



Effect of Agricultural Land Reform Development Project on Rural Livelihood: Experience from Thailand

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Received 22 December 2012 Accepted 10 June 2013 (*Corresponding author)

Abstract Thailand has faced from long time the problem of land tenure, and agriculture land reform program has been implemented in Thailand for about three decades particularly in the areas identified as the encroached national reservation forest. Today more than 5.12 million ha of land have been allocated to the farmers in 69 provinces of the country for settlement and agricultural purposes. The collaborative project between JICA and ALRO called D/S North project has been implemented during 2004-2007 aiming to improve the living standard of farmers through promoting the practices of sustainable agriculture and integrating the proper natural resource management and environmental conservation measures into their living activities. This study, therefore, examines the achievement of the integration of the natural resources conservation measures to farmers' livelihood under the D/S North Project in the representative site, namely BorLek Long sub-district, Phrae Province. The Sustainable Livelihood Framework, developed by DFID was used to investigate the livelihood situation of the people who implemented the project. The study shows that the people have better living condition with better natural, financial, and social capital as a result of project implementation.

Keywords Agricultural Land Reform Office, agricultural land reform, rural livelihood, sustainable livelihood framework

INTRODUCTION

Like other developing countries, Thailand also had adopted the liberal market-oriented policies to develop the country (Isarangkun and Pootrakool, 2005). The developmental strategy was implemented in Thailand aiming to improve the quality of life of its people by expanding the basic infrastructure throughout the country such as roads, electricity and irrigation projects. Consequently, the expanding of the basic infrastructure can bring in the foreign and local investments were encouraged to increase agricultural commodities in order to support country's economic. Focusing on economic growth gave a great pressure especially on forest areas, which were rapidly destroyed and encroached for agricultural expansion (Department of Environmental Quality Promotion, n.d.). Furthermore, the need for land areas was high to meet the demand of increasing population and the high competition on land for residential, industrial, and agricultural purposes has also led to the land tenure insecurity for farmers. Accordingly, in response to those problems and the land protection for agriculture, the Agricultural Land Reform Office (ALRO) was established under the Ministry of Agriculture and Cooperatives in 1975 to take responsibility concerning the access of the poor people to land through implementation of land reform. ALRO's mission was in line with the King's wish to have agricultural land protection in order to have the

most efficiency farming (Agricultural Land Reform Office, 2009). ALRO is not only responsible for distributing land to poor farmers for agriculture and resident purpose, developing infrastructure and occupation but also promoting the effective natural resources of rehabilitation and utilization.

One of many rural livelihood improvement projects initiated by ALRO, The Development Study on Planning and Capacity Building for Natural Resources Management and Sustainable Rural and Agricultural Development in the North Thailand Project or “D/S North Project” had been implemented in cooperation with the Japan International Cooperation Agency (JICA) during 2004-2007 (Satutum, 2009) aiming in improving the living standard of farmers in the project areas through the practice of sustainable agriculture, integrated to proper natural resources management and environmental conservation of the protected areas, including local capacity building. Varieties of activities and provision of required basic infrastructure were carried out within the project, including forest plantation, making firebreak line, forest boundary marking, small-scale check dams construction, nursery of local plants, head water source protection, herbal harvesting and utilization, producing bio-gas using pig manure, organizing saving group and membership, swine meat processing, practicing kitchen garden, low chemical inputs farming, soil surface protection farming, soil improvement by bio-fertilizer/compost, livestock raising extension, plant material processing, water melon cultivation extension and Wood vinegar production.

This study examined the achievement of the integration of the natural resources conservation measures to farmers livelihood under the D/S North Project in the representative site, namely BorLek Long sub-district, Phrae Province. The Sustainable Livelihood Framework (SLF), developed by DFID. According to DFID, SLF assumes that livelihood resources comprised of five different capitals or assets, namely human, natural, financial, social and physical asset and each asset can be represented by number of factors affecting livelihoods. Different researchers used different indicators for assessing the livelihood asset, such as skill, literacy, knowledge, ability to labor and health of household members as human asset (Ahmed and Chowdhury 2006; Cramb et al. 2004; de Sherbinin et al. 2008; DFID 1999; Kristjanson et al. 2005; Scoones 1998; Westley and Mikhaev 2002) and also family structure, education, occupation, link to outside the farm sources of income (Soini 2005). Natural assets are the natural stocks and environmental services (de Sherbinin et al. 2008; Scoones 1998). Land holding size is one of the most commonly used natural asset indicator by several researchers, e.g. Ahmed and Chowdhury (2006); Cramb et al. (2004); Westley and Mikhaev (2002). Some other natural asset indicators in use are rainfall, wildlife density, and likelihood of having tick diseases (Kristjanson et al. 2005). Financial asset can be represented by cash, savings and credit (DFID 1999). In other cases, livestock possession (Kristjanson et al. 2005; Ahmed and Chowdhury 2006; Cramb et al. 2004; Westley and Mikhaev 2002; Soini 2005) and remittances (de Sherbinin et al. 2008; Westley and Mikhaev 2002) are also used as financial asset. Social asset are found to be represented by networks and connections, memberships of formalized groups and the relationship of trust (de Sherbinin et al. 2008), density of active community and benefit from kinship (Kristjanson et al. 2005; Westley and Mikhaev 2002; Ahmed and Chowdhury 2006) and collective action and accessibility to knowledge (Soini 2005). Physical asset comprises of basic infrastructure and producer goods (DFID 1999), houses and occupational equipments (Ahmed and Chowdhury 2006; Cramb et al. 2004; de Sherbinin et al. 2008), transportation network (Kristjanson et al. 2005), vehicles, machinery, shops and other agricultural implements (Westley and Mikhaev 2002) and even land under possession (de Sherbinin et al. 2008). Besides assessing livelihood using five assets, the SLA has also been used in studying the coping strategies and adaptation to change of rural livelihoods (Salisbury and Schmink 2007; Soini 2005). SLA as a wider view-based approach for addressing poverty and environment than conventional income-based approach, which recognizes the importance of the ability to access to resources, however the completeness of the assessment depends on the availability of data (Cramb et al. 2004). The indicators selected to be used in this study was appropriately designed as good representative of each asset in order to give the best responses of the villagers’ livelihood.

Study Area

The project has been implemented in Phrae province, North region in Thailand (Fig. 1) where is the most significant area of the country for management and conservation of natural resources because of its extensive forest cover with unique biodiversity. The area is surrounded on all sides by mountains with level plains in the middle. The main occupation of the people is agriculture, particularly rice cultivation, cash crops and orchards. It was found that villagers have unbalanced income and high expenditure problem. Their main income source was from agriculture, livestock raising and fishery, etc.

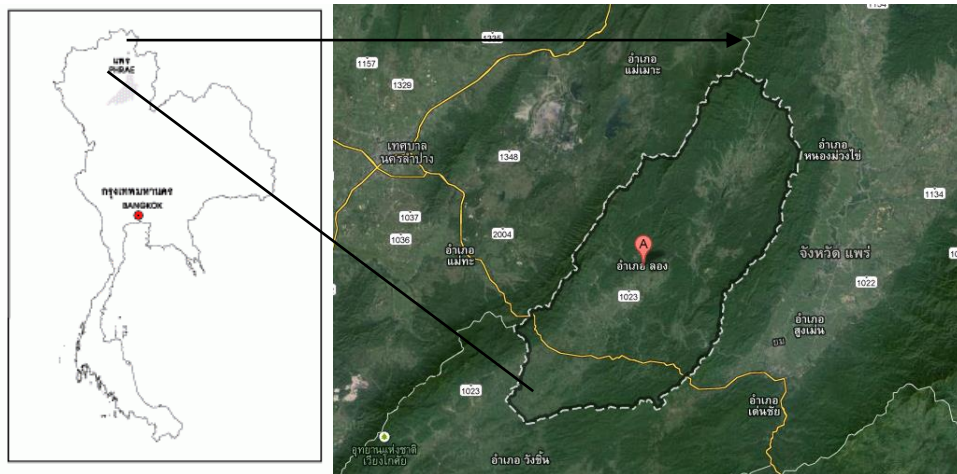


Fig. 1 The location and the aerial photo of the study area

METHODOLOGY

The D/S North Project activities were implemented during 2004-2007. The project had adopted the method of participatory approach by which villagers were encouraged to conduct all process of the project by themselves. The outcome of the project was evaluated 3 years after project has been terminated in order to investigate the changes of villagers' livelihood as policies, institutions and processes can have a great influence on access to assets (DFID, 1999). The study made use of the sustainable livelihood framework (SLF) developed by DFID (Department for International Development). The primary data was collected through household survey. A total of 75 households, who participated in the project from the beginning until the project termination, were interviewed using semi-structured questionnaire to determine significant change by asking specific questions relating to before and after implementation of the project. The indicators representing those five livelihood assets were assessed in order to investigate by comparing the changes of their livelihood after project has been implemented. Thirteen indicators were used to represent four livelihood assets. The physical asset comprised of the necessary infrastructures especially for agricultural activities was constructed with the supports of the D/S North Project, therefore this asset was considered significantly improved. The human asset indicators were derived from two indicators, namely experience/knowledge from training and gaining indigenous. The natural asset was derived from four indicators, namely forest condition, forest product dependence, quality of water resource and soil condition. The financial asset was assessed based on household income, expenditure, saving and debt. The social asset was derived from network building, cooperation among group, cooperation between local organizations, networking between neighboring communities, the relying on external services. The collected household information was described and analyzed using the Statistical Package for the Social Sciences (SPSS) software.

RESULTS AND DISCUSSION

Natural Asset

The natural asset of the villagers under the D/S North Project was assessed through four important indicators included forest condition, forest production dependence, quality of water resource and soil condition. Nearly 89% of the respondent perceived that their natural asset became better after the project has been implemented, whereas only 1% claimed that their livelihood was getting worse and 10% perceived that their livelihood remained unchanged (Fig. 2). Forest, water and soil condition were investigated as the indicators of natural asset. Nearly 95% of the villagers perceived that the condition of the forest was increase while only 5% of the respondent perceived no change in condition of the forest but none of the respondent detected the decreasing of the forest. However, the forest condition is better but the villagers whose livelihood rely on the forest was decreasing as only about 4% of the respondent still live by using the forest product whereas 86% perceived that they stopped relying on the forest product. The better forest condition consequence the better water quality and soil condition as 80% and 92% of the respondent perceived the better water and soil condition, respectively.

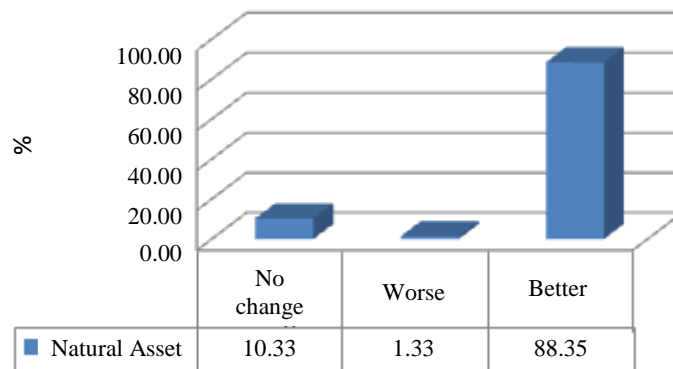


Fig. 2 Perceived natural asset due to the D/S North Project

Table 1 Perception of respondents on natural asset indicators

Perception on	%		
	No change	Decrease	Increase
Forest condition	5.3	0.0	94.7
Forest products dependence	9.3	86.7	4.0
Quantity of water resource	20.0	0.0	80.0
Soil condition	6.7	1.3	92.0

Source: Household survey

Financial Asset

The financial asset was assessed mainly through income and expenditure of the respondent. Overall financial asset of the villagers under the D/S North Project became better as about 86% of the respondents perceived that their income and saving has been increasing (Fig. 3) whereas the expenditure has become smaller after the project has been implemented. However, 1.68% respondents perceived that their financial situation got worse due to their higher expenditure and debt whereas 12% of the total respondents mentioned their financial situation remained almost the same (Table 2). In detail, the financial indicators showed positive results which help improving their livelihood. The respondents responded that they have higher income (according to 86.7% respondents) with higher saving (89.3% respondents) and reduction of expenditure (89.3% respondents) and debt (80% respondents).

Table 2 Perception of respondents on financial asset indicators

Perception on	%		
	No change	Decrease	Increase
Household income	13.3	0.0	86.7
Household expenditure	8.0	89.3	2.7
Household saving	10.7	0.0	89.3
Household debt	16.0	80.0	4.0

Source: Household survey

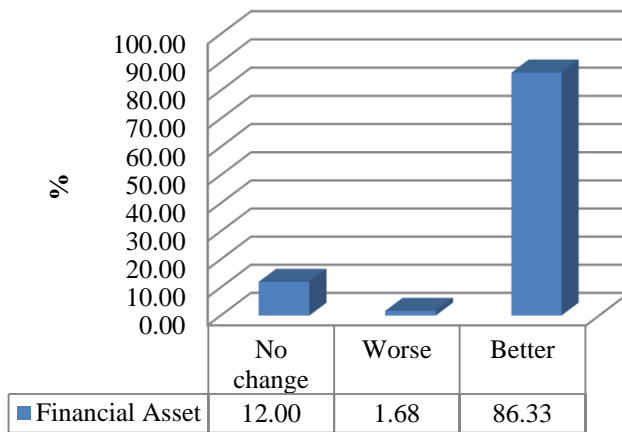


Fig. 3 Perceived financial asset due to the D/S North Project

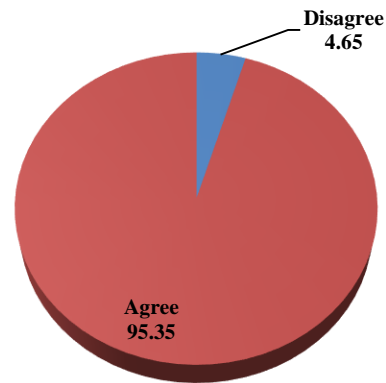


Fig. 4 Perception of the respondent on benefit of community networking and farmers group on overall social asset

Social Asset

The social asset of the respondent was assessed through various indicators which related mostly to farmers group and the networking. The questionnaire was designed to investigate the benefit of the network and the farmer group on their livelihood. The positive results were found from the household survey as more than 95% of the respondents have agreed that having network and farmer group can support their livelihood (Fig. 4). Especially networking and farmer group can help reducing their dependency on external services (Table 3), as they can produce and use the production within group member. All respondents have agreed that the D/S North Project was capable to improve their livelihood through social asset as they can reduce their dependency on external service by being self-reliance. About 98% of the respondents had agreed of making network and established the farmer group can improve their livelihood by having better cooperation from local organizations and neighboring communities (Table 3).

Table 3 The percentage of perception of the respondent on benefit of community networking and farmers group on the social asset indicators

Benefits from network and farmers group	Disagree	Agree
Benefit on gaining a better cooperation with local organization	1.3	98.7
Benefit on creating a better networking with neighboring communities	1.3	98.7
Benefit on gaining less dependency on the external services and being self-reliance	0.0	100.0

Source: Household survey

Human Asset

All respondents (100%) had agreed that their human asset was perceived significantly improved through various types of training organized by the D/S North Project. They perceived that they

gained more experience and knowledge from training and meeting. On the other hand, the indigenous knowledge can be transferred among the group members.

CONCLUSION

As in other places of Thailand, agriculture has remained the major source of income to support people's livelihood in the BorLek Long land reform project (the D/S North Project) area. The investigation showed that the farm households are better off with regard to every livelihood asset after the project has been implemented. The physical asset was improved through various basic infrastructure obtained from the project. The villagers perceived that their natural asset was better as the conservation measurement were integrated into the project. Similarly, the financial asset was improved as they can reduce their expenditure by living on their own farm production, for example, the kitchen garden, low chemical input farming, organic fertilizer, etc. Their social asset and human asset were also improved through various types of training and they can make connection through trainings and forming farmers group.

ACKNOWLEDGEMENTS

Thanks are due to the Agricultural Land Reform Office, Ministry of Agriculture and Cooperatives, Thailand for providing the information of BorLek Long and the D/S North Project.

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