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The Rural Community Potential in Natural Resource Management for Sustainable Livelihood in Rural Thai Village: Case Study in Thailand

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Abstract: Community and natural resource management are related at difference levels through time. The concept of sustainable development is a balance between economic, social and environmental aspects. Sustainable development includes sustainable livelihood, which, in turn, can explain community potential to solve the problems of well-being. Three rural villages in the West of Thailand, Ban (sub-district) Hoisapan, Ban Chong-kab and Ban Ma-kabung were selected for this study. Five conceptual capital or assets composed of: human and culture, natural resource, economic and financial, social and management and physical capital. Check lists, questionnaires, key-informant interviews and focus groups were employed. The interview questionnairs were conducted on 20% of the population in each site. Triangulation approach was used to data analysis. Each community was different in each capital context. Human and culture capital were found to be the essential assets in all communities, consisting of leadership, participation and natural resource management traditions. Out of the 3 study villages, tradition asset as a part of human and culture capital was more vital in the Karen ethnic village than the other two. Community networks and kinship supplied community potential. In terms of natural capital, each site was rich with forests and forest products; however, the villagers made a living at subsistent level and most had debts. Sustainable living started with community awareness for their own future together with government or outsider support to provide basic infrastructure and young generation involvement. Transforming structures meant changing institutions, organizations, policies and legislation that shapes livelihoods.

Key words: Sustainable livelihood, sustainable development, rural area, community potential, community management, asset

INTRODUCTION

Development is a long process especially in rural areas. Even well-intended development can often has unintended effects and impacts on its beneficiaries. Brandt (1980) explained world development into two separate parts, the North and the South. The North is more developed and wealthy while the South is underdeveloped and poor. The effects of the developments in the 18th century have devastated natural resources for the next generations. The gap between the North and the South has grown widely. The effects from development in forms of pollution, climate change, deforestation and drought are evidently pervasive (WCED, 1987). The poor become poorer especially in rural areas.

High proportions of the world's population still live in the rural areas and many of them are among the extremely poor. Most of the rural poor rely on some forms of primary productions from natural resources for their livelihood (Chamber and Conway, 1992). Many of these people also have to supplement their income through small-scale farming or other forms of livestock and gardening activities (Kydd, 2002).

Most of the discussion on Sustainable Livelihood (SL) has focused on rural areas and in situations that people are farmers or make a living from primary self-managed production (Ashley and Carney, 1999; Carney, 1998; Chambers and Conway, 1992).

SL proving is explaining the capacity in each community and outsider factors (Scoones, 1998; Conroy and Litvinoff, 1988; Ellis, 2000; Helmore and Singh, 2001; Singh and Titi, 1995).

Dependence on forests and natural resources is one way to achieve sufficiency living. Since most forests in Thailand are the property of the government, the people's struggle for the rights to manage their community environment and natural resources occur everywhere. However, many communities in Thailand are able to manage their community forests and hold legal rights to do so (Salam *et al*., 2006). These community management processs can help explain the sustainable living.

Purposes of this study are: to study community background and natural resource management, to determine community capacity, classify and compare the capitals in each site and to analyze community natural management patterns for sustainable livelihood.

MATERIALS NAD METHODS

Site studies, methods and populations: Three villages in Kanchanaburi province, on the west of Thailand, were selected. They were Baan Maka-bung, a Karen village, Baan Hoi Sa-pan, a Thai sub-urban village and Baan chong-kab, a Thai rural village (Fig. 1).

The data on each village were collected using check lists, questionnaires, key-informant interviews and focus groups conducted with participants.

Both qualitative and quantitative methodologies were employed. The data from the rapid community profiling checklists showed primary basic potentials data in 5 assets: natural resource and non-pollution asset, human and culture asset, economic and financial asset, social and management asset and physical asset. Apparently, each community has different potentials depending on their history, landscape and settlement pattern, surrounding, members and outsider supports.

The interview questionairs were conducted on 20% of population in each community which were used to explain the community potentials. The key-informant interviews with community leaders, elders, community forest committee, government officials, respected wisemen and youth were to verify the questionnaire data. Triangulation approach was used in this process. Finally, the focus group process rechecked the obtained data with the community. As for national policies, the study used secondary documentary reviews.

RESULTS AND DISCUSSION

Thai community potential: A case study: Community's yearly livelihood mainly revolved around annual nature's cycle. They not only planted food or farmed their own land or hired-out labor and used water for consumption and farming but also collected forest products and hunted forest animals. So yearly, community life cycle related to forest, hunting and gathering. Most villagers planted maize, rice, cassava and sugar cane in the planting season and collected forest products at other time. Figure below show the villgers life cycle.

Figure 2 showed villagers work plan for the last year. Farming, hunting and gathering periods were fit into the year. This cycle showed food security of the community by: planting and gathering, bartering the surplus in the community and local area and earning money from surplus of the farm and forest products.

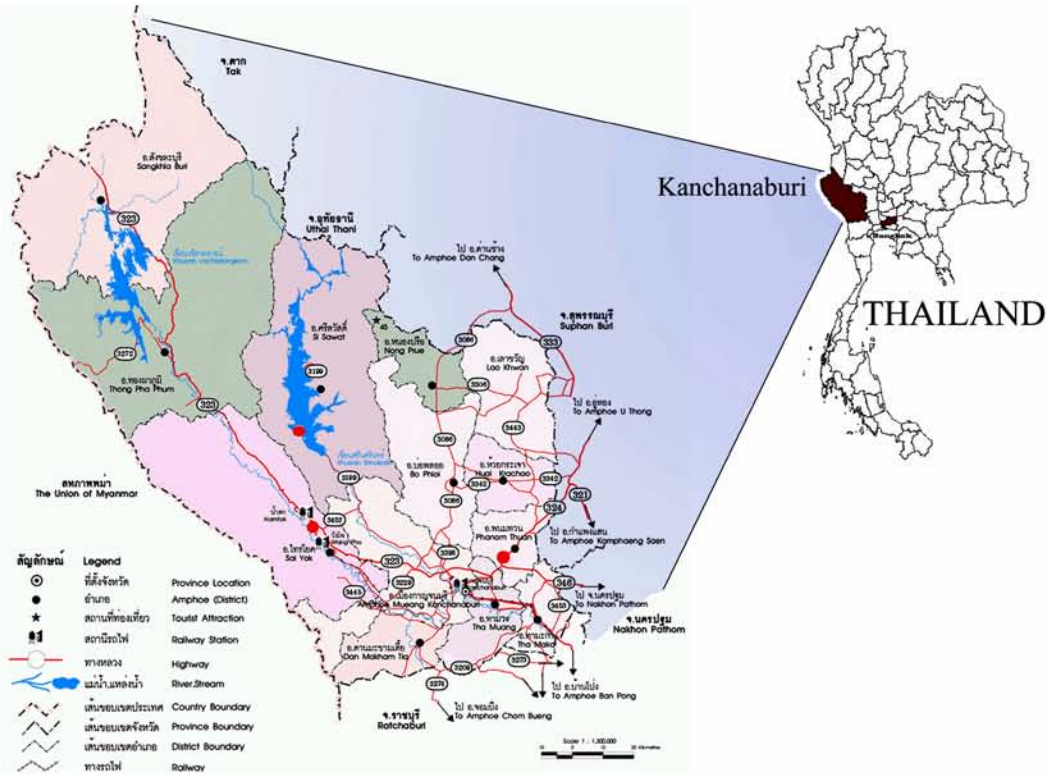

Fig. 1: Study sites map in Kanchanaburi Province. Source: TAT

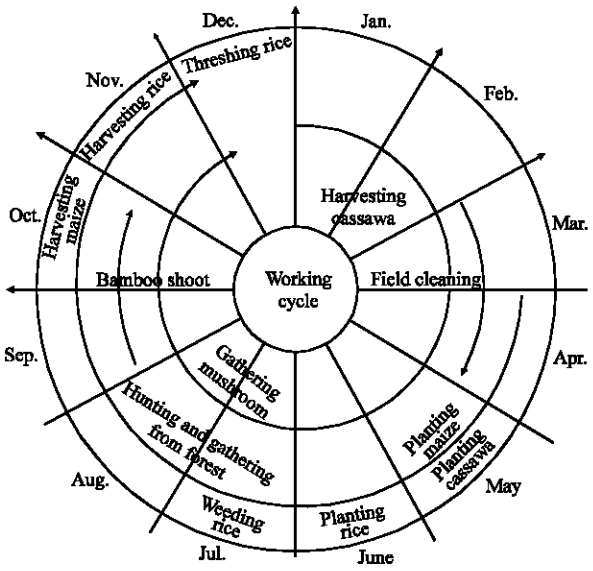

Fig. 2: Community working cycle in 1 year

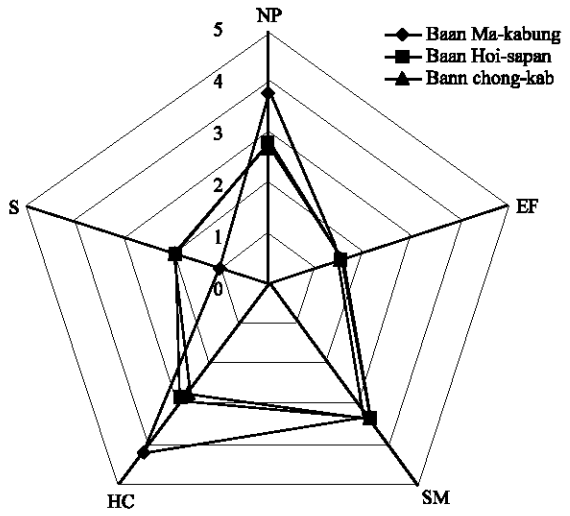

Fig. 3: Potential pentagon from 3 communities

The chicklists showed the community basic potentials. Each community had a forest, clean environment, a primary school, a primry public health service and basic infrastructure, road eletrect city etc. They had local ceremonies, folklore, kinships and occupations. All communities had 5 potentials in different levels. The interviewed questionnaires from 3 villages showed in the pentagon (Fig. 3).

In Baan Ma-kabung, the potential was high in Human and Culture asset (HC, 4.2), natural resource and Non-Pollution asset (NP, 3.8) and Social and Management asset (SM, 3.3). These assets indicated that villagers could identify their existing capitals and knew how to use available resources to survive. With abundant and clean environment, villagers survived by using forest products. Moreover, they protected the resources using culture, traditions and kinships. They prevented young generations from deforestation by passing on the understanding of their culture and livelihood with the forests. The Karen has always had a strong forest culture. Their forest traditions, folk rules, tales and holy spirits served as the law. The weaknesses in this community were government service, debts as well as low income. However, the lack of basic infrastructure and public services such as this small remote rural valley often occured in other rural areas in Thailand.

Baan Chong-kab, this foothill village was highly scored in Social and Management asset (SM, 3.4): leadership, social network and farming skill. The score for natural resource and Non Pollution asset (NP, 2.7) and the Human and Culture asset (HC, 2.7) were the same. In physical capital (S, 1.9) the infrastructure, road, water supply and electricity in the village received poor score. Only a few villagers had access to the forest and they had land problems for farming. Most of the villagers came from different communities and had some conflicts in the village. Debt was an important problem. Villagers earned income from selling cassava, but some were manual laborers who occasionally collected bamboo shoots from the woods for sale. Their low earnings lead to debt and perpetuated cycle of poverty.

Baan Hoi-sapan, this sub-urban community was highly scored in Social and Management asset (SM, 3.4). All assets were similar to Baan Chong-kab. But this village was more urbanized than others. In the villagers opinions, the village lacked roads within the village and gave themselves low scores for physical asset and public services. But when we compared it with the other 2 communities, Baan Hoi-sapan had better physical asset than the others. Since all data came from villagers' opinions, they showed their good strong points to outsiders. Some assets showed high score. Baan Hoi-sapan and Baan Chong-kab were different in some capitals, but the pentagon graphic showed the same shape.

The key-informant and focus groups interviews verified the questionnaire findings that each village had its own characteristic with certain potentials. Social and Management asset (SM) was high in 3 communities; relationship, kinships, network and trust were the same potentials. In addition, Human and Culture asset (HC), leadership, skill, knowledge, health, tradition and folk and natural resources and Non-Pollution asset (NP), resourceful and clean environment were also high.

Especially in ethnic minority group community, two potentials, the human and culture asset and the natural resources and non-pollution asset, were higher than the other 2 communities. It could conclude that knowledge and culture potential of the indiginous community, Karen was the strongest asset (Dei, 1995) and the social capital was very important asset for both Thai communities.

CONCLUSION

Within rural Thailand context, there is little agreement on core indicators of 'success' in this study of the natural resource management by community. Most attention to date has been on the number of assets in each potential and on the villagers' opinions of sustainable livelihood, in both qualitative and quantitative methods.

Access to natural resources is a key asset for rural households, especially as it affects the sufficiency living and food security of poor households. Natural resource potential is necessary for the community. On the other hand, the conflicts over natural resources in each community can be a major obstacle to people's sustainable livelihoods. The conflicts can indicate that different outsider policies, institutions and processes are not often able to regulate access to resources and can undermine people's livelihood outcomes and well-being. Long-term conflicts can increase people's vulnerability and reduce their capabilities to respond to sudden challenges, such as price changes, droughts, floods or diseases.

Human and culture potentials and social and management potentials are also essential. Community uses leadership, tradition, knowledge and skill for work in 3 villages. Folk rules for natural resource management in rural area are found in community. So, knowledge1 in culture potential is very important in rural areas and in indigenous peoples' villages. Local leaders use culture to protect and prevent their environments. Both physical potential and economic and financial potential are important supporting factors for communities to improve their wellbeing. Poor infrastructures and household debts lead to many problems for the villagers and become poverty issues.

How to live in a sustainable way? This study suggests that primary outcomes or indicators of community potential for sustainable livelihoods should include the following:

- Higher income, increased regularity of income and more proportional distribution of income from farm products, forest surplus products and wage employment
- Reduced household debt and increased saving
- Increased well-being by means of improved access to health service, ownership of household items and land
- Reduced vulnerability through improved access to social infrastructure, such as schools and public health or clinics and increased mobility
- Improved food security by using subsistent resulting in improved nutritional status
- Increased social networks or relationship in and out of community
- More sustainable use of the natural resources based on tradition or folk rule
- Made young generations get involved in actual sustainable livelihood in the future

Although the study does not offer any official set of indicators, the rest of this study reviews some of the key sources of data on livelihood impacts in natural resource management in rural areas in Thailand. It highlights the dominant attention in policy on natural capital and the need to address the deficiencies in physical, economin and financial, human and culture, social and management capital in order to generate sustainable livelihoods.

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