Complex Conditions and Factors Determining the Success of Community Land Deeds: A Case Study of Mae Aow Village, Pasang District, Lamphun Province, Thailand

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Abstract

Thailand has faced problems regarding land in terms landlessness, scarcity and enclosure of land in the forest areas. This has created further problems such as land conflicts, poverty among small holders and landless farmers as well as ecological degradation. There have been several measures from the government to reallocate some parts of the already destroyed forest to poor villages, through the ALRO 4-01. However, farmers still are unable to make decent production and some of them have sold their rights of use to outsiders. The most recent measure under the Abhisit Vejjajiva government was the Community Land Title Deed with the principle that all parts of the reallocated land legally belongs to the community and the community assigns the rights of use to suitable people. This new measure appeared to be promising and was expected to improve the ALRO 4-01 scheme. However, they were skeptical to the effectiveness of this community land deed, and so Mae Aow Village was used as one of the pilot sites for a case study. From reviewing literature, the researcher discovered that the legal aspects of community land deeds were not sufficient. Rather, they needed to have three principles in balance; (1) ecology (2) fairness and (3) sustainable production. These three principles must be met as a prerequisite, and then the community would be capable of managing the land and allocating it to suitable people accordingly. Finally, this research the result of the study revealed found that land allocation was not a guarantee that the situation of ALRO 4-01 would improve. Judging from three principles and the community management, (1) the ecological aspect was not suitable (2) fairness of land allocation was in favor of the rich, and (3) plots of land were not productive and sustainable. In addition, there would be expectations that this community land deed, for the case study, was more or less the same as ALRO 4-01. Therefore, this research conceptually suggested that, the three principles and management must be added to further research, and in practice, the government needed to reconsider community land deeds before launching nationwide.

Keyword: Community Land Deed, GIS, Factors Geo-Ecosystem, Factors Fairness, Production Systems Factors, Community-Based Management

Introduction

Complexity of political, economic and cultural changes during the past 40 years caused villagers to confront many problems which were interconnected. One major problem that was specifically linked to other problems of the villagers was land loss. This phenomenon of loss of resources, that were essential to the villagers, was the result of people in and out of the

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community snatching natural resources including soil, water, and forest land. This caused more various and complex problems in the northern region along with others.

Problems of resource loss were caused by the influence of governmental expansion and the increasing growth of commercial production. Changes of use of the community's resources after altering agriculture production for sale and more intense commercial husbandry, as well as support from the government to originate private property regimes by enforcing land laws in the community are examples of these causes.

Problems regarding land have been ongoing and previous solutions were to allocate land for people, but after a person had possession for a while, the government would issue a letter of rights to that person. By solving the problem by issuing letters of rights to the people, many households were then in trouble with holding rights to unproductive land and when they did not have land to earn a living they would trespass on new land.

Currently, there is recorded data of around 800,000 people who have utilized public lands with an overall space of 12 million rais. Previously, the public section had concepts relevant to community rights as a solution and at present, the government applies such principles under the name of a Community Land Title Deed. The principles of these deeds were to permit people to utilize public land for the purpose of accommodation and agriculture. The people could possess and utilize public lands in a community but the land still belonged to the government and the community had to mutually manage the land. The community was responsible for maintaining and preserving natural resources and the environment to prevent more trespassing along with monitoring the land and following rules and regulations.

Due to the problem of land concentration, people in Mae Aow Village, Pasang District, Lamphun, assembled to possess lands from capitalists and the government. They allocated land totaling 142-0-80 rais for 89 households, giving 1 rai 2 ngan of land to each family and the remainder was used for public benefit. Currently, villagers utilize allocated land for agriculture to earn a living. This caused people to emphasize creating a sustainable land management system. As a group, the community land owners, or land deed holders in the community needed to adapt in order to stabilize the land possession of farmers. These adaptations would be the guidelines to solve land deprivation from agriculturists because apart from area-level operation, that organizes and brings justice at the community-level, such farmers also drove the community's land ownership system to be a policy. They expected that a policy would be accepted and would create criteria related to a solution for conflicts over land ownership and a solution for land sales of minority farmers in all areas of Thailand. (Public Benefit Area Solution Sub-Commission, 2010)

Hence, to understand such problems, especially the realities in area-based terms, many questions needed to be answered in this study .The first one is related to concepts about how community land deeds, in the context of a local community, should be in logistic terms to create balance toward complexity of all terms. The second question is in real operation relevant to community land deeds, how is this project different from the previous concepts offered to the local community. This study attempted to illustrate all of the processes used for solving problems of land concentration and land resource management in the model of a community land deed. The subject area used was deserted land and the land rights verification was obtained by referring to local authorities. The model of a community land deed to reform the system of land and resource utilization was applied in order to be free from the monopoly of capitalism. These lessons were concrete examples proving that concepts of land reformation, which were proposed in the research, could really be implemented and could result in a positive outcome in local

communities and overall society due to the fact that it fairly distributes land. Land deeds should have policies that support said concepts and operations in order to get past the current crisis.

Research Objectives

1. To study the new scheme of Community Land Deeds in order to solve the problems regarding land among poor farmers. These deeds contain the principles of (a) fairness in land holdings would be managed collectively by the community, (b) the pieces of land must be suitable ecologically, and(c) new land holders would be able to utilize the lands for economic and ecological sustainability
2. To study and analyze the case study in reality, a pilot project was tested. This led to the understanding of the successes or failures of the Community Land Deeds in line with the concepts and principles.

Methodology

This study was done to understand the complex conditions and factors that would specify the success of community land deeds. Studied area was Mae Aow Village, Nakhon Chedi Sub-District, Pasang District, Lamphun Province. The study comprised of mixed methodologies by using the research principles of both qualitative and quantitative terms to accumulate and analyze data, especially a part of relevant localities. Quantitative data from community foundation surveys, topographic maps, aerial photographs, and satellite images were analyzed together with interviews and opinions from the community. The field work was a survey of the area to study the general ecosystem in both physical and biological terms. In physical terms, this studied considered the dimensions of the location and its geological features, topography, geomorphology, soil resources, water and forest resources, land utilization management, boundaries of the community area, and the community's basic consumption. The biological features included original conditions of the forest, economic, social and cultural terms that led to the awareness of the community ecosystem along with its natural resources and its ecology together with the overall image of land utilization management for production, preservation and maintenance. Research was done to understand the community's way of life, production systems, relationships between people and the environment including previous regulations, customs and traditions and original wisdom rooted in the community. Moreover, this study aimed to understand the impact from government policies and market mechanisms.

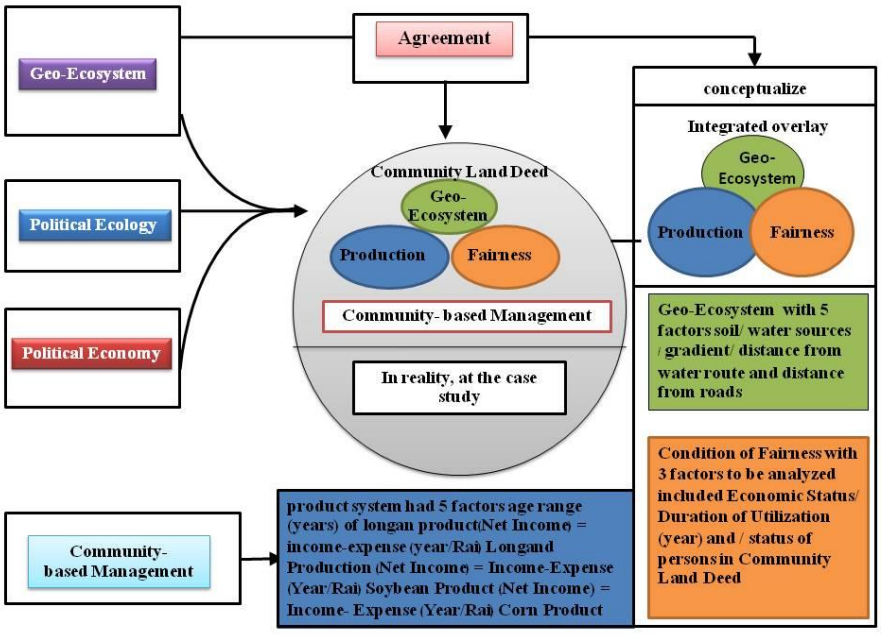
A review of previous concepts and theories to manage land and natural resources under ecological essence, showed that land belonged to the government and management required instruments, laws, power and boundaries, for example the resolution of the cabinet for leveling watershed quality in 1988. The concept of scientific management was designed to separate people from the forest. That was an abnormal concept especially in terms of principles and the methods used in leveling the watershed quality that consisted of topography, level of gradient including altitude from sea level, geological features, and Pedology. The conditions of the remaining forest were the criteria used to decide how to divide the area. The geomorphology of watershed level 1 and level 2 were not suitable for determining a blueprint for different nationwide areas (Kanchanapan.2000: 215-299). The concept of political economy focused on understanding power relations as a key of environmental problems, complex rights and

community rights for management. (Kanchanapan 1989: b; Jamarik & Santasombat. 1993; Wittayapak.1995; Kanchanapan & Khaosa-ard, 1995; Vandergeest, 1996)

On the concept of political economy, at the heart of the problem was government and capitalists changing ways of production. The community had to critically respond with capital for operations under new market mechanisms which were influenced by a mixture of fields affixing historical, political, and social dimensions for analysis. (Akesing. 2000: 142-146)

These three concepts did not indicate how they should work and gave incomplete explanations. Each explanation had a focusing point that was separated by expertise and some issues were ignored. The conflict reflected that guidelines of community land deeds, in both principle specifications, and real implementation, could not find conforming concepts because they lacked thoughts connected with rights and fairness along with the geological conditions. Production included terms of land, suitability of the ecosystem, and the balance of plant and animal production. The economics of community land deeds involved land management. The government of Mr.Abhisit Vejjajiva, the prime minister, specified a policy of land provisions for deprived farmers under the model of the Land Bank and rushed to issue letters of rights to them. Communities grew plants on public lands and forests in the form of a Community Land Title Deed, but it still lacked concepts in logistics a community land deed should have. Criticism of the guidelines of community land deeds, both in operation principle specifications and in real implementation, reflected that conforming concepts could not found due to lack of connected thinking between 1. the terms of rights and fairness and, 2. the geo-ecosystem and production terms.

Three major conditions could be specified for study such as, (1) the conditions of the geo-ecosystem; (2) the conceptual fairness; and (3) the conditions of production. The conceptual framework of these three conditions can be illustrated below:



Results were analyzed by using a Geographic Information System (GIS) with specifying weighted scores and hierarchy scores. variables taken into the analysis were: (1) The condition of

the geo-ecosystem with five factors to be analyzed including the quality of the soil, water sources, gradient, distance from water routes, and distance from roads; (2)The condition of the product system, analyzing four factors such as, age range in years of longkan production, net income (income-expenses) per year per rai of longkan production, net income per year per rai of soybean production, net income per year per rai of corn production and;(3) The condition of fairness had three factors to be analyzed including, economic status, duration of utilization in years, and the status of persons using the community land deeds.

To specify the weighted score for condition analysis, this study found weighted scores by using the Analytic Hierarchy Process, AHP. The weighting of each factor to be analyzed and the (Rating) Factor Evaluation (FE) Matrix, Critical Factor, and Weight determined weight range of each factor and determine their Weighted Score. Weight of different scores depended on variables. Results of the score were from all weighted scores and of all variables.

Data Analysis

1) Data superposition, or Factor Rating, according to criteria was overlaid with all factors.

2) Weighting: due to the fact that each factor held different importance, to gain nearest analysis result, the factors must be given a weight in order to prioritize each factor. For example, studying the suitability of the geo-ecosystem found that factors of water resources was very important as water was essential to agricultural production, next was soil quality, gradient of area, distance from main water route and distance from road respectively. Each factor had its own Weighted Score, or multiple, of 1.0 0.75 0.5 0.25 and 0.1 respectively.

3) Score Ranging: results of the scores included every factor multiple with its weighted scores was leveled in one of four levels, such as not suitable, slightly suitable, moderately suitable and very suitable by calculating the approximate width, or Interval scale, of each score group;

Data Range

Number of layers; Therefore, the score range that was used to level the suitability to study the three conditions and overall image was as in Table 1

Table 1 Level Suitability

Suitability Level	Score Range
Geo-Ecosystem	< 5.44 - >= 7.71
Fairness	< 4.94 - >= 7.31
Production	< 2.06 - >= 4.19
Overall Image	< 15.18 - >= 19.43

Results

Baan Mae Aow in Pasang District, Lamphun province was supposed to be the leading area for land possession distribution of people or land reallocation for people.

Condition of Geo-Ecosystem

The area with high score it meant that area was very suitable. On the other hand, area with low score was defined as slightly suitable. The level of suitability was divided into four levels which were: not suitable, slightly suitable, moderately suitable and very suitable. As

shown in Table 4.1, it was found that in the Baan Mae Aow Community Land Deed, with suitability in terms of geo-ecosystem, 8 plots were very suitable or 7.12% of all areas in the community land deed, 4 plots were moderately suitable or 3.56%, 53 plots were slightly suitable or 47.17% and 24 plots were not suitable or 21.36% of all areas in the community land deed.

Table 2 Plot-level Suitability of Baan Mae Aow Community Land Deed with Condition of Geo-Ecosystem

Suitability Level	Number of Plots	Percentage
Very Suitable	8	7.12
Moderately Suitable	4	3.56
Slightly Suitable	53	47.17
Not Suitable	24	21.36
Total	**89**	**100**

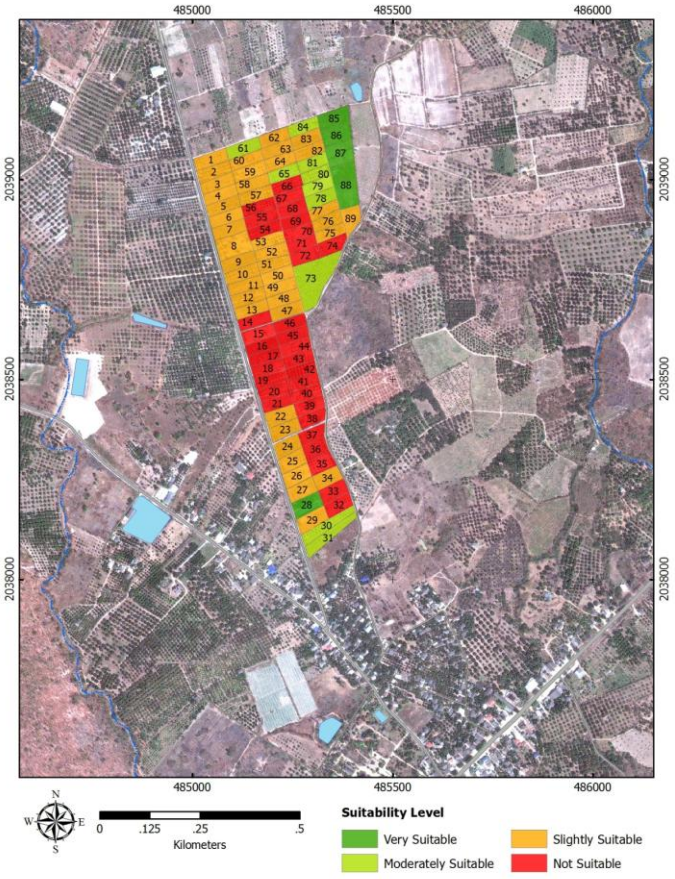


Fig.1 Plot-level suitable land of Baan Mae Aow Community Land Deed with condition of Geo-Ecosystem

Figure 1 Map showing plot-level suitable land of Baan Mae Aow Community with condition of Geo-Ecosystem

Condition of Production

It was In the sense of condition of Production, it was found, at the plot level that 8 plots with level of very suitable (7.12%) of all area in the community land deed, and 22 plots (19.58%) that were found moderately suitable. Out of the remaining plots (29.37%), were found slightly suitable of all area in the land deed and 26 plots were found not suitable or 23.14% of all areas in the land deed as in Table 3.

Table 3 Plot-level Suitability of Baan Mae Aow Community Land Deed with Condition of production

Suitability Level	Number of Plots	Percentage
Very Suitable	8	7.12
Moderately Suitable	22	19.58
Slightly Suitable	33	29.37
Not Suitable	26	23.14
Total	**89**	**100**

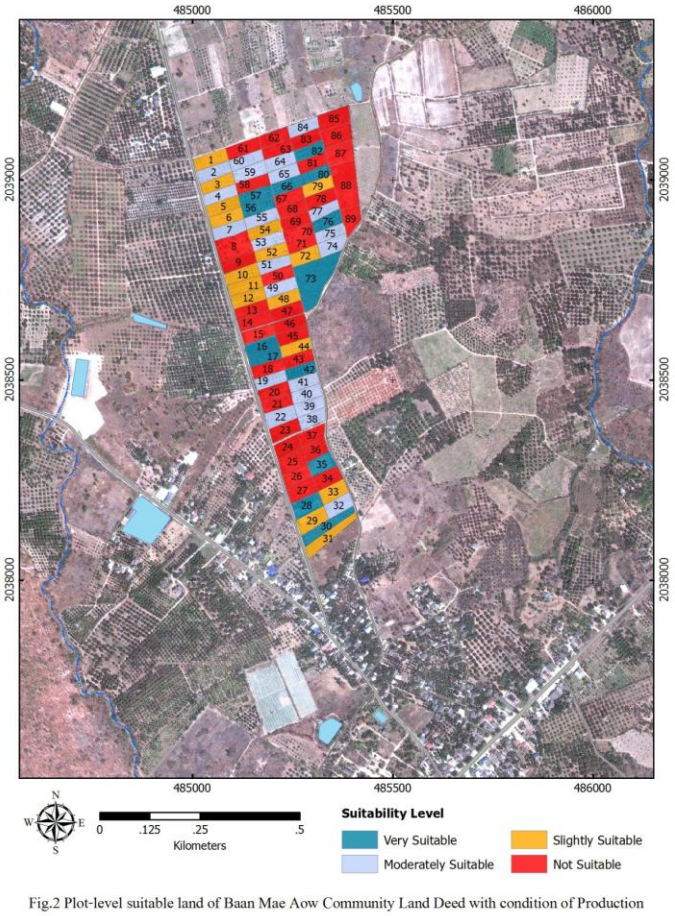


Fig.2 Plot-level suitable land of Baan Mae Aow Community Land Deed with condition of Production

Figure2 The map showing plot-level suitability of Baan Mae Aow Community Land Deed with condition of Production

Condition of Fairness

For fairness in terms of benefit allocation, it was found that for plot-level areas in the Baan Mae Aow Community Land Deed with the fairness condition, 2 plots (1.78%) were very suitable of all lands in community land deed, 54 plots (48.06%) were moderately suitable, 25 plots (22.25%) were slightly suitable and 8 plots (7.12%) were not suitable of all lands in the community land deed as in table 4.

Table 4 Plot-level Suitability of Baan Mae Aow Community Land Deed with Condition of Fairness

Suitability Level	Number of Plots	Percentage
Very Suitable	2	1.78
Moderately Suitable	54	48.06
Slightly Suitable	25	22.25
Not Suitable	8	7.12
Total	**89**	**100**

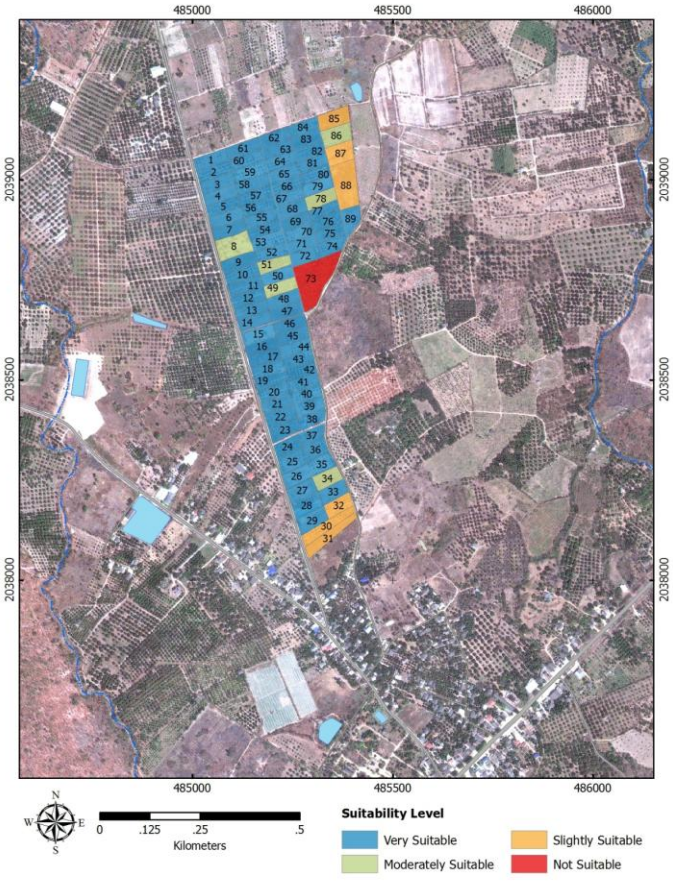


Fig.3 Plot-level suitable land of Baan Mae Aow Community Land Deed with condition of Justice

Figure 3 The map showing plot-level suitable area of Baan Mae Aow Community Land Deed with condition of Fairness

Overall Suitability Levels of Three Conditions of the Community Land Deed

When data was analyzed by using a geographical information system, which uses spatial analysis by weighting overlay and determining the significant value of each factor, it was found that for plot-level areas in the Baan Mae Aow Community Land Deed with an overall suitability level of the three conditions; 3 plots(2.67%) were very suitable of all areas in the community land deed, 16 plots (14.24%) were moderately suitable 44 plots (39.16%) were slightly suitable of all area in the community land deed and 26 plots (23.14%) were not suitable as in table 5.

Table 5 Overall Suitability Level from 3 conditions of community land deed

Suitability Level	Number of Plots	Percentage
Very Suitable	3	2.67
Moderately Suitable	16	14.24
Slightly Suitable	44	39.16
Not Suitable	26	23.14
Total	**89**	**100**

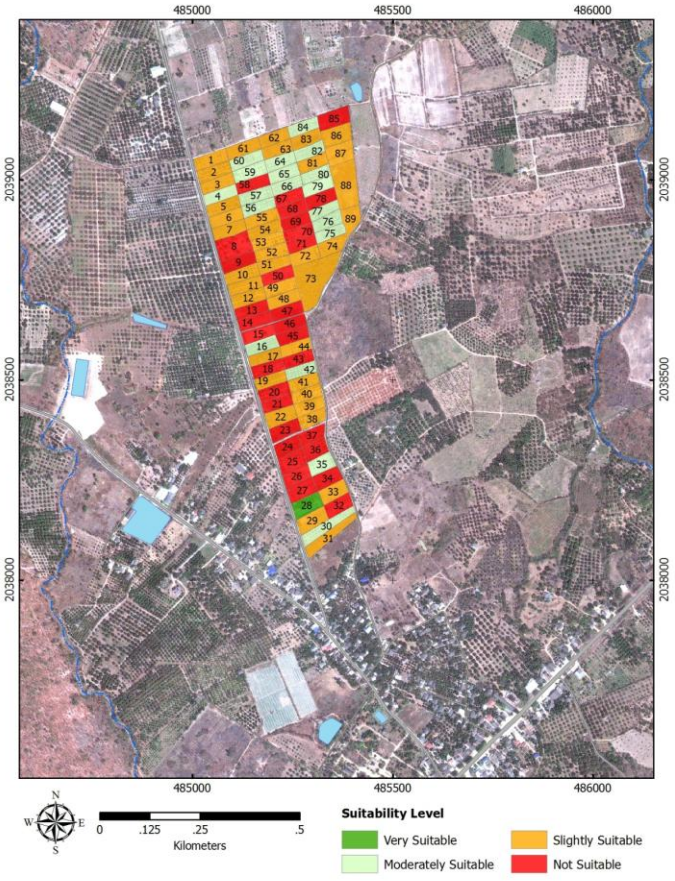


Fig.4 Plot-level suitable land of Baan Mae Aow Community Land Deed with 3 conditions

Figure 4 Map showing plot-level suitable area of Baan Mae Aow community land deed with 3 conditions

Conclusively speaking, the results of the study were as follows: the factor in terms of ecological conditions was less appropriate, the factor in terms of the level of production was less suitable, and the factor in terms of fairness was moderate suitable.

The results of spatial data of the classification of the appropriate level by using GIS, which applied the spatial analysis by using weighted overlay analysis and assigned the importance value of each factor and the integrated overlay, found that the deeds in the Ban Mae Aow community at the plot level have been less appropriate.

Discussion

After studying conditions and complex factors that determine the success of community land deeds, the case study of Mae Aow Village, Nakhon Chedi Sub-District, Pasang District, Lamphun Province can be used to conclude the results of such research and discuss the conceptual framework as follows:

Community land deeds need to be integrated with sustainable political and economic geo-ecosystems in order to be compatible with the economy and land reallocation. They should strive for these effective results (1) all lands should be managed by the community which is similar to mutual rights (2) allocation needs to be realized of fairness, otherwise, the community cannot manage it (3) Land should have an ecosystem that facilitates a production system to be in accordance with social and economic conditions and the community should manage soil and water or even ecosystem restoration (4) For land that has been already allocated, the government and community must collaborate to provide guidelines and methods for increasing production, heightening product quality, increasing efficiency of the production unit so that it is sustainable production with suitable management that will succeed in land reform.

If reform and land managed with sustainability and transforming concepts into implementation is wanted, Community Land Deeds is just one concept. Care of implementation must be taken as well as a complete understanding of the natural conditions especially in the perspective of the government. Otherwise the government will standardize everything and consider all matters as the same or similar quality. Previous policy has shown the government considers people in the society as everyone is alike, especially hill-tribes whose cultural and ethnic differences are not vital, but are being considered simple and easy to manage. Features of the geo-ecosystem or natural areas in current context should always be recognized as major factors when creating other conditions and complex factors that specify the success of a community land deed.

In studying the human rights, or some academics referred them as mutual rights, the villagers came to agreements without written documents typically involved in any public ownership. Not only in Thailand, but in Sweden, Norway, Europe or even the indigenous people in Australia and the Red Indians having mutual rights, or as it was called ‘tradition and custom’ and they would accept public ownership. (Kanchanpan, 1989; Jamarik & Santasombat, 1993; Wittayapak, 1995; Kanchanapan & Khaosaat, 1995) However, all of these did not mean only ownership for benefits. There was determining who had rights to use forest resources or other types of resources and when they could utilize them. They needed collaborate to protect and prevent the trespassing of outsiders. This prominent feature of the mutual rights concept was at the heart of the Community Land Title Deed, nevertheless mutual rights could be in same context as they still exist in wide areas of the forest.

But if we implemented the foundation for such good concepts these days, it would be another context with outstanding features and concepts, but if they are currently implemented without reconsideration, the Community Land Title Deed will not be achieved as desired. The level of concepts and implementations in research found that the community land deeds would be successful if the following equation is adhered to:

Community Land Deed = Factors (Geo-Ecosystem + Fairness + Condition of Production) +Community-Based Management

The equation consists of conditions of the geo-ecosystem, fairness and the production system. Among these three conditions, neither is more important than another as each condition is equally essential. If it can be done, the community can manage these three conditions and propel with community management and it will become a new concept of the best and most effective land management system. The community land deed is significant in terms of policy and the proof of this research can imply that if issuing a law regarding community land deeds without the above conditions of a new explanation, it is possible that land management with community land deeds would become title deeds leading to sale and purchase of land like in policy SPK 4-01. The perspective of farmers toward land rights differs from that of the government. Previous experiences of farmers saw no earnestness to enforce laws regarding the infringement on the Land Reform for Agriculture Act B.E. 2518. A factor that caused the breach on regulations of such laws resulted in conflicts between the law and reality in society (Preechasilapakul, 2005: 58-59)

As a suggestion, if we want to make land reallocation perfect, it shall be attached to a Community Land Deed. Ideal land reallocation would be issuing Community Land Deeds for all areas, the government would issue only one copy but it would need to also recognize the economic, social and cultural contexts along with new community management. When the land deeds are issued, there must be re-plotting layout and bigger plots would be readjusted. (Mueller-Joekel, 2001; Karki, 2004; Schnidman, 1997; Seele, 1982; Sorensen, 1999; Turk, 2003a, 2003b, 2005, 2007)

With this method, we could specify the layout of all plots in a Community Land Deed according size, shape and position and impose conditions in the Community Land Deed. After that, we would have to consider zoning for the utmost benefit and then analyze the data of the real areas by using a Geographic Information System (GIS) with Spatial Analysis and using Weighting Overlay and finally, specify the significance of each factor (Weiner, D. and Harris, T. 1999). We must also enforce the Act of Land Reform for Development B.E. 2547 according to the purpose of this Act or land reform so that land utilization is more suitable for spatial management.

The researcher deeply expected that guidelines of solving land problems with the model of a Community Land Deed would be extended further leading to law enforcement associated with Community Land Deeds including the conditions of the geo-ecosystem, fairness and production as well as management by community, most importantly, management of community needs overlaid with the mechanisms for sustainability of land to create a solution for the farmers.

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