Forest Resource Management as Common Property in Mountainous Area

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Introduction

Mountainous area has gotten risk in soil erosion and lower diversity. Therefore, mountaineers become poor, not health, not hygiene and jobless.

Today, most mountainous areas face environmental and social problem. The government and many organizations have involved in resources and social management and development. Particularly the Royal Forest Department has been a main organization for resource management in mountainous area. The government passed the act and policy for managing forest resource in mountainous area. Many areas were declared as national reserved forest and protected area, such as national park, wild sanctuary and watershed area. The policy was based on the concept that the resources are belonged to the government and they would be managed by the government. In fact, the government can not protect ecological systems in mountainous area. The mountainous areas were degenerated because the policy was inefficiency, lack of human resource and budget and lack of corporation from local people. Therefore, the resources in mountainous area became open access resources.

This paper has objectives to reflect an impact of forest resources management as common property and roles of local community organizations in forest resources conservation.

Two villages ; Mae Ka Poo and Hui Nam Jang, Karen and Hmong village from Nam Khan sub-Watershed were selected for the case study.

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Table 1 : Study sites information

	villages	
	Mae Ka Poo	Hui Nam Jang
Ethnic group	Karen	Hmong
Population	1000 people/205 hh.	416 people/65 hh.
Occupation/income	Rice field, rotational shifting cultivation	Cash crop planting, Fruit tree plantation
Forest cover area	10000 rai	150 rai
Forest dependence	Water, Timber, Fuel wood, Food	Water, Fuel wood
Forest type and condition	hill evergreen forest, Dry dipterocarp forest	hill evergreen forest

Forest resource management in mountainous area

1. Community control resources access

Community control resources access can ensure the plentifulness of forest resources that all community members can use them. The communities have developed an access control mechanism for non-community members who do not corporate in forest resources management activities. According to this research, the effectiveness of resources access control based on three factors: define boundary of conservation area by community, define resources using authority list and define common resources only for daily basic of community.

The size of community forest is an important factor for access control because large size is difficult for access control. Especially non-community member control. A good example of this is Mae Ka Poo village that has over 10,000 rai[*] of forest area which is high mountainous area. The village set up a forest patrol system that has the community members to survey the forest. Also natural patrol system that has villagers who raise cow in the forest to survey the forest.

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[*] 1 acre = 2.5 rai

2. Community control resources use

Even though, the access control mechanism was success, it could not ensure that the forest will free from disaster because the forest resources would be high demand products, such as wood, bamboo shoot, herb, etc. Particularly, land in mountainous area is demanded by capitalists. Today, the community members have been involved to capitalism and marketing system. Thus, the forest resources become products for income. It is known that people who take benefit from forest try to get as much benefit as they can get from the forest.

The control mechanism based on community need and the capacity of resources. It has 2 mains rules: community tradition and forest resources management plan.

However, both rules based on Karean trustfulness including sort of useful trees and type of areas. It is known that the Karean trustfulness was transferred from generation to generation through songs and fables. It became tradition that is very useful and appropriate to control the resources use of the community because it is compatible with community approach. The good example of this is the rule of land sharing that was mixed between Karean trustfulness and general approach in order to be accepted by public because the temporary resources management approach would be used for non-community members while community tradition approach would be used for community members.

However, the rules are not specific quota of resources for each family, period of resources access and the quantity of resources that available without environmental impact. A good illustration of this is Mae Kapu regulation that had the detail of resources use but it was not success in operation. It was difficult to evaluate appropriate amount of resources use because it depends on both the amount of community need and the amount of resources. The community should assess the capacity of forest that is time consuming activities because the villagers need time to gain experiences.

3. Community maintains common forest resources

Activities to maintain common resources include management activities and resources reform. It is generally know that the activities do not give the result immediately at implementation period.

The maintenance activities have been classified to suit with each forest area. For instance perfect forest has 3 activities. First activity is fire protection. Community has construct fire protection lines around community forest between February and March. The second activity is forest planting, the community has brought some plants that were not much in the forest to serve the community, such as rattan trees that have been used to make baskets. The last activity is cutting of orchard trees to make them growth up and take sticks for firewood. Moreover, the communities have a rule of forest resources collection that conserve the community forest, such as tree cutting by the Karean method (stump should at least 1 metre, so, the stump can grow up again)

On the other hand, reform forest has 2 activities that support small tree to grow up. The first activity is fire protection, the community has constructed fire protection lines around young trees and the other activity is forest planting with the support of the water source unit.

4. Community punishment

The community punishment has been divided into 4 types: spirit punishment, fine, damnation and capital punishment.

Spirit punishment base on community trustfulness in spirit. The good example of this is *Tawedo* (Karean trustfulness) that not allow cultivation in Tawedo. The members who alert the Tawedo would sick or die. So, this trustfulness is very effective at Mae Kapu. It can control forest resources use of Mae Kapu members.

Fine can be money or things. In general, fine is used for non-community members. The fine start from 500 to 20,000 baht and things are gun, power saw, etc.

Capital punishment has been used with strong guilty that the community can not be decide the punishment. So, the community act as guard for forest conservation.

Local institutional arrangement and forest resources management

Local institution includes traditional trustfulness of community, forest resources use rules, community forest committee, forest and forest resources management plan and community network.

The research found that local community institution for forest resources management has continue developed because it has responded many situations about forest resources conservation. For instance, Mae Kapu has traditional trustfulness in forest resources as a main institution in forest management since settled the community. The traditional trustfulness system has no document but it transfer from generation to generation and become the law of community. That is a good example of the traditional trustfulness system benefit in forest resources conservation. However, the community has been affected by economic, society and marketing. Thus, the community has adjusted the regulation to be more formal with documentation system.

Another good example of this is forest management of Huai Numjang that has trustfulness and local community culture as resources management approach. Even though the community members have not strong in spiritual system because of economic, they still participate some rituals with Maesa Mai village at Maerim, Chaingmai. They have learnt from society and environmental that was degenerate. They was blamed by public and learnt more about resources management; so, they have developed the community institution to control forest resources use.

Therefore, the local community institution has more potential to preserve forest in mountainous area than governmental policy and law. It has many reasons as following:

1. Clear resources boundary

It has 2 factors that are important for forest resources management. The first factor is boundary of common property of the community and the second factor is limited usage area. With 2 factors, it would be clear to manage what and to manage for whom.

A community has to define boundary of common property area where they have to manage. In case of Mae Kapu, the boundary of forest would declare the boundary of the community; so, the community members have to protect the boundary. While Huai Numjang has declared forest boundary among community members and agreement between community committee and land owners who have land border with the common forest area in order to protect the forest area.

All community members have resources access authority only for own consumption. They can not sell forest resources to non-community members.

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┌─────────────────────────────┐     ┌─────────────────────────────┐
│ Community Network Building  │     │ Community forest management │
│                             │     │      plan development       │
│   -  water shed network     │     │                             │
│   -  inter-watershed network│     │  -  Resources use plan      │
│   -  regional network       │     │  -  Forest management plan  │
│   -  national network       │     │                             │
└─────────────────────────────┘     └─────────────────────────────┘

                    ┌─────────────────────────────┐
                    │        Organization         │
                    │  establishment and forest   │
                    │  management regulation      │
                    │        development          │
                    └─────────────────────────────┘

┌─────────────────────────────┐     ┌─────────────────────────────┐
│    Learning process of      │     │                             │
│   villagers form NGO        │     │    Community trustfulness   │
│  workers and government     │     │                             │
└─────────────────────────────┘     └─────────────────────────────┘
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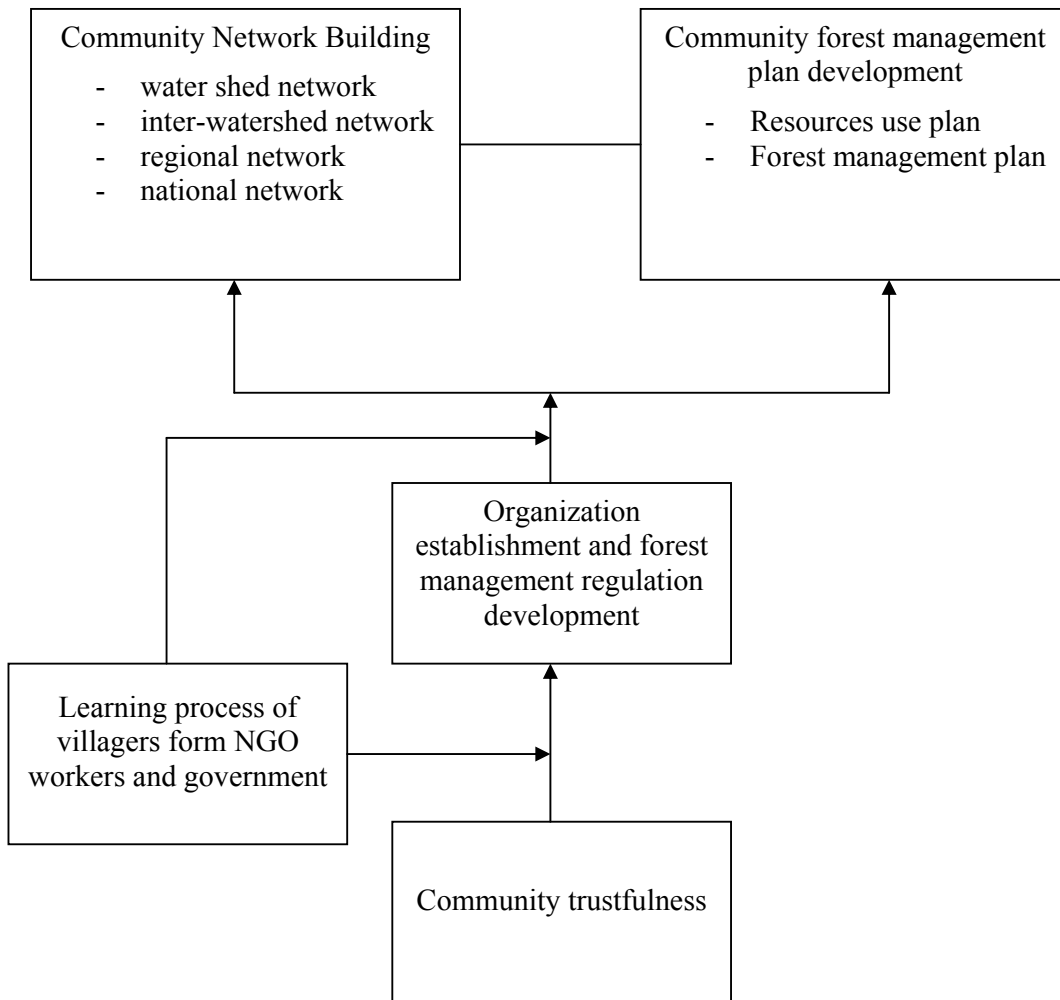
Figure 10 The development of local forest resources management institution

Source: Interviewing 1999

2. Appropriate management system for community

Management approach of the local community institution base on area, resources diversity and users. The rules have been concerned with resources available, appropriate amount of resources in order for survival of society and survival of forest. The single policy of government is not sutible because each community has different environment, different area and resources.

The local community institution should have diversity approach of management to match with community environment and resources in each area and to be managed by community itself.

3. Community has participation in institutional development

Local participation means community members have developed the community institution including institution design, implement, follow up and evaluation. Also they can improve the institution to match with the community environment. Therefore, the local community institution would establish and develop by community member experiences as a dynamic institution that match with situation.

The local community institution movement has 2 types. The first type is the traditional trustfulness institution was established from community trustfulness that was transfered from generation to generation through songs and fables. However, the institution has adjusted some regulation to match with situation but the adjustment based on community members experiences that came from their operation with government and public. The second type is new institution was established to cope new situation by agreement of the community.

The institution is dynamic which can be adjusted all the time through the community forest committee, community committee forums and community member agreement. The advantages of local community institution are community participation in all activities. However, it has some community members who disagreed with the institution but community leaders had to influence them to the movement even though it needs long period and natural process.

4. Have follow up system

The institution has been followed up and evaluated by community members. The follow up process and evaluation can be divided into 3 methods. The first method is follow up process and evaluation by each community member. It is an

effective method because each member inspect each other members. The second method is natural inspection which is non operation cost method. Each community member would inspect the forest when he/she go to forest. The last method is follow up process done by committees that can be a community forest committee or a community committee. The committees have to respond all maters about forest resources of the community. The community committee has 2 members respond on forest resources. They have to follow up resources use of community members.

5. Step by step implementation and punishment

Punishment of the community institution includes natural punishment, damnation, fine and capital punishment. How strong of the punishment depends on action of convicts that can be classified into 3 levels: first level is non-meditated action or action for survival would be gotten warning, second level is the second time action would be fined and the last level, the third action would be gotten capital punishment. Guns and equipments of convicts would be taken as community own by community committee or community forest committee.

However, the punishment has been used step by step. It starts from talking and negotiation within the community. The institution try to use compromised method because each community member has to support each other.

6. Conflict management

Conflict in forest resources management can be classified into 3 types: conflict within community, conflict between communities and conflict between community and governmental staff.

The conflict management for the conflict within community is talking for understanding, corporation and compromising. While conflict management for the conflict between community and the government uses rule respective. The institution play role of negotiation.

Conclusion

Forest resources management as common property in mountainous area has more effective than the management approach of the government and economic system because of reasons as following:

First, Forest resources management as common property is concerned with society and culture diversity because each community has different economic status, power and forest resources use. Forest resources management as common property is dynamic and multi-regulation method. It uses at least 2 methods together. The forest resources management as common property uses trustfulness of community, tradition and resources network among communities.

Second, the forest resources management as common property considers the diversity of land and resources. Mae Kapu and Hui Numjang have divide their land into many types including conservative forest, servicing forest, and ritual forest which have many sub-types and trustfulness. The classification of the forests based on man and forest relation.

Finally, the forest resources management as common property considers the diversity of community institutions. Mae Kapu and Hui Numjang have established natural management institution and system which can be an important mechanism for community forest management. The institution has objectives of forest survival and community survival. At the first stage, community trustfulness and tradition were basic approach for resources management because they had low impact from public. After more impact from public and economic, the institution are more systematic. Right now, the resources are high demand; so the institution has to more systematic. The communities have developed community forest management plan and resources network in order to build movement among communities to negotiate with other communities and the government.