

Building the capacity of watershed networks to resolve natural resource conflicts: Field experiences from the Care-Thailand Project

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In the absence of any national processes for recognizing local forest management regimes in Thailand, villagers, fieldworkers and local government officials are often left to settle conflicts over natural resource management on their own. Sharing and managing the benefits between upstream and downstream users of watershed areas is an increasing problem in Northern Thailand. This article focuses on the use of watershed networks to solve inter-village land use conflicts and analyzes their effectiveness in two instances.

Before a national logging ban in 1989, logging concessions had devastated large areas of vital watersheds in northern Thailand. Illegal logging, shifting cultivation practices by hilltribes¹ and extensive agricultural practices in mountainous area also contributed to the decrease of forests. For lowland Thais both in the North and Center of the country, the watersheds are an important source of water both for consumption and large-scale agricultural production.

For the hilltribes, such as the Karen, Hmong, Lahu, Akha and Mian, the watersheds are their home and an intrinsic part of their cultural landscape. While some hilltribes have practiced an ecologically-friendly method of rotational shifting cultivation, others practiced slash and burn techniques that caused greater environmental impacts, particularly in upland watersheds.

Forest degradation, conflicts over water resources and increasing competition over land and natural resources, has led to greater conflicts between upstream people and downstream people. In the

North, the Royal Forest Department (RFD) has responded by unilaterally expanding the areas of 13 national parks. Though many of the hilltribes had been living in these areas for generations, more than 200 upland communities were evicted from their homelands.

This article presents the conflict between different groups of people in northern Thailand over land and water resources and the role of CARE-Thailand Project in facilitating multi-stakeholder agreements in a mini-watershed area of Mae Chaem District, Chiang Mai Province. One of the main features of the project was to support the establishment of watershed networks as a tool to build the capacity of local communities in collectively solving conflicts and managing their natural resources.

The overview of conflicts on natural resource use in Mae-Chaem

Mae Chaem district is primarily a mountainous region and has a population of approximately 67,000 people consisting of five different hilltribes living in the area. Each hilltribe has their own distinct traditional beliefs and cultures. These are reflected in agricultural practices and forest management. For example, the Karen traditionally tend to settle down in the lower altitudes and practicing rotational farming for subsistence. They grow rice as a major crop mixed with various kinds of vegetables such as pumpkins, gourds, chillies, cucumbers and soybeans. Each family normally has 5-7 rotational plots of land and each plot is cultivated for one year. The rotation of cultivated land is done every year. However, they return to the same plot later when soil fertility is recovered. This shifting cultivation system is called rotational shifting cultivation or cyclical bush fallow cultivation.

On the contrary, the Hmong people were traditionally slash and burn cultivators and moved to new

¹ Hilltribes are ethnic minority groups living in the mountainous areas of northern and southwestern Thailand.

areas once the area lost soil fertility. As part of the upland development programs of the Thai Government, the Hmong and other hilltribes were supported to practice sedentary cash-crop farming². Once they were settled, they were encouraged to grow cash crops like cabbages, maize and fruit trees. This led to the diminishing soil fertility and further dependence on fertilizers to increase nutrients. The situation became worse when new market demands drove the Hmong to grow other cash crops such as carrots, tomatoes and potatoes. To respond to this new system, more chemical inputs were introduced, and in turn, led to further soil degradation and water pollution.



Conversion of forestland into farmland has been one of the main causes of conflict and forest degradation in northern Thailand

Apart from the hilltribes, lowland people also live in the Mae Chaem area. The lowlanders generally plant cash crops such as onion, garlic, soybean and maize. Wealthier farmers, who have a capital for investment, intensively plant fruit trees like liches and longans. As most of the water supply to the orchards come from the streams flowing down from the uplands, the water shortages and poor quality of water has caused these people serious problems.

Selected villagers were trained to develop their skills in working together with other villagers and formulating groups to solve village problems.

Based on differences of the cultivation practices among these various groups of people and competition for diminishing resources it is natural that conflicts over resources has occurred.

Background to the CARE-Thailand Project

The CARE-Thailand Project has worked with the people of Mae Chaem since 1994. The project understands that the problems related to watershed degradation are multifaceted and complex. In Mae Chaem, some of the main issues included: shifting cultivation, encroachment in mountainous area by lowland people, and chemical and pesticide dis-

posal in rivers. For this reason, the project initiated “the integrated natural resources conservation project” from 1994 to 1999. The project established programs for forest, water and soil conservation in mini-watershed areas, and improvements in agriculture production. Training programs were designed to promote sustainable agricultural practices, build capacities of communities to participate in natural resource conservation activities, and promote learning and sharing between communities through cross-exchange visits.

To improve forest and watershed management, the project assisted each community in the project areas to form a forest conservation group and an inter-village network. The network was comprised of all the communities living in the same mini-watershed area and its main purpose was to build up collaboration among the villages in forest conservation and to deal with resource management conflicts. Through this, the project strengthened the capacities and confidence of the communities to be more proactive in working and discussing issues with government agencies.

² In the 70s, there was increasing effort to stabilize the movements of hilltribe people and solve cultivation of opium, national security concerns and natural resource degradation.



Rotational shifting cultivation systems practiced by the Karen. The fallows in the background will be rotated for planting in the future.

The evolution of watershed networks in Mae Chaem

One of the project's main aims is to build the capacity of communities to participate in conservation activities. Selected villagers were trained to develop their skills in working together with other villagers and formulating groups to solve village problems. Various tools and methodologies such as small group discussion, informative games, three dimensional model construction (3-D model) were used during training.

One of the greatest challenges was to ensure that traditional land-use patterns and forest management practices could be articulated in a way that clarified intra-village forest use to both outsiders and other communities. To achieve this, each village had formed a conservation group and developed a forest conservation plan which clarified the demarcated and defined land use types in the village and adjacent villages. Each village then constructed 3-D models which showed topography, protected forest areas, watershed forest areas, community forest areas and village boundaries of its village and neighboring villages. These models are used as tool for discussion whenever there is a natural resource related dispute.

The establishment of the watershed networks has been used as a management tool for more than 10 years in northern Thailand. At present, there are more than 22 mini-watershed networks in north-

ern Thailand, either established by communities themselves or facilitated by projects and NGOs. In Mae Chaem, villages in the same mini-watershed formed networks around three years ago, and presently seven mini-watershed networks have been established with the assistance of Care-Thailand. According to the project plan, every village in the watershed network has to carry out the following activities:

4 Boundary demarcation between farmlands and the watershed forests or protected forests within the village

4 Increasing forest area in the watershed by stopping cultivation in forest areas or by leaving fallow land to be naturally regenerated

4 Setting rules and regulation for forest protection including making fire breaks

Each village elects 1-2 representatives from the village conservation group to join the watershed network committee. Representation is based on the size of the village. The member term is two years. It was also decided that the village headmen, village leaders and the member of the *Tambon* (sub-district) Administration Organization (TAO) are automatically members of the network committee.

Network meetings are regularly organized once every three months. Members provide updates on issues arising within their own villages as well as cross-village issues affecting all. If there are conflicts among villages, the committee will try to resolve the conflict themselves. During this process, representatives from relevant government agencies are involved as the advisors, including the watershed management unit, the district office and CARE-Thailand Project staff.

The role of watershed networks in resolving resource related conflicts

The following cases show the particular role of watershed networks in solving conflicts among various stakeholders in Mae Suek mini-watershed area which is one part of Mae-Chaem watershed area.

Conflicts over land between the Hmong and the Karen

In 1997, one family in the Hmong village of Pui Nuer Village expanded their farmland into San Poo Loei community forest established by the Karen. San Poo Loei Village began forest protection activities in 1982 due to severe droughts. At that time, the Karen requested the Hmong to stop shifting cultivation and collaborate in forest rehabilitation. The Hmong in the area did not accept the request and even removed the seedlings planted by the Karen. The situation reached a climax when this expansion of farmland occurred.

This issue was taken up by the network committee. After a series of discussions, it was decided that Pui Nuer village would not allow the villagers to expand their farms into San Poo Loei community forest. However, the person who encroached San Poo Loei community forest requested that he be allowed to grow cabbage in this land for two more years and then he would stop.

Conflict between the Upland people and the lowland people

In 1997, several lowland villages called a meeting to discuss the problem of insufficient water supplies for their agricultural areas. Coincidentally, there was a drought that year. After the meeting, the lowland people decided to send some of their community leaders to the uplands to find out the causes of water shortage. The lowland representatives found that a large amount of forest area was degraded by shifting cultivation practices or converted into farmland. At the time, the group requested the uplanders to stop shifting cultivation and expanding their agricultural land into watershed forests. Furthermore, the chemicals and pesticides used by the Hmong were being discharged into the streams. These issues were brought up to the government appointed chief of Mae Chaem District with some photos to support their claims. The deputy chief of district, who was assigned to deal with this conflict, organized a meeting among relevant agencies to find a resolution.

To resolve this conflict, various parties were involved in the negotiating process as there were a number of people who had a stake in this conflict. After some initial discussions, a forum was organized at Pang Hin Fon watershed management unit by Care-Thailand staff (see Figure 1). The meeting was attended by representatives from five lowland villages and four upland villages, concerned government officials, and project staff from the Queen

Sirikit forest rehabilitation project and the CARE Thailand project.

After the discussion, the lowlanders proposed some conditions upon the upland people. Because the uplanders have little bargaining power, they had to follow the proposed conditions, although many of them were perceived to be unfair. Only one condition was unacceptable. The lowland people requested to the RFD that forests areas in the watershed areas occupied by the uplanders be declared a national park, effectively making them illegal dwellers and could have led to eventual eviction. The conditions agreed to included:

- 4 The upland people will undertake enrichment planting in watershed areas every year and coordinate this with the watershed management unit and other relevant agencies.
- 4 Pesticide and chemical wastes must not be thrown into streams and should be disposed of appropriately.
- 4 Farming done by the outsiders is prohibited so as to protect the forest from land encroachment.

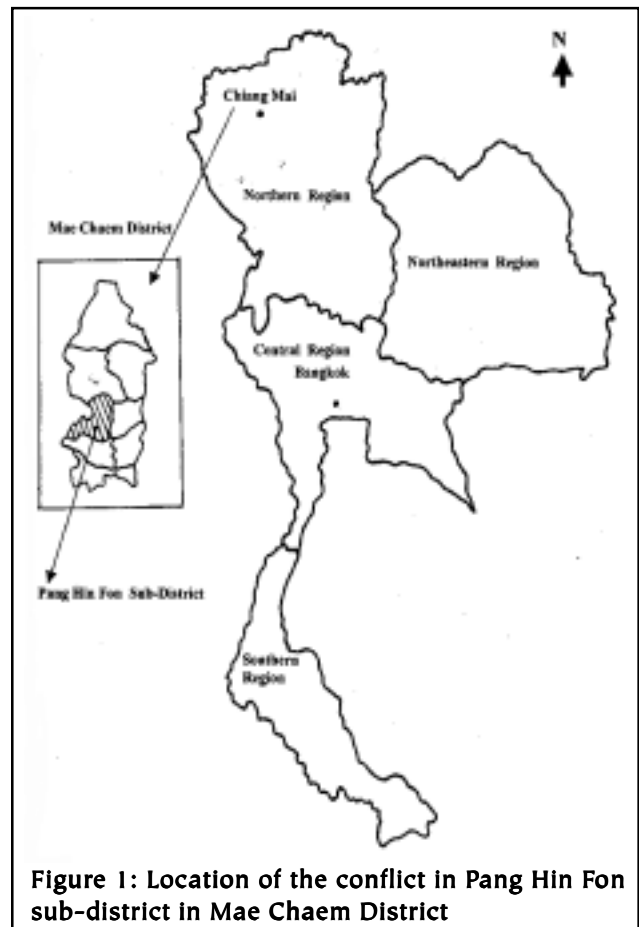


Figure 1: Location of the conflict in Pang Hin Fon sub-district in Mae Chaem District

- 4 Fruit trees should be planted to substitute for annual crops in order to reduce the quantity of water used for cultivation.
- 4 The quantity and quality from upstream to the lowlands will be monitored every September.

These conditions were written into an agreement by the district officer. Village headman from the uplands and the lowlands signed the agreement and representatives from the relevant local government agencies witnessed the signing.

Conclusion and Discussion

These two cases show that watershed networks are an effective tool in building the capacity of communities to collaboratively tackle crosscutting issues, and are particularly effective in managing natural resources on a wider landscape level. However, power and authority are key elements influencing the effectiveness of the watershed network committee in taking any action or resolving conflicts. The conflict between the Hmong and the Karen was easily solved by the watershed network committee itself. Conversely, external parties were needed in the case of the conflict between the upland people and the lowland people. One major reason was that the lowland people did not recognize the authority of the watershed network to resolve conflicts. In addition, the presence of government officials during the negotiating process hindered any real objectivity because they were naturally sympathetic to the lowlanders.

Although the watershed network's roles and authority have not been recognized by some groups, other groups believe that the continuation of the network will help to resolve conflicts among the villages within the watershed area.

After the end of the project in 1999, a new project was formulated building on past experiences and will be run from 2000 - 04. One of the new project's main aims is to support the further development of the watershed networks. In response to the new Thai constitution which places great emphasis on decentralization and peoples' participation in natural resource management, the project plans to place watershed networks existing in the same *Tambon*

under the *Tambon* Administrative Organization (TAO) itself. This means that the networks will be in the same sub-district unit rather than on a mini-watershed unit. As part of the TAO, the watershed networks will gain more power in negotiation and the provision of financial support from relevant agencies which will strengthen the function and authority of the watershed networks. As the watershed networks play a more active role in overall management, it is expected that the project's input and role will be reduced.

In addition, they have learned why some of community forestry rules & regulation are impractical such as the fines for illegal cutting are too high and some rules are outdated or do not correspond with the existing situation.

It is felt that there is a need to reflect on these lessons, and others, that the communities and the watershed networks have learned to improve their capacity to develop practical

community forestry rules and regulations.

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