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Title:

Designing Technical Interventions in Community Forestry Management:

Experiences from the Social Forestry Development Project (SFDP)

Song Da, North-West Vietnam

by:

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Abstract

Four key factors appear to provide useful criteria for the introduction or strengthening of community-based forest management practices: tenure, local needs, community capacity, and local site conditions. This paper uses two case studies from the Social Forestry Development Project (SFDP) Song Da, North-West Vietnam, to illustrate how technical interventions in community forest management can be designed to match these four factors.

1. Introduction

More than 500 years ago coppice systems and coppice systems with standards were already widespread in Germany for the management of communal forests. These communal forests originated from marking out the boundaries of the villages between the 9th and 12th century. The forest within the boundaries of a village was a common property meeting the needs of the farmers. The earlier invented coppice system mainly produced fuelwood and wood for charcoal burning, stakes, fodder and straw for stables, and tanbark. Later - with changing needs - the coppice system with standards for production of poles, timber, and wild fruits for livestock grazing in the forest emerged. This system was derived by retaining individual trees or patches in the undergrowth which than developed into a distinct overwood. Although skills to assess and to inventorize the forest resources were low, sustainability was ensured by dividing the forest area through the rotation period allowing the annual harvest of forest products only in a definite area(Hasel 1985, Hausrath 1982).
Modifications of the two management regimes lead to a variety of local management practices. However, the systems which have evolved were clearly shaped by a number of key factors. Functioning management practices did not only reflect site conditions and the production potential of the forest but also local needs, tenural and benefit sharing arrangements as well as the capacity of the community regarding silvicultural knowledge and skills. In the past as well as present-day, attempts to introduce or to strengthen community forest management practices need to reflect these factors.

This paper tries to outline a methodology to design technical interventions in community forest management. It begins with the brief discussion of four key factors which provide useful criteria for the introduction or strengthening community-based forest management. The factors are derived from field-level experience of the Social Forestry Development Project in North-Western Vietnam, and they are also often discussed in the community forestry literature. Chapter 3 provides two examples how the project has designed technical interventions in community forest management. The presentation of the case studies is structured along the four factors to illustrate the proposed methodology. Chapter 3 also includes a brief description of the SFDP and its work.

2. A proposed methodology to design technical interventions in community forest management

From field-level experience with community forestry in North-West Vietnam (see case studies in chapter 3) and from the literature four key factors shaping indigenous forest management practices as well as determining interventions in community forest management have been identified.

Tenure

Tenure has been recognized as an important factor in community forest management. Although community forestry is essentially about access to and control of forest resources, local tenurial arrangements and decision making processes about the use of the resource are often not well understood by outsiders. Access to forests is often governed by locally recognized use rights which are quite distinct from any legal tenure. The group of people who share such use (access) rights can be described as a user group (Fisher and Makarabhirom 1997). Their claim to a right to use the resource is the basis for de facto tenure. While the resource may be under de jure tenure of the community or the state, the user groups strongly identify with the resource and claim their rights and responsibilities for its management (Poffenberger 1996).

Technical intervention in community forest management will most directly affect the user group and its cooperation is required for effective management. This implies that the user group is the appropriate unit for technical intervention. It also suggests that building on de facto use rights will facilitate the implementation of effective management.

However, there can be need for organizational interventions on the level of larger administrative units. Organizational interventions aim at creating a supportive environment for community forest management and removing the constraints which prevent local people from receiving the benefits from the resources they de facto manage.

Benefit sharing arrangements are often derived from local tenurial arrangements. Technical interventions need to account for the existing arrangements or have to create appropriate arrangements.

Local needs

Community forestry was seen from its beginning as directed towards rural needs, in particular the needs of the rural poor, both women and men (see Arnold 1992). Local people use not only timber and fuelwood but also a range of other forest products such as bamboo, rattan, fibres, dye, wild vegetables and fruits, medicinals, fodder, etc. Additionally, forests serve as hunting grounds, grazing areas, and are reserves for agricultural production.

Meeting local needs for forest products is to be mirrored by specific and flexible approaches giving local people the freedom to decide about details in management schemes as outsiders often cannot accurately determine local need hierarchies. It is crucial that needs are expressed by local people themselves and that interventions take into account differences among users as much as possible.
It is long perceived that generating benefits for local people should be the primary objective of any community forestry activity. There is growing recognition of the importance of income in the decisions about resource use. Economic considerations influence the decisions of even those within a largely subsistence-oriented economy, and interventions needs to respond to this fact.

**Community capacity**

The primary emphasis of community forestry is to involve local people in forest protection and management. The shift from state forest management to participatory forms of forest management, such as joint forest management with equally shared authority by the government and local people and further to community forest management with full community authority has strong implications for the definition of technical interventions.

To position the community in the center of attention means to take account of its capacities and skills to assess forest resources, to plan and implement forest management. Innovations regarding management regimes and silvicultural practices have to build on indigenous knowledge and available skills. Attention has to be paid to the ability of the communities to organize themselves, to distribute work and benefits in an effective way, and on their ability to monitor and enforce regulations regarding forest use. The technical equipment, the accessibility of the forest and the availability of labor for forest activities are often limiting factors in designing forest management schemes. Monitoring and evaluation needs to be very simple using tools and indicators the community is familiar with.

It is very obvious that conventional "scientific" approaches to community forest management which are not concerned enough with the communities’ capacity and skills are not likely to be successful. Silvicultural techniques for community forest management have to reflect the management capacity of local people to the same extent as local site conditions and silvicultural parameters. In the long-term, training and extension can increase communities’ capacity to manage their forests and may lead gradually to more sophisticated approaches to forest management. However, intensive training and extension appears to be justified only where people’s commitment to forest management can be sustained by adequate benefit generation.

**Local site conditions and silvicultural parameter of the forest**

Considerations regarding the selection of a particular silvicultural system in conventional forestry are mainly based on the initial situation of the forest stand, that is tree species, volume and its distribution, and the forest structure (Lamprecht 1986). It cannot be denied that technical interventions in community forest management have to be based on the local site conditions as well, but the emphasis must shift from a scientific approach towards a simple practical approach which local people are able to implement. Sustainability is not necessarily ensured by detailed estimates, detailed knowledge about tree species, volume etc., as the historical example given above indicates.

There are other factors influencing local forest management such as socio-cultural factors, peoples preferences, linkages to and support from administrative levels, government policies and historical legacy. These factors are not discussed in this paper because they are not regarded as key factors. From the project’s experience the factors: tenure, local needs, community capacity, and local site conditions are most useful. By structuring considerations along these four key factors they can provide criteria how technical interventions in community forest management can be designed. There are, of course, several ways to manage community forests in a given context. The ultimate management practices are the result of a trial and error process that builds upon the cooperation between the outsiders and communities. Two examples from SFDP’s experience are given below.

### 3. Two case studies from SFDP’s pilot areas in the Song Da watershed

#### 3.1 Brief description of the SFDP and its work

The Social Forestry Development Project (SFDP) Song Da is a technical cooperation project between the Governments of Vietnam and Germany. It is executed by the Forestry Development Department of the Ministry of Agriculture and Rural Development, and supported by GTZ (Deutsche Gesellschaft für technische Zusammenarbeit). The SFDP started in 1993 and is currently finishing its first implementation phase. The project is located in the Song Da (Black River) watershed in North-West Vietnam with pilot areas in Tua Chua district, Lai Chau province and Yen Chau district, Son La province.

The expected project results are to develop methodologies for sustainable natural resource management, in
particular to develop methodologies for participatory land use planning and land allocation and for participatory village planning. Furthermore, the project strives to identify and to apply technological options for agriculture and forestry, to develop and apply a concept for a needs-oriented agro/forestry extension service, as well as to enhance the capacities of the local authorities and institutions through training.

The Project started in 1996 with activities in the field of community forestry after completing the land-use planning and land allocation in two communes of Yen Chau and Tua Chua districts. Forest land allocation in Vietnam has opened up possibilities for community forestry. Forest land without forest cover, the so-called "bare land", can be allocated to households with land use certificates commonly known as "red books" issued for a period of 50 years. The certificates include the rights to exchange, transfer, lease, mortgage, and pass on the land for inheritance. The rights of the state are restricted to specifying the broad purpose for which the allocated plot is to be used. Usually, farmers are expected to afforest the allocated plots for which several plantation programs provide substantial cash payments. Forest land with forest cover remains to be state owned but can be contracted to villages, groups of households or individual households for protection. The forest protection contracts are made on a yearly basis. They include an incentive payment of up to 50,000 Vietnamese Dong/ha/year. The forest protection contracts emphasize direct state control over the use of forest resources. So far, people with forest protection contracts enjoy very limited rights, only having the right to extract dry fuelwood and minor forest products.

SFDP’s community forestry activities have gradually expanded from forest protection activities such as forming of forest protection groups and formulation of village forest protection regulations toward developing experiment and demonstration plots on other components of local forests and potential silvicultural practices. Developing and structuring alternative forest management practices is an important element of SFDP’s community forestry strategy (see Apel and Viet 1997). It is a further step in the logical sequence which started from involvement of communities in forest protection and leads toward communities’ responsibility for forest management. A lesson learned from the local situation in North-West Vietnam is that forest protection activities are the basis for introducing community forest management. Land-use planning and land allocation, forest protection contracts and forest protection regulations, they all foster mechanisms which help local people to enforce their claims on forest resources.

3.2 Managing natural regeneration in H’mong villages Thon I and Thon III, Sinh Phinh commune, Tua Chua district, Lai Chau province

Tenure

In 1995, SFDP has carried out land-use planning and land allocation in Sinh Phinh commune. According to the regulations, existing forest and so-called bare land in different stages of forest succession has been contracted to farmers with annual forest protection contracts. Because of the fact that the H’mong villages in this commune usually consist of several hamlets, the forest has been contracted according to residential proximity to the hamlets. Households of a hamlet form a forest protection group and the forest has been contracted to them as a group. Groups consist of 4 up to 30 households. This turned out to be quite successful and leads to the assumption that the households of a hamlet also represent a user group. Therefore, community forest management interventions by the project in H’mong villages are planned and implemented with the forest protection groups.

Benefits are shared equally in H’mong communities. A striking example is that money paid by the state for forest protection contracts is equally distributed to the groups and households within the groups, regardless the size of the forest area they protect. Therefore, project activities promote distributing benefits from forest activities equally to all households forming a protection group.

Local needs

H’mong communities in the pilot area of the SFDPane are largely subsistence oriented. Markets for forest products hardly exist. Main needs for forest products are fuelwood, poles, stakes, and housebuilding timber. The prevalent situation in Thon I and Thon III villages is that forest resources are scarce. Collection of fuelwood is mainly done by women and children. It is collected in neighboring villages 3 – 5 km away, thus contributing to the high work-load of women.

Community capacity

The H’mong ethnic minority mainly practices shifting cultivation and is often blamed for forest destruction.
Vietnamese authorities and state institutions attest them a low educational level and an inefficient land-use system. In Tua Chua district, in fact, the H'mong have developed complex upland farming systems reflecting intimate knowledge concerning the management of their natural resources. Indigenous knowledge regarding forest management encompasses tree species, their wood properties, their indication of soil quality. H'mong people have an idea about increment of trees, e.g. how long it will take until the tree reaches the appropriate diameter for harvest. Participatory assessment of resources and monitoring and evaluation of activities with the H'mong is quite difficult, because timber or fuelwood harvested is usually quantified in 2 categories only: "few" or "much". Illiteracy is common. Labor is scarce during certain periods of the year.

The H'mong in Tua Chua appear to have cohesive hamlets which equally share access rights to and benefits from the forest areas adjacent to the hamlets. This is important for their ability to organize and implement community forestry activities. The hamlets represent, therefore, an appropriate unit on which forest management interventions can be based.

- Basic site description and silvicultural parameter of the two forest stands

Technical interventions focus on young natural regeneration on abandoned shifting cultivation land. The stands are 3 to 5 years of age and are mainly composed of pioneer species such as *Eurya acuminata*, *Cratoxylon cochinchinensis*, *Aporusa tetrapleura*, *Wendlandia paniculata*, *Mallotus metcalfianus*, *Glochidion* sp., *Litsea cubeba*, *Schima wallichii*, *Quercus poilanei*, *Betula alnoides* and *Styrax tonkinensis*. Tree density (height > 50 cm) ranges from 3,000 up to 7,000 trees/ha. The high number of coppices in the regeneration indicates the ability of most tree species to coppice quite vigorously. Total volume of the stands is estimated ranging from 4 to 9 m³/ha. The stands are mainly located on slopes with 20°-30° at altitudes of 1,100 to 1,200 m a.s.l.

**Intervention strategy**

The situation described above leads to the following management scheme which was later proposed on a 1 ha trial basis in 2 neighboring H'mong villages: Introduction of a rotational coppice system with standards to combine production of fuelwood with some timber for housebuilding. The rotation period for fuelwood harvest was planned to be 4 years. Initially it was proposed to retain 400 trees as standards (mainly *Schima*, *Quercus*, *Betula* and *Styrax*, however local people were encouraged to decide which species to be favored) to ensure the harvest of a large quantity of fuelwood as an incentive for peoples participation. The standards were to be equally distributed over the area, a space of 5 m between trees was proposed. The treatment was planned and discussed with the heads of the forest protection groups and carried out later in the relevant areas. Benefits were to be shared equally among participating households. It was agreed that local people would monitor how many loads of fuelwood they have harvested, how the cut trees coppice and if enough standards were retained and how they develop in comparison to those in untreated areas. Furthermore, the areas were to be strictly protected from grazing and fire.

The treatment was carried out in December 1997 instructed by project staff. The results of the activity were promising. First of all, almost all households of the protection groups took part, participation of women and children was high. Secondly, during the silvicultural operation it became evident that knowledge about tree species is high among both men and women. An additional need of farmers which was previously not mentioned in the planning process was revealed: farmers retained slender and straight-growing trees (mainly *Eurya acuminata*) for stakes used in roofbuilding. That lead to a final number of around 900 standards/ha of which 100 promising trees for timber production (mainly *Schima*) were pruned and singled if necessary. The activity yielded around 4 - 6 m³ of fuelwood and some stakes from a 1 ha plot. In the second plot in the neighboring village even more trees were retained leading to a number of about 1,600 standards. Here, the activity yielded only 2 - 3 m³ of fuelwood/ha.

In conclusion, the farmers easily adopted and further adapted the technical intervention of the project to local needs and site conditions. Participating households realized, that even very young natural regeneration can yield substantial benefits. The current forest policy, however, focus on strict protection rather than on management for sustained use. However, such trials have already convinced local authorities that management of forest for local needs and watershed protection can be combined.

3.3 Managing young secondary forests in the Thai village Then Luong, Chieng Dong commune, Yen Chau district, Son La province

**Tenure**
The village Then Luong was selected as a pilot site since most of forest land has been contracted to the entire village. Only a small area has been contracted to groups of households. In the Thai area usually the entire village more or less equates a user group. The forest is a common property and its use regulated by the village with informal regulations. It can be assumed that in such cases the village is the appropriate administrative level of intervention. Field-level experience with the protection contracts for individuals or groups of households has revealed that in most cases protection groups do not correspond with the user groups, thus leading to conflicts between them.

Benefits from the forest are shared less equally compared to the H’mong. Rich farmers build bigger houses and households with free labor can harvest more products to sell (illegally) on the market. Money from forest protection contracts for groups of households is distributed according to the area they protect, sometimes even according to the time they spent for forest protection. The money from the forest protection contract for the village forest goes into the village fund and is used to pay the forest guard. The village imposes taxes for harvested forest products for the village fund. This practice, however, leads to some extent to a redistribution of benefits when funds are used for public purposes.

Needs

Due to the importance of Thai houses as a status symbol the need for housebuilding timber of good quality and larger dimensions is enormous and resources have become scarce. Fuelwood and non-timber products are generally speaking still abundant. Consequently, farmers interest in forest management is to produce valuable timber. This is partly confirmed by tree planting activities (mainly Teak) carried out by local farmers in their homesteads, but so far no efforts have been undertaken by farmers on natural forest land.

Nevertheless, fuelwood is more a concern of women who are mainly engaged in its collection and have to cover increasing distances to meet the demands. Men are responsible for the selection and harvest of housebuilding timber. This results in only men having intimate knowledge about tree species and wood properties.

Community capacity

Thai-village institutions seem to be capable to formulate and enforce informal regulations about access to forest resources. Then Luong village, like several other Thai villages, appointed a forest guard for the protection of the village forest. The village more or less successfully protects forest areas considered as important for watershed protection, and patches of natural trees as spirit forests or burial sites. Collection of bamboo shoots is limited to a certain period of the year, thus allowing for their natural regrowth.

Although the village has good organizational structures and skills, there are little joint activities or cooperation among households regarding forest use. Forest activities are usually carried out by households individually when their agricultural work calendar permits.

- Basic site description and silvicultural parameter of the stand

The forest stand which was selected as a pilot site has an area of 13 ha on an isolated hill right next to the village. The altitude is about 600 m a.s.l. and slopes vary from 5° to 35°. The stand is dominated by a very dense natural regeneration which started 1989 after overlogging of the stand. It consists of species like Lithocarpus elegans, Aporusa tetrapleura, Elaeocarpus dubius, Wrigthia sp., Cratoxylon cochinchenensis, Phyllanthus emblica, Mangifera foetida, Schima wallichii, Engelhardtia spicata, Syzygium sp., Diospyrus mun, Randia sp., Grewia tomentosa, Lagerstroemia tomentosa, Oxylym indicum, Litsea sp. The Basal area is about 8 - 10 m² with a standing volume of approximately 50 m³/ha.

Intervention strategy

Considering the context described above, SFDP approached the leadership of Then Luong village with the idea of improvement thinning of the stand to foster the growth of useful tree species for housebuilding over the long term. In addition, the thinning was to yield a substantial amount of fuelwood. Marking of trees to be removed was to allow for individual silvicultural operations whenever a household was in need of fuelwood and has time for its collection. Households should pay a tax for the fuelwood harvested into the village fund which in turn would be used for paying a village forest protection guard who could also be trained and work as a sort of extensionist. After several years of improvement thinnings a positive selection system could be applied by defining a minimum diameter for trees allowed to harvest.

The leadership largely agreed to the idea but was very concerned about forest protection if households were
allowed to carry out silvicultural operations individually even if the trees were to be marked. The leadership decided that after marking the trees farmers were to be assigned to carry out the treatment and would be compensated with 15,000 VND/day applying the market rate for labor. Money would come from selling the fuelwood in the village. Because the leadership argued that the revenue would not be enough to pay the worker, the project agreed to cover the difference if it became necessary.

On a 0.5 ha area trees were marked jointly by project staff, the village forest protection guard and the village head. This activity was considered to be a training course for the villagers enabling them to work on their own in the future.

Thinning on the pilot plot was carried out in December 1997. Six men and four women gathered to participate in the activity which produced around 7 m³ of fuelwood on half a hectare. However, selling the fuelwood produced only an average revenue of 11,000 VND per worker, the difference of 4,000 VND/worker had to be covered by the project in order to generate an acceptable remuneration of labor. The relatively low returns to labor seems to be the reason why the village did not continue with the thinning so far. But the prospects are quite good. If thinnings are undertaken outside the agricultural season fuelwood collection may present a competitive source of income for women.

Participatory assessment, monitoring and evaluation has been introduced in form of a forest stand management book, including a sketch map of the stand with its division into management blocks. Simple forms were provided to record silvicultural operations and their results. So far, the management book has not yet been adopted by the farmers even though the required monitoring would definitely be within their capacity. One likely reason for the village not wanting to document silvicultural operations is the inherent possibility of control and enforcing tax collection by higher level administrative units.

4. Summary and Conclusions

The two examples discussed in chapter 3 stem from particular local situations in the Northern highlands of Vietnam. They serve to illustrate how technical interventions in community forest management can be designed by donors, planners, foresters, social scientists, NGO’s, and communities itself. Structured according four key factors the presented case studies also bear relevance for attempts to introduce or strengthen community forest management in other regions.

Community-based forest management requires specific approaches. That does not mean that forestry has to be reinvented. "Conventional" forest management practices provide a basis for community forest management. A shift, however, is required from focussing on the forest resource and its production potential towards stressing the communities, their needs and capacities. Based on the project’s experience it can be emphasized that successful initiatives in community forest management have to be mainly concerned with the capacities of local communities.

Designing technical interventions in community forest management is only the first step towards the introduction of appropriate management systems. The whole process definitely requires time, needs flexibility and can be thought of as a two-way learning process that builds upon cooperation between the outsiders and communities. The initiatives in community forest management undertaken with the support of the SFDP are still in an experimental stage. Besides the examples discussed above the project has initiated several other so-called “experiment and demonstration plots” in community forest management. The project expects these activities to yield a wide range of possible management schemes suitable for particular local situations.

References


