons of lemongrass a hectare of land can produce and how much it can be sold for. They contacted a wholesale lemongrass market in Phnom Penh to learn how many tons they need and how much is the price.³¹

³¹ https://www.facebook.com/permalink.php?id=186375388234611

"The majority of the lemongrass currently sold in the market is imported from Vietnam. Our cooperative has plenty of vacant arable land. I surmise that if we can find a huge lemongrass market opportunity, we can help leverage our members to another level," he says. Eventually, many of the Sambo Meanchey Agricultural Cooperative members shifted to growing lemongrass instead of paddy and cassava.

Lim Sokleat, a farmer and member of Sambo Meanchey Agricultural Cooperative in Kampong Cham, Cambodia, as well as other farmers in their community used to just grow lemongrass for their own consumption. With support from the MTCP2-AFOSP Programme, these farmers were taught on how to grow lemongrass for commercial purposes and eventually made a better living out of it.³²

Heng Nang, a member of the cooperative says, "Through reinforcement of lemongrass growing, I can earn more income compared to paddy cultivation. I can have a yield of over 20 tons and the price per one kilogram is KHR 800 to 1,000 (USD .19 - .24), while the paddy per hectare can only yield 5 to 6 tons and the price is KHR 1,200 to 1,400 (USD .29 - .34) per kilogram."

In 2018, the cooperative sold 300 to 400 tons of lemongrass to Deum Kor Market and Neak Meas Market.

"Nowadays, though our community can sell over 1,000 tons per year, it remains below the market demand. Overseas markets are also contacting us for supply chain, but we lack production capacity," Chairperson Chheng says.

The cooperative does a marketing strategy of servicing only and avoid buying products directly from its members. Per kilogram of lemongrass, the cooperative charges KHR 30 (USD 0.0073) and keeps it in the cooperative. The transportation of produce is recorded by those who bring the products for distribution to the markets. The cooperative has been increasing the growth of lemongrass production as well as choosing quality seedlings that cater to market demands to be able to compete with lemongrass that is imported from Vietnam.

Lemongrass (*Cymbopogon citratus*) (Poaceae) is an essential oil rich plant widely used as a flavoring due to its lemon scent. Conditions of stress are often associated with an increase in secondary metabolite production. Studies with root growth restriction have shown that under this stressful condition plants are dwarfish. The factors responsible for the observed effects are not clear, being commonly attributed to water and nutrient restrictions and hormonal effects. In this work the effects of root growth restriction on lemongrass growth and essential oil production were evaluated. Plants were grown in 0.5, 1.5, 6.0, 11.0, and 42.0 L pots. They were harvested at 60, 90, 120, 150, and 180 days after planting. Leaf emission, nutrient contents, essential oil content and citral percentage were evaluated. Root growth restriction did not affect leaf emission rate³³. Essential oil contents were negatively influenced by root growth restriction. Citral accumulation pattern was not affected, but in 0.5 L pots plants showed reduced percentage. All nutrient contents were reduced with plant age. The observed effects on essential oil contents

³² https://www.facebook.com/groups/ifadasia/permalink/2538254976272657/

³³ https://www.researchgate.net/publication/308388723_Lemongrass_Essential_Oil_Production_and_Qality_in_ Response_to_Root_Growth_Restrict

were linked to nutrient deficiency which in turns can impair plant yield. (Cláudia Lopes Prins, et. al., 2016)³⁴

From the experience of the Sambo Meanchey Agricultural Cooperative, establishing an agricultural community makes it easier to find markets and negotiate the price. The community committee always provides market updates to the members by holding regular meetings where they disseminate information to members so that they can understand the importance of producing quality lemongrass and its packaging for the market. Moreover, the cooperative is researching and looking for the possibility of processing the lemongrass upper leaves which are usually discarded.

Lemongrass produced in Sambo Village in Sopheas Commune has been included in Cambodia's list of exported goods to international markets. The news followed Cambodia's recent export of 0.02 tons of lemongrass to the Republic of Korea.³⁵ Though the amount of current export of the plant is low now, this is considered as a new record for the country's agricultural exports. Lemongrass is not only a special ingredient for food commonly used in Asian countries, but it can also be processed into beverage, medicine, cosmetics and beyond.³⁶

5.2.5 Facilitating Factors and Challenges

From the various interviews conducted among the officers and members of the Cooperative, the following were the facilitating factors and challenges of the community-driven activities in the Sambo Village:

- Technologies and Cultivation of Lemon Grasses: The farmers were trained in the cultivation of the lemongrasses, quality control and postharvest handling by FNN. Planting materials were bought and ferried and Field extension advisors were locally recruited and trained the smallholder farmers and members of the Cooperative in terms processing technology and linkage to markets. Collective training of farmers in production techniques including soil amendments that ensure continued soil fertility was adopted as a strategy for sustained supply of lemon grass to the domestic and international markets, including some factories that are doing the post-production processing of the lemongrass.
- **Capacity building:** Capacity building was conducted for partners and communitybased trainers (CBT) drawn from farmers groups within the Sambo Meanchey Agricultural Cooperative. The training covered production and processing of the lemon grasses. A field visit to other areas producing lemongrass immensely improved farmers'' motivation towards the project as manifested by renewed enthusiasm.
- **Production**: The project reached most of the farmers targeted. Forty were selected to establish mother gardens to cultivate lemon grasses. These farmers were to provide seedlings to the rest of the farmers after the first harvesting. ³⁷

³⁴ https://www.tandfonline.com/doi/abs/10.1080/0972060X.2016.1181575

³⁵ https://www.information.gov.kh/detail/430371

³⁶ https://www.khmertimeskh.com/718292/lemongrass-from-cambodia-to-the-pots-of-the-world/

³⁷ https://www.kilimotrust.org/documents/project%20report/MATF%20Round%20V%20Evaluation%20 Final%20Report.pdf

- **Improved farmer income and standard of living:** From the interviews with farmers, it emerged that the project helped participants to meet some of their financial needs with 30% of the respondents confirming ability to pay school fees, 14% indicated that they got money from the project to meet their domestic needs, and another 11% reported that they could afford decent clothing from the benefits of planting lemongrass. However, these claims could not be ascertained as it also emerged that farmers spent their money and did not profit from the sale of the crop.
- Social sustainability: This new agricultural product segment of lemongrass in the village has contributed to social sustainability by promoting the formation of strong and viable farmer groups. The farmers groups within the Cooperative have written some policies and procedures that govern the way they work, wherein individual members that were mobilized to produce lemongrass have benefited through interaction with each other.
- **Gender balance:** The Cooperative organized training for both men and women, striking a gender balance among those who underwent the TOTs training.
- Challenges to implementation: Various challenges were encountered during the • implementation of the project on lemongrass production by the Cooperative: (1) Resource constraints: The Sambo Meanchey Agricultural Cooperative is seriously understaffed. Currently, the single staff member dedicated to lemon grasses project is considered not adequate to manage a project of such magnitude with a focus in the entire Sambo Village. Finances have been another constraint altogether as reports of delay in project implementation due to lack of funds is widely reported. Movement form one place to the other to serve farmers has also been difficult for the Cooperative and FNN coordinator and it would be prudent for the Government thru the Ministry of Agriculture, Forestry, and Fisheries (MAFF) to fund projects that are sufficiently resourced, especially when considering human resource. (2) Performance of partners: The choice of partners was well thought out. It is clear that each one of them played a role in ensuring that the sound project implementation. However, it seems FNN and the Cooperative were overwhelmed by the workload which is clearly not matched by personnel available. As proposed earlier on, choice of partners should endure adequacy of resources to avoid such shortfalls in future projects.

5.2.6 Lessons Learned and Recommendation

5.2.6.1 Lessons Learned

The Lemon Grass Project of Sambo Meanchey Agricultural Cooperative in Sambo Village, Sophas Commune, Steung Trang District in Kampong Cham project has potential to reduce the poverty level in the community. The following are some of the lessons learned:

6 Need for economic analysis upfront of funding: Before inception of a project, the breakeven point (BEP) and net present value (NPV) need to be ascertained in order to evaluate the viability of the project, the market demand notwithstanding. From the interviews conducted within the village, it emerged that average land holding is 2 to 3 hectares devoted to lemon grass production is equivalent to 6.8% of the family land holding. It was revealed by some smallholder farmers that cultivating lemon grass on land less than one hectare may not be economically viable. And this advice should be communicated to the farmers in good time so that reallocation may be affected.

7 On the viability of capital investment projects: Under the prospective MAFF support in Sambo Meanchey Agricultural Cooperative interventions should also target the introduction of distilling perfumery oil from lemongrass and citronella. Viability of the distiller is however dependent on achievement of a critical mass of farmers with capacity to fully engage the distillation plant but as things stand now currently, this is a tall order. With lemon grass cropping having stalled at some of the land, and the plant already facing technical challenges, it is doubtful whether this distillery plant will ever be put to economic use and this casts doubts on the merits of investing MAFF funds from ASPIRE Project or other projects on agriculture funded by donor agencies on the technology transfer for lemongrass that entail construction of capital-intensive facilities.

5.2.6.2 Recommendation

Although the lemongrass project of the Cooperative appears to be promising, it is also faced by several challenges in terms of farmer participation, production, processing, marketing, return on investment, and others, all of which point to a possibility of failure. Thus, the CDD intervention in this Village need to be supplemented by assistance from Government's technical advises in order to solve the twin problems of inadequate production and market prices, or else the project is headed for failure. Indeed, as currently operated, it risks causing participating farmers to slide deeper into poverty if they will not be provided with proper guidance.

5.3 Secondary Case 2: Agriculture Coop Boosts Native Paddy Seedlings Production in Prey Sangha Village, Khnach Romeas Commune, Bavel District, Battambang ³⁸

5.3.1 Descriptions and Locations

The Sangha Phal Agricultural Cooperative was established and registered officially at Battambang Agricultural Department in February 2004. The agricultural cooperative, located in Prey Sangha Village, Khnach Romeas Commune, Bavel District, Battambang, was established initially with 48 members of whom 15 were females with a total capital of KHR 1,920,000 (Cambodian riels) or USD 464 (1 share is KHR 30,000 or USD 7) and a membership fee of USD 10,000 (USD 2).

"The objective of establishing Sangha Phal Agricultural Cooperative is to (1) join forces to compete for market shares for agricultural produce; (2) increase the income through investment of shares and joint investment, and; (3) create other employment in support of agriculture," says Hul Kleom, Chairperson of the cooperative board.

³⁸ http://www.fao.org/family-farming/detail/en/c/1259437/

Sangha Phal Agricultural Cooperative receives support from many partners, including the AFOSP-MTCP2 Programme in Cambodia, the Battambang Agricultural Department which offer training on paddy farming techniques, ADES Organization, Harvest, Ecozone, and JICA which strengthen paddy seedlings production capacity, boosting projects, REAPIP, Buddhism for Development Organization which fortify capacity on cooperative management and market strategies. Currently, the cooperative has a membership of 218 (90 are women) and with a total capital of KHR 260,350,000 (USD 62,965).

5.3.2 CDD Approaches and Interventions

Like many places in the northwest of Cambodia, Sangha Phal Agricultural Cooperative has been producing Phka Rumduol, Sen Kraoub, and Sragae paddy seedlings but mainly for their own consumption. After learning that growing paddy seedlings can be profitable, some farmers in the village have shifted from growing paddy for food to paddy seedlings for supplying to the cooperative as it has markets in Chamroeun Phal Company and some other depots in Battambang as well as to other cooperative-based farmers in other areas. On average the cooperative can produce 267 tons of paddy seedlings per year and each member could see progress in themselves through the production of paddy seedlings for sale to the cooperative.

"Before joining the cooperative, I did not produce paddy seedlings for sale. I only did paddy farming once a year. At times, I experienced loss due to the lack of an irrigation system. We only depended on rain. After joining the cooperative, my livelihood improved as I can now produce rice seedlings to sell. I have three hectares of paddy but I can produce paddy seedlings only on 16 acres (0.16 hectare). The remaining is kept for growing paddy used for the consumption of my family. Last year, I produced 600 kilograms of dry paddies and sold them at KHR 3,000 (USD 72) per kilogram," shares let Vannak, member of cooperative account and paddy seedling production.

However, not all members of the cooperative can produce paddy seedlings because doing so requires proper techniques. Members are required to undergo training and follow the instructions of the cooperative. The cooperative chooses good quality paddy seedlings for supplying to the members. These are distributed to the members for planting. After harvesting, the members sell the seedlings to the cooperative which offers better prices compared to middlemen.³⁹

"I feel really happy because the community helps in finding a market for us paddy seedling producers to sell at a high price. Those who have a vast amount of land can earn a considerable income. As for me, I only have a small plot of land as I have given some of my land to my children," adds Vanak.

Paddy seedling producers do face some challenges, like when they cannot sell their seedlings as supplies are higher than the demand, resulting in rice seedlings just being safe-kept in the storehouse. During such situation, the cooperative committee extends help by providing the members with payments through a bank loan to meet their budgetary requirements as well as looking for agricultural cooperatives in other areas to purchase the seedlings.

³⁹ https://www.facebook.com/notes/asia-pacific-farmers-forum/cambodia-agricoop-boosts-native-paddy-seedlingsproduction/1230027733869366/

Over the past 10 years, Sangha Phal Agricultural Cooperative has expanded its resources by purchasing land amounting to USD 30,000 for construction of a paddy storehouse and community sales stalls and purchasing paddy planting machines worth USD 2,500. The government shouldered the construction of the paddy storehouse.⁴⁰

5.3.3 Post-Harvest Practices by Farmers and Issues

- **Reaping:** Rice is usually reaped with sickles at around 20-30 cm above the ground depending on the height of its plants (stem length) in both transplanting and direct sowing fields. The reaped rice plants are bundled with rice straws (a part of reaped rice plants: stems with ears). Paddy grains may come off their panicles easily when bundles are made. It is also common that a group of day laborers does reaping work. Farmers with large scale of rice fields, although they are not many, have started to use a reaper (reaping machine) to harvest their crops. Rice plants and weeds are cut at the same time with the use of a reaper and a problem of weed seeds mixing with paddy has occurred during threshing. This problem might spread in the future.
- **Threshing:** During the days when man/animal-power were used to do threshing work, the threshing took time and reaped rice plants were thus dried in the field in order not to deteriorate paddy quality with high moisture content. Field drying also increased shattering habit and made threshing easy. After the introduction of the mechanical threshing (a thresher of axial-flowing-in & throwing-in type), reaping is scheduled for the availability of a thresher in order to prevent the rice from being stolen from its field. Accordingly, this causes the reaping loss due to the missing of the optimum time for reaping. Usually, reaped rice plants are threshed at the same day or taken home. In the case of the former, the paddy grains will risk being damaged with fungus growing on them due to their high moisture content. In the case of the latter, there is also a similar risk as the un-threshed rice with high moisture is piled up under the eaves. Farmers are, however, not concerned with the quality of the paddy. In the case of the introduction of the reaper, while the threshing efficiency increases with the utilization of the machine, other issues of mechanization thus need to be tackled. It is rare that every individual farmer owns a thresher. However, some farmers and paddy collectors do own threshers and they provide a paid threshing-service. In principle, the fee is paid in cash but sometimes it is paid in kind (paddy). So far, there seems to be no case of cooperative owning and use of threshers in groups of farmers.
- **Drying/Screening:** As the rice stems at the time of threshing have high moisture, the screening (cleaning and grading) capacity of the thresher declines and paddy coming out of the thresher has high moisture and a lot of foreign matters/impurities such as rice straws. In case the moisture content of the paddy is above 18-19%, farmers usually have it dried by the heat of the sun in their yards; but they will not dry it less than 18-19% and they do no screening. In other words, farmers in general consider drying and screening of paddy for selling to be not worthwhile, as they think these will reduce the weight although the quality is improved. On the other hand, farmers do dry and screen the paddy they keep for self-consumption. This means that they know how to dry and screen and

their significance. As for the paddy for selling, if traders value the paddy quality properly and offer an appropriate price to the farmers, the quality improvement by them might be achieved. Therefore, it is prerequisite that rice millers and traders value paddy for its quality and buy paddy from paddy collectors at a proper price. If paddy collectors can feel their own merit, they will then demand improvement of the quality of paddy by farmers; but the present mechanism is not the case. Without motivation, the improvement of paddy quality by farmers will never be achieved.

- Sale of paddy by farmers: The time for farmers to sell their paddy is just after harvest . and at the time when they start to purchase production materials such as fertilizer and fuel for the next cultivation. The sale made immediately after the harvest is to get cash for not only supporting their living but also paying for fertilizer bought on credit. In the case of the rainy season crop, the sale is at the harvest time of November to December and at the preparation time for the next crop around April and May. Average farmers who produce and sell paddy have 1.5 hectares of planted area and 3 tons (paddy) of production. They keep 1 ton for self-consumption and sell 1 ton just after the harvest and another for the preparation of the next crop. Also, 15-20% of the large-scale farmers keep 1-2 tons of paddy of the pre- ceding rainy season crop in anticipation of the rice in price after July. While those living near rice mills take their paddy to sell there directly, most of farmers just wait until paddy collectors come to purchase it from them. As the paddy collectors usually come first to make villages accessible in order to improve collection efficiency, remote villages have limited contacts with them and limited market information, which eventually leads to information divide. Having weak bargaining power, individual farmers are forced to accept the offered price of the paddy collectors. There is no cooperative sale of paddy by farmers at present. Paddy collectors distribute paddy bags to farmers for free. After being filled with paddy (60-90kg), every bag is weighed with a spring scale belonging to the paddy collectors. Tare weight (0.1-0.2 kg/bag) is ignored and fraction below 1 kg is usually rounded⁴¹. Although farmers often have a dis- trust of inaccurate scales and the weighing method, they have no means to verify them. Sometimes, one bag holds more than 100 kg when its top is covered with rice straws in order to save the required number of bags; this causes the straws to mix with the paddy. Most of payments are made in cash on the spot, but some paddy collectors pay farmers after they have resold the paddy to rice millers or traders. No any paper is made on the weight and price at the transactions. There is off-the-record condition for the transaction except a short memo of paddy weighing for integration of weights. These business practices appear to be the result of selected practical means. For example, a relatively accurate platform scale is difficult to transport and expensive, and it also needs weights to do adjustment for every weighing work. On the other hand, while a spring scale is less accurate, it has the merits of cheap price and quick weighing.⁴²
- Paddy storage of farmers: Farmers need to store paddy safely for self-consumption purpose and later sale. In some areas, every farmer household has a granary on the

⁴¹ For example, in the case of 70 kg/bag, although farmers sell paddy at 500 riel/kg, the actual price will be 475-460 riel/kg - declining 4.3-8.6% as 1.4% of weighing error and 2.9-7.2% of weighing loss of foreign matters/impurities (2-5kg/bag) are considered.

⁴² https://www2.gsid.nagoya-u.ac.jp/blog/anda/files/2009/06/21_ishikawa.pdf

premises of their house, but usually paddy is stored in bulk in a large container (made of bamboo with approximately 1-ton capacity) under the floor of a stilt house. To store paddy for a long period, it is dried around 14-15%, but no measures are taken to prevent damage by rats and insects. Sometimes, insect outbreak occurs around following March in paddy harvested in November and December2. In that case, farmers sell it as soon as possible and it is often mixed with other normal paddy in the distribution process. Paddy of dry-season crop of IR varieties is not stored for a long period.

- Issues of post-harvest practices of paddy: Simply comparing the offered prices of paddy collectors, most farmers merely sell their paddy to anyone who seems to offer the highest price. Since farmers have yet been in a stage to negotiate the price, they are coping with inaccurate weighing and unfair buying price of paddy collectors by mixing with high-moisture paddy, foreign matters and impurities. Unfair trans- actions become a habit. Since a village community is underdeveloped, there is no custom of agricultural collaborative work except at some locations. Labor is paid in principle and human relations among villagers are weak and businesslike. Cooperation such as group or cooperative sale of paddy is difficult to organize. It seems that there is a reciprocal distrust among villagers.
- **Present condition and issues of paddy quality:** The quality of milled rice is dependent on the taste derived from the physical features (shape of grain/color/aroma/starch composition) associated with varieties, growing environment (location/year) and post-harvest practices. Though varieties have the most profound effect on the taste, it is difficult to measure/identify them on the face of the milled rice, as features, shape and other physical properties, disappear through the milling process. Sensory test on the cooked rice is the only way to evaluate the taste of the milled rice. Cambodian consumers choose milled rice to purchase based mainly on varieties, production sources, aroma and prices. The year of production is not concerned as little old rice is on the market. Foreign matters mixed with milled rice are removed by hand at the wholesale / retail stage. How- ever, pebbles whose color is similar to that of the milled rice are not easily identified with bare eyes; thus they cannot be removed.
- Paddy quality at transaction: Although the paddy quality expected by buyers must be maintained, it is not necessary to be the same. The quality of paddy needs to be understood in terms of the excess moisture/foreign matters and impurities, which are not essential paddy, and items such as broken rice/red rice/damaged grains, which are directly related to the paddy and affect its quality. The variety purification and the quality uniformity of same lot are also important for handling in the distribution and processing stages. The uniformity of paddy quality is especially important for rice millers. The milling machine is usually required to be adjusted in every 2-3 minutes, as the quality of collected paddy varies greatly. As wet threshing is a common practice, paddy just after threshing contains foreign matters and impurities (1 to 2%) and has high moisture content (22-25%). At the time of sale, paddy with moisture content of over 18-19% needs to be dried, or its quality will deteriorate during distribution. However, it is often sold in combination with paddy with moisture content of less than 18-19%. Buyers, therefore, check the moisture content and the quality of each bag according to their experience and instincts. In case many foreign matters and impurities (straw dust/ sand/ weed seeds) are found, sellers and buyers will then negotiate the weight deduction. In

most cases, however, buyers are in a stronger position. Thus, it is unnecessary to dry (14-15%) and to screen (0.5%) the paddy fully, as paddy transactions are done with the moisture contents below 18-19% and the weight deduction for foreign matters and impurities. These business practices seem to disrupt the improvement of paddy quality.

5.3.4 Significance of paddy-quality improvement

The paddy quality (good or bad) is basically determined by various conditions before harvesting such as the availability of superior seeds, growing environment and fertilizer management, but it is also affected greatly by the post-harvest practices. The quality improvement at post-harvest practices is to prevent, beforehand, factors that might affect the paddy quality in the various processes after harvesting; and also, to remove factors that have already affected the paddy quality. The former is heated grains by high moisture content and cracked grains at drying. The latter is to remove red rice grains, dusts and weed seeds.

The purpose of paddy quality improvement is to raise the price of paddy, which is the raw material, and to boost the market value of milled rice, which is the end product. To be specific, it is to improve unit price and milling rate. In other words, if the market price of paddy is raised, then it means the income of farmers will be raised as well. Rice millers can also earn more profits by producing better quality of milled rice more from a certain amount of the raw material.⁴³

Meanwhile, paddy collectors/traders are not directly concerned with the improvement of paddy quality. They are only concerned with the difference between buying price and selling price, and with the amount of transactions. They can, however, play an important role of passing information on what quality is demanded by the market. In order words, to increase the amount of transactions and to be able to earn more profit are prerequisites. Under the free distribution, the quality-improvement demand of the market seems to have the greatest impact on the production side.

5.3.5 Problems/issues of paddy quality improvement

In the paddy transactions, to make use of a scale (prohibiting transaction without a scale) and to make use of a moisture meter are the surest way to make transactions based on the quality (moisture).

In Cambodia, the longer paddy is stored, the more likely it is that fungus which emits toxin will grow and propagate. Colored rice is definitely moldy (not smell of oxidized rice bran). Transaction price needs to be lowered drastically though it depends on the degree of damage. A lot of paddy that contains yellowish rice will not be attached with any value. So, it is important to prevent yellowish rice from taking place. Drying immediately by farmers after harvesting is the only way to solve the problem.

5.3.6 Impact

In the evaluation of impact, both positive and negative effects directly and indirectly generated through the implementation of the project are examined. The activities of the Open Paddy

⁴³ https://businessdocbox.com/80303283-Agriculture/Chapter-i-introduction.html

Market (OPM) are in conformity with the life of local inhabitants, and basically operated by their hands. All the staffs except for the managers are farmers from the neighboring areas, and most of them are engaged in wet rice cultivation. The positive impact of the OPM activities can be summarized that it changed the conventional paddy distribution practices in the area covered by the OPM into fair and equitable ones. On the other hand, the negative impact is merely that the balance of payment was not realized, but the improvement in that respect is a prerequisite for the continuity and the development of the OPM.⁴⁴

- **Impact to Farmers:** According to farmers, it seems that farmers taking their paddies into the OPM could sell their paddies 4% higher than the conventional price. In addition to the increased unit price, the users enjoyed weight increase due to accurate measurement. It is difficult to estimate how much weight increase was achieved by utilizing the OPM since it is influenced by many factors such as collector, variety, quality, timing, and region. However, taking also the unit price increase into consideration, it is estimated that at least 5% increase from the conventional selling price was achieved.
- **Impact to Collectors:** In the benefiting areas, the commission income of the collectors reduced by the handling amount by the OPM. This may be a negative impact to them, but it does not seem that any of them suffered a serious loss due to the reduction of collection amount. It is because collectors can easily change their collection area and it is easy for them to switch their handling commodities from paddies to other products.
- **Price Information:** Daily market prices publicized by the OPM worked to equalize purchase prices, serving to prevent unfair pricing.
- Use of Platform Scale: Collectors in the neighboring areas came to measure paddies on the premises of farmers by carrying a platform scale on the truck like the OPM collection team did.
- **Purchase Slip:** Traders in the neighboring areas came to draw up a purchase slip at the time of shipment and hand them to farmers shipping paddies. Since all of these changes were started by collectors in the neighboring areas following the activities of the OPM, they can be regarded as the influence generated by the pilot project.⁴⁵
- Impact to Millers/Mid-traders: Millers utilizing the OPM can reduce the milling cost by using premium paddies. Appropriate moisture and little foreign substances may lead to reduced operating hours of milling machines. It is difficult to estimate the benefits enjoyed by the mid-traders using the OPM since their business results are influenced by many factors. Judging from the number of user traders and their attitudes, it seems that they are enjoying as much benefits as millers. They might stop trading paddies at the OPM unless they earn profit. However, in reality, they are continuing and expanding their trades with the OPM. According to millers using paddies purchased through the OPM, about ten percent cost reductions are possible by using premium paddies.

⁴⁴ https://openjicareport.jica.go.jp/pdf/11837077_02.pdf

⁴⁵ http://open_jicareport.jica.go.jp/pdf/11837077_02.pdf

5.3.7 Sustainability

In the evaluation of self-sustainable development, whether the benefits realized by the project will be maintained after the completion of the pilot operation is examined by focusing on the self-sustainability of the project. Judging from the situations at the completion of the pilot project, it has to be said that the possibility of self-sustainable development of the OPM is low and the continuity of the operation is not assured.

5.3.8 Recommendations

The case study examined the resource use efficiency of beneficiaries and non-beneficiaries of rice farmers in Prey Sangha Village. It was found out that seeds, labor and herbicides contributed significantly to changes in the output of rice among beneficiaries while fertilizer was the only input that contributed significantly to the technical efficiency of non-beneficiaries. Also, allocative efficiency analysis result showed that rice farmers in the two groups did not make optimal use of resources available to them as all resource input was underutilized. These results point to the fact that the two categories of rice farmers have potentials for expansion of their rice output.

The results agree with earlier findings that no matter the level of success of an agricultural development intervention, the effects of farmer specific characteristics like age, years of farming experience, educational background and level of income on the final outcomes should not be ignored (Ogundele and Okoruwa, 2006).

The overall outcome of this case study suggests that adequate strategy should be put in place to prevent elite capture of the Paddy Rice Project in Prey Sangha Village. The positive correlation between farm size and rice output for both groups in the study suggests that there is need for policies that will make more land available to these farmers. Use of high yielding seeds, timely provision of fertilizers and labor-saving technologies will surely increase rice output in Sangha Phal Agriculture Cooperative because they all contributed positively to the efficiencies of farmers in both groups.

5.4 Secondary Case 3: Chicken Raising and Vegetable Growing in Trapeang Roung Village, Udom Soriya Commune, Tramkork District, Takeo⁴⁶

5.4.1 Descriptions

The Udom Soriya Agricultural Cooperative was assisted by the Facilitation Association of Economy for Cooperatives (FAEC) under the AFOSP-MTCP2 Program to raise chicken, raise vegetables, and to produce, as well as commercialize natural fertilizers (EM solid and EM liquid) to supply local markets, identified as a priority and presenting high potential demand for Bokashi type of fertilizer. ADG and FAEC provided necessary support to improve the quality of fertilizers, to set up the production unit and the collective commercial organization of these locally produced natural fertilizers and support smallholders to correctly apply it in order to address the lack of organic material to fertilize their agricultural fields.⁴⁷

⁴⁶ Some parts of this case were taken from FNN's case, which were also published in the following website: http://www.fao.org/family-farming/detail/en/c/1259436/

⁴⁷ https://ali-sea.org/item/alisea-sgf-developing-innovative-business-model-for-agricultural-cooperative-to-produce-

5.4.2 Location and Activities

The project that supports Udom Soria Agricultural Cooperative is located in five (5) communes in Tramkork district of Takeo province with the following activities:

- Providing action research/ experimentation to find out best formulas with lab test and field experiment with local producers;
- Set up management system, design responsibilities and prepare management tools for the cooperative;
- Capacity building to the cooperative both management and operation including follow up and coaching for chicken raising, vegetable farming, and production of fertilizers;
- Set up production platform and facilities such as warehouse, small laboratory, rice husk burner, grinding machine, shaking machine and other production equipment;
- Set up distribution channel of final products and deal with local retailers and other cooperatives to ensure that it is easy for users to get access to the fertilizer;
- Launch different marketing campaigns/awareness raising, design packaging, leaflet, other promotion materials and web page or Facebook page;
- Organization of two events: (a) a provincial AE workshop organized at the end of 2017; and (b) a final workshop to assess the impacts and lesson learn from the project.

5.4.3 CDD Approaches and Findings

5.4.3.1 Chicken Raising

With both hands handicapped, Than Ponlok, a resident of Trapeang Roung Village, Udom Soriya Commune, Tramkak District, Takeo Province, says, "I do farming to the extent possible with my disability, such as raising chickens. I can do everything except building the chicken pen so I hire others to do that." Than Ponlok gave up his studies in grade 10 and turned to chicken farming to earn a living.⁴⁸

In 2014, he received chicken raising training from the Institute of Agricultural Research and Development of Cambodia. In 2016, he joined the Udom Soriya Agricultural Cooperative and received special agricultural training on chicken raising techniques from the Facilitation Association of Economy for Cooperatives (FAEC), one of the farmers' organizations under the AFOSP-MTCP2 Program.⁴⁹

Before joining the cooperative, Ponlok used to raise about 30 chickens and managed to sell very few of them due to his limited skills in raising chickens. He did not know how to tend to his chickens, and as a result, his chickens often contracted diseases of which he had little knowledge of how to treat. Through the support of FAEC, he was given an opportunity to go on a study tour to learn from farmers in other provinces in the country and even overseas (France). Ponlok

and collectively-supply-natural-fertilizer-to-local-producers-cambodia/

⁴⁸ http://www.fao.org/family-farming/detail/en/c/1259436/

⁴⁹ http://www.asiapacificfarmersforum.net/cambodia-than-ponlok-chicken-farming/

received training from experts and learned new techniques on chicken raising and, thus, translate these into practice.

"Every three months, I add 300 chicks to ensure the production chain. I buy them at one week old from the farmers hatching chicks for raising to their prime. They usually reach the wanted weight within three months, and then I sell them. I use modern chick raising and tending techniques which require pens and enclosed net fences. The pens are always maintained tidy," he explains.

So far, the chick farming of Than Ponlok has been highly successful. Each time, he sells 900 to 1,000 chickens and he can do that eight times a year. From this, he can earn KHR 40 to 50 million (USD 9,674 to 12,092) annually.

However, at times, he also faces challenges including loss of income due to diseases that plague the chicken because of weather changes. When this happens, he tries to find the best options to save them with only minimal amounts of chickens lost to death. The bigger challenge for him is the market. There are times when merchants price down his chickens. Additionally, the cooperative is not strong enough and he cannot find a market within the community.

Nonetheless, Than Ponlok remains committed and does not plan to give up chicken farming even if, at times, the price of chicken drops. He hopes that Udom Soriya Agricultural Cooperative will be able to find a collective market for the chickens in order to help its members by reducing the price imposed by the middlemen.

5.4.3.2 Facilitating Factors in Chicken Raising

With Community-Driven Development activities in the District, through the Udom Soriya Agricultural Cooperative, the following were some of the experiences and facilitating factors of the beneficiaries of the project:

- **Improving Livelihoods Through Poultry Farming:** The smallholder farmer members of the Cooperative have spent their days around the pens in which they raise and sell their chickens. The Chicken Raising Project of the Cooperative formed groups and provided them organizational capacity training programs and provided them with chickens, feed and nets for their pens, which were used to reinforce their facilities and expand their operations. Additionally, the project also provided additional training in topics like hygiene and breeding which helped them tremendously. With the success of their project, the women have taken on new roles within their families and community. In the past their main focus was on household duties and childcare, but now they have expanded their roles to become players in the local economy. The income they are making from their improved enterprise has improved their overall quality of life.⁵⁰
- **Reinvestment of Income Generated:** Each time the group makes a profit, they reinvest a large part of that back into their business. As a result, they have grown their stock from the initial 78 chickens to 116 chickens. Previously they lacked the knowledge and skills to be successful chicken farmers, which was resulted in the loss of chickens from diseases and a resulting loss of profits. The ANDA program has helped give them the knowledge they need to run a prosperous breeding operation and organized business.

⁵⁰ https://www.globalcommunities.org/node/38293

- Will Power to Succeed: Although they still face challenges managing their growing business with limited resources, their will power and desire to get ahead always motivate them. They have become an example for the community in Uddom Soriya Commune and for the whole Tramkak District which is slowly carrying out small actions that produce big changes.
- **Pets or poultry:** By far, the biggest difference in raising poultry in a homestead setting for meat and eggs versus keeping a backyard chicken flock is getting used to the idea that these birds are not pets. Backyard chickens frequently end up with names, endearing them to us much the same as our indoor pets. In a backyard flock that isn't an issue as most backyard birds are treated as pets and unlikely to see the business end of the butcher knife any time soon; the eggs are mostly a byproduct of keeping a small flock. In a homestead flock however, the intended purpose is food and sustainability.
- Interaction and stimulation: Chickens get bored; keeping them active and stimulated helps to keep fighting and pecking to a minimum. While you can never eliminate all chicken troubles, keeping them busy ensures that the only pecking is the natural type to establish the 'pecking order'.⁵¹
- Water and feed: Chickens drink a lot of water. A backyard flock of six to eight hens or so can get by with the water fonts typically sold at your local hardware store. When you keep a homestead flock of 60 chicken though, you need to start thinking in terms of gallons. Keeping the water outside may seem counter-intuitive, but the benefits outweigh the cons. Chickens will fly into and try to roost onto hanging waterers inside the coop and the result is a soaking wet floor, contaminated water or no water at all. It is imperative for flock health to keep the coop dry but chickens don't know that. Laying hens eat a lot of feed. They expend a lot of energy and nutrients making eggs. While we supplement them with leftovers and garden scraps, they still need a feed that will provide the right amounts of calcium, protein and other ingredients to maintain regular egg production.

5.4.4 Production of Natural Fertilizer⁵²

Mr. Seom Sao is a 48-years old famer and is also the vice-chief of his village and a BoD member of Otdom Soriya Cooperative. He lives in Trapang Thlan village, Takeo province. He has been actively involved in agroecology since 2014 and has learned and tested different AE practices. For instance, he worked on producing earthworms for selling and could get a net income around 125\$ per year. Mr. Seom Sao has around 2.5 ha of land on which he cultivates rice, vegetable and raises cow, pig, and chicken. He just started to concentrate more on vegetable production and his income from vegetable has increased to 600\$ per season. This good result motivated him to convert 450 m2 of rice field to vegetable fields. As one of AE farmers, he appreciates to have an easy to access the market for his AE products.

He understands that to have commercial success in vegetable growing, soil fertility is the main key factor. However, applying natural fertilizer in the farm is a big challenge for the members of the cooperative due to the limited access to natural resources around the houses, and to the

⁵¹ http://ridgelinesmagazine.com/blog/2017/02/27/homestead-chickens-lessons-learned-part-1/

⁵² https://ali-sea.org/wp-content/uploads/Annex3-Case-Study.pdf

low quality of natural compost fertilizer produced by those farmers.

In 2015, he participated in the first experiment of Bokashi. He found that with quantity 3 times less than "saving compost", Bokashi still produced better yield. This research has inspired him and the BoD of Otdomsoriya Cooperative. With support from ADG, a market research has been conducted and found that there is pretty much demand from members and local farmers for Bokashi fertilizer.

To respond to the need of local producers and with the support from ALISEA and UPSCALE program, the BoD of Otdomsoriya Cooperative decided to produce Bokashi fertilizers by using as much as possible the local resource, that were collected by local farmers including members of 6 cooperatives in the region. Currently, Mr. Seom Sao is head of production unit of the cooperative. His role is to ensure the quality and quantity of Bokashi and bring it to the market. He has involved in many experiments since 2015 to improve the quality of the fertilizer.

5.4.4.1 CDD Experiences of Smallholder Farmers

Ms. Nhem Sokly, 49 years old, is a farmer living with her two daughters in Por Presh Song village, Taphem commune, Tramkork district, Takeo province. She is a professional organic grower supplying for a retailer in Phnom Penh. She has a pound which allows her vegetable to produce vegetable almost the whole year. She has collaborated with Asia Food Safety and Security Association (AFSA) and UPSCALE (Upgrading Strategy for Smallscale Cambodian Farmers) program since 2011 and has received different trainings from the program. However, one of the challenges to produce organic vegetable at commercial level is is to have enough natural fertilizer for the farm. Nevertheless, the quantity of natural inputs around the house is not sufficient to produce a required quantity of fertilizer that could supply for a whole year of vegetable production. The access to external natural fertilizer like cow dung is difficult due to distance and organic fertilizer provided by company are not trusted and reliable. The insufficiency of organic matter for the vegetable lead to decrease yield and generate more disease to the plant.⁵³ As woman and mother, it is difficult for her to produce proper compost because first she doesn't have time to look for inputs sufficient enough at a time of the production; and compost take quite long time for her to wait. The practical solution for her is collect all the inputs and waste from the house and puts them continuously in the compost house; it is called saving compost and she take those saving compost when she needs. However, this saving compost doesn't provide efficient nutrient or microorganism compared to standard compost.

As professional vegetable producer, she is very enthusiastic in finding new technics to improve her farming condition. She decided to participate in the experiment of Bokashi produced by Otdomsoriya Cooperative. She appreciates the quality of the natural fertilizer; it provides better result than her saving compost with affordable price. She will continue to support this product form the cooperative. She mentions that "I am really happy that I could get a higher income this year from vegetable production, around \$3,275. I have never bought vegetable from outside and

⁵³ https://ali-sea.org/wp-content/uploads/Annex3-Case-Study.pdf

I have stopped using chemical fertilizer since I collaborated with the Program. My own compost is not enough so I bought Bokashi from Otdomsoriya to make my vegetable soil better. I think that when I become more older, the soil will become more fertile, I will get more yield and more income with less work."

5.4.5 Conclusions and Recommendations

- Impact of Highly Pathogenic Asian Avian Influenza A (H5N1) in Poultry Production: Poultry production in Udom Soriya Agricultural Cooperative in Takeo Province is strongly related to wealth category and geographical area. HPAI outbreaks economically affected mainly the medium- and large-scale chicken farms in the community. Small-scale chicken raising was not strongly affected by HPAI, since small-scale production does not require large investment, except for buying some hens. Poultry raisers within the Udom Soriya commune and Tramkak district are not well aware of this disease or of its negative impacts. When disease occurs, chicken farmers seek to cure their flock by discussing problems with friends raising chickens or with veterinary shop owners in order to get medicine or recommendations for treatment. Since no HPAI control measures were carried out and HPAI cases were not common, medium- and large-scale commercial chicken raising experienced negative impacts of HPAI indirectly, with lower prices of poultry products, and finally, the inability to sell their poultry products.
- Poultry Production System by Wealth Group and Social Factors: In terms of economic value, the poor and poorest farmers were not directly or seriously affected by HPAI outbreak, since they were not able to be involved in medium- or large-scale commercial chicken raising. Poor women-headed families that previously depended on raising chickens and selling chickens for petty cash in cases of urgent need, only experienced difficulty in 2004 and 2005, during the HPAI outbreak.⁵⁴
- Role of Poultry Production System in Farming and Overall Livelihood Systems: Poultry production has played a very important role in providing food (meat and eggs) for home consumption, cash income to meet urgent needs, and capital for investment in other economic activities. Taking advantage of cultural practices, resource-poor farmers can also ask relatives or neighbors for one or two chickens to raise. However, this practice has gradually decreased since the increasing price of poultry. Many woman-headed families expressed considerable appreciation for the roles played by poultry in providing food for their families, especially for educating their children and healthcare, and as an investment in other economic activities. Moreover, small-scale chicken raising is also well integrated in the rice farming system since it can provide eggs during the busyfarming season. Medium- and large-scale chicken raisings are also well integrated into vegetable farming in some communities, as it provides manure for vegetable production, which is one of its important economic activities.
- Livelihood Strategies, Social Relations, and Production Practices: Livelihood strategies, social relations and production practices are obviously closely related to livelihood outcomes. Social relations and social capital are the main factors in the

⁵⁴ https://pdfs.semanticscholar.org/395e/814ee286a1e553f36f897e0fd8967c3c71aa.pdf

different outcomes of livelihood outcomes of the different poultry producers in response to the HPAI threat. Since the early stages of HPAI, many poultry producers lost income and investments due to the lower prices of poultry-related products. Producers with poor resources and poor social relations depleted their investment and could not restart their businesses, while farmers with rich social relations or social capital could access favorable loan conditions or financial donations to reinvest in poultry raising. It is important to note that poultry meat in Cambodia was largely supplied from Thailand and Viet Nam. Since the serious outbreaks of HPAI in Viet Nam and Thailand, importation of poultry meat from these two countries has decreased. Moreover, Cambodian consumers are also afraid of poultry meat from these commercial farms, which opens up an opportunity for the poultry products produced locally on small-scale farms.

- **Perceptions on Livelihood Impacts and Outcomes:** Due to the importance of poultry production in rural livelihood systems, farmers are committed to continue raising poultry, especially chickens for the resource-poor farmers. As a result, the farmers in the community were observed to simply began to restock poultry just a few months or so after the disease outbreak. Poultry has traditionally played an important role in their rural livelihood systems in farming, household economics and socio-cultural practices.⁵⁵ Moreover, it was also found in the community that many misunderstandings of villagers and/or farmers. For example, most villagers believed that consuming dead chickens was harmful to their health, so when they see that their chickens are sick, they hurry to bleed them before they die, erroneously thinking the disease is in the blood.⁵⁶
- Selling Chicken by the Roadside: The visited markets in the community in Udom Soriya commune were mainly located on the important roads that could be accessed not only by the local population, but also by travelers who stop by for food. Some of the markets served as distributing points to other markets within the province and/or to other provinces, and for exportation to other countries (for those markets near borders). Considering biosecurity concerns, the selling place, particularly of live chicken, should be allocated to an area exclusively for customers seeking live chicken. The sale of live poultry particularly by the unlicensed sellers on roadsides with many people passing by, poses significant risk of avian influenza (AI). This can lead to quickly spreading the disease and therefore placing public health at risk.⁵⁷
- Udom Soriya Agricultural Cooperative's Adaptation of Community Driven Development Appoach to Rural Development: The various activities carried out by Udom Soriya Agricultural Cooperative are excellent agricultural intervention projects adopting Community Driven Development approach to rural development. It empowered the smallholder farmer members through collective decision-making to effectively and efficiently allocate and manage resources for their livelihood activities. The demand-responsive structure of the project grants the Cooperative as much decision-making authority as possible and promoted community ownership of and responsibility for operations and maintenance of infrastructure investments in their locality. This will change the psychosocial life of the communities and improve their perception of life.

 $^{^{55}\} https://123 doc.net/document/1223864-rural-livelihood-and-biosecurity-of-smallholder-poultry-producers-and-poultry-value-chainpdf.htm$

⁵⁶ http://www.fao.org/docrep/013/al681e/al681e00.pdf

⁵⁷ http://www.fao.org/docrep/013/al682e/al682e00.pdf

This will help break the vicious poverty circle inherent in the economy and ensure greater productivity, enhanced income and improved living standard.⁵⁸ It will be very ideal if the Project allocates its resource delivery for the production of vegetable crops in the communities in order of their income yielding capabilities.⁵⁹ Early and prompt release of productive resources and cash counterpart contributions to the farmers, provision of more extension agents, services and logistics for the farmers and reduction of users' cash contribution will ensure improved productivity, income and project sustainability should mount vigorous public enlightenment campaign to educate the communities on the advantages of the project to community development. The Project should step up its capacity building support for the Cooperative to upgrade their skills and acquire new ones to support demand-driven community investments. The Royal Government should increase their matching grant fund to the Cooperative to finance acquisition of assets for income-generating activities. This will increase value added from the products produced by their members and diversify their sources of livelihood from poultry raising, vegetable farming, and fertilizer production. The matching grant will actually help reduce their vulnerabilities and risks, thereby making them more attractive to formal financial institutions.⁶⁰

⁵⁸ https://www.researchgate.net/figure/Estimated-Value-of-Productive-Resources-of-the-Farmers-before-and-after-Joiningthe_tbl4_283634099

⁵⁹ http://www.sciedu.ca/journal/index.php/mos/article/download/8105/4838

and http://beta.garj.org/garjmbs/abstract/2015/February/Okechukwu.htm

⁶⁰ http://documents.worldbank.org/curated/pt/891201468100142333/text/PROJECT0INFORM1aisal0stage104118108.txt

6. Discussions, Implications, and Conclusions

6.1 Discussions and Implications

This studies primarily looks into the CDD project initiate by FNN, non-governmental organization with supports from multiple parties including the governmental authorities and private companies. Even though, the nongovernmental organization play a role as an initiator and facilitator, these development projects are designed to infused some necessary CDD approaches and characteristics during the implementation by the established community-based organizations. Taking the consideration of education level of the community in evaluating the understanding of community driven development by the beneficiaries, it is acceptable that the theoretical framework and their understanding are limited to how the project is implemented. The beneficiaries understand that development project is serving the purpose of generating income for the community, improving living standard, and business creation. However, the core understanding of CDD lies on their involvement in the project and how they implement it. With the infused CDD approaches and characteristics, the community perspective and believe are on the community empowerment, self-reliance, collective effort, participation and in control of its own resources. Overall, it can also conclude that the community apprehend the CDD as a strategy used in implementing all of the activities in the projects that serve the purpose of uplifting their living condition, incoming generation activities etc.

Evaluating the understanding of concept of community driven development by the beneficiaries, it is undeniable that the above observations about quantity and quality, four themes have come to light. Context matters when attempting to create specific rubrics and/or best practices for community-driven development in the rural communities in Cambodia. Not only are the communities being supported by NGOs and Cooperatives, each operating uniquely and differently.

However, the second theme is somewhat in direct contrast in that certain elements of CDD were strongly represented by at least six community organizations and cooperatives supported by FNN.

Thirdly, proper monitoring and evaluation (M&E) are necessary to gauge the true efficacy of a project (a reliable, cost---effective M&E system has not yet been developed). Finally, the current elements of CDD do not account for heterogeneity and potential for endogenous conflict within a community that may affect the feasibility and sustainability of a community-focused development project. In some cases, a more hierarchical, top-down approach may be necessary to institute societal shifts, like gender inequality.

As stated above, context matters in relation to both the beneficiary communities, the cooperatives, and FNN themselves. There is no clear definition for the model of a "development NGO," like FNN, and as such, there is quite a wide array of organizational models that fall under this title, making it difficult to create specific guidelines as to how to best implement CDD across all different models of NGOs. This particular aspect became especially clear when looking at the scoring of Cross-Cultural Solutions.

The second theme was the presence of certain CDD elements of Participatory Planning and Participatory Monitoring. These elements were the ones that focused on enlarging the decisionmaking roles and processes, resource mobilization capacities, and communication and coordination roles of the community (Datta, 2005). It is not clear, however, if these two elements were so strong because they were the easiest to implement or because the organizations independently determined they were the most essential elements to maintaining a successful CDD program supported by FNN. Moreover, it is important to note how strongly each was represented as opposed to the other three elements, which differed quite significantly across all three organizations.

As the World Bank asserts, "despite the inherent challenges of conducting impact assessment of CDD programs, there is a growing recognition that there is a need for evidence on the actual impact of such programs and a need for insights on how to improve project performance" (WorldBank.org).⁶¹ Both the literature and the studies made in Kampong Chhnang, Takeo, Kampong Cham, and Battambang appear to agree on the move toward more community-focused approaches, and as a result, it is time for "community involvement" to be operationalized in order to really be able to gauge the efficacy of it as an approach and replicate reliably across different communities and FNN.

The fourth theme was reflected in the case studies as well as the literature, and this was the lack of attention given by the elements of CDD to endogenous conflict within a community, as attested by critiques of CDD for having a naïve application of complex contextual concepts (Mansuri and Rao, 2004). While the rubric was quite focused on the positive outcomes, including the community in development projects, there were not protections and/or recourse for potentially negative situations that may arise when a community is involved, like elite capture, irresponsible use of funds, and objective project evaluation methods. As a result, each organization had to create its own safeguards to protect themselves from this eventuality, thus, in some cases, potentially threatening the very principles of CDD it was espousing. These themes are very important for future policy implications in relation to CDD and the development industry. Future research including plus conducting significantly more case studies are necessary to learn how individual organizations are modifying and utilizing participatory-based approaches. Identifying these patterns are important for pinpointing key common elements as well as patterns in on-the ground experience as they indicate something important may be happening (Datta, 2005). In accordance with the development industry and CDD literature, the six organizations examined support through their actions the currently held belief that development driven by the beneficiaries is the best in terms of creating long lasting and effective change. However, because of their different models, each has a unique interpretation of what exactly is the ideal way to go about fostering productive, healthy, independent relationships between FNN and their local counterparts in the four (4) provinces. Regardless, in all cases, there was a clear ideology based on independence by the community from external agents in formulating its agenda and managing its affairs (Lyons, et al., 2001). What was not always agreed upon were the ways to do that. This indicates that we have not yet pinpointed which aspects of CDD must happen, and for future research to truly begin to understand which aspects

⁶¹ https://www.worldbank.org/en/topic/communitydrivendevelopment/brief/cddmonitoring-evaluation

of CDD are necessary as well as which can be modified and changed while still maintaining a community-focused mission and principles.

6.2 Conclusion

This study in Cambodia agrees that communities can be effective channels of development if they receive a genuine delegation of powers and responsibilities (Platteau & Abraham, 2002).⁶² However, there are still several concepts within the ideology of CDD that must be addressed, as for instance, the issues that may arise when complex and highly contextual concepts such as "community" and "sustainability" remain largely undefined (Mansuri & Rao, 2004). The rubric for CDD analysis has some weaknesses in that it only ensures best practices on the side of the FNN or any NGOs and leaves very little recourse for ensuring equally good behavior on the side of the beneficiary. A local or international NGO may receive a good CDD score, but still has significant weaknesses in the model (a large amount of community focus can allow for easy elite capture of a project, for example). The smaller organizations are providing their own safeguards, but the weakness in the smaller programs lies om M&E. They do not have the funds, personnel, or training to produce viable data. As a result, they have instituted strategies in the project planning and implementation phases to mitigate the lack of resources for M&E. However, the question remains: If organizations are only taking elements of CDD that apply to them and interpreting to fit their model, are the principles of CDD still viable? The fact that organizations are able to customize the CDD approach is a necessary boon, but it also presents challenges in that there is no way to maintain and ensure the validity of approaches individual organizations choose to take. Thus, as shown by this study, when looking at organization performance in relation to CDD, it is essential to gauge not only the presence of CDD but also its quality. By doing this across multiple organizations and projects, we will begin to identify patterns and common elements that will aid in operationalizing and replicating productive CDD practices.

In the five (5) cases presented in this Country Report of Cambodia, it was evident that the Royal Government of Cambodia has supported community-based organizations with clear and transparent rules, access to information, and appropriate technical and financial support, specifically for poor communities that enabled them to effectively organize to identify community priorities and address local problems by working in partnership with the provincial departments of agriculture, forestry, and fisheries; and the provincial departments of rural development; and other local government organizations to build physical infrastructure and deliver basic services. They also have provided support by providing agriculture extension workers to assist smallholder farmers in agricultural activities.

⁶² http://msessd.ioe.edu.np/wp-content/uploads/2017/04/MOral-economy.pdf

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