Ministry of Forestry
Forest Department
Forest Research Institute

A Proposal for the Sustainable Socioeconomic Development of Plantation Villagers in Myanmar

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မြန်မာနိုင်ငံရှိ သစ်တောကျေးရွာနေပြည်သူများ၏ လူမှုစီးပွားရေး ထာဝစဉ်ဖွံ့ဖြိုးတိုးတက်စေမည့် နည်းလမ်းနှင့်ပတ်သက်၍ အဆိုပြု တင်ပြချက်စာတမ်း

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သစ်တောတက္ကသိုလ်

စာတမ်းအကျဉ်း

ဤသုတေသနလုပ်ငန်းသည် မြန်မာနိုင်ငံရှိ သစ်တောကျေးရွာများတွင် နေထိုင်လျက်ရှိသူများ၏ လူမှုစီးပွားရေး အခြေအနေပေါ်တွင် လက်ရှိဆောင်ရွက်နေသော စိုက်ခင်းစီမံအုပ်ချုပ်မှုဆိုင်ရာ လုပ်ပိုင်ခွင့် ခွဲဝေချထားပေးမှုစနစ်၏ သက်ရောက်မှုပုံစံ၊ ၄င်းရွာသားများ အဘယ့်ကြောင့် သစ်တောစိုက်ခင်းများကို ဖျက်ဆီးသည့် အုပ်စုများအဖြစ် ပြောင်းလဲသွားကြပုံတို့ကို လေ့လာရန်နှင့် ၄င်းပြဿနာများကို ရင်ဆိုင်ကျော်လွှားနိုင်မည့် အကောင်းဆုံးနည်းလမ်းကို ရှာဖွေတင်ပြနိုင်ရန် ရည်ရွယ်ပါသည်။ သုတေသနလုပ်ငန်းကို ၂၀၀၆ခုနှစ်နှင့် ၂၀၀၇ခုနှစ်များတွင် ပဲခူးရိုးမအရှေ့ခြမ်းရှိ သစ်တောကျေးရွာများတွင် ဆောင်ရွက်ခဲ့ပါသည်။ လေ့လာတွေ့ရှိချက်အရ သစ်တောကျေးရွာများမှာ နှစ်မျိုးနှစ်စားရှိပြီး ယာယီသစ်တောကျေးရွာနှင့် အမြဲတမ်းသစ်တောကျေးရွာတို့ဖြစ်ပါသည်။ ယာယီသစ်တောကျေးရွာအမျိုးအစားမှာ စိုက်ခင်းများကို ဖျက်ဆီးသည့် အုပ်စုများအဖြစ် ပြောင်းလဲရန် ဖြစ်တန်စွမ်း နည်းပါးကြောင်း တွေ့ရှိရပါသည်။ သို့ရာတွင် ၄င်းတို့၏ ရွှေ့ပြောင်းနေထိုင်ရသည့် သဘာဝကြောင့် စိုက်ခင်းများကို ထိရောက်စွာ ထိန်းသိမ်းရန် အခက်အခဲရှိကြောင်းတွေ့ရပါသည်။ အမြဲတမ်းသစ်တောကျေးရွာ အမျိုးအစား မှာ စိုက်ခင်းများကို ဖျက်ဆီးသည့် အုပ်စုများအဖြစ် ပိုမိုပြောင်းလဲလွယ်ကြောင်း တွေ့ရှိရပါသည်။ အကြောင်းအရင်းမှာ သစ်တောစိုက်ခင်းများ တည်ထောင်ပြီးစီးချိန်တွင် ၄င်းကျေးရွာနေပြည်သူတို့၏ လူမှုစီးပွာရေးဖွံ့ဖြိုးတိုးတက်စေမည့် အခွင့်အလမ်းမှာ လွန်စွာနည်းပါးသောကြောင့် ဖြစ်ပါသည်။ ဤစာတမ်းတွင် သစ်တောကျေးရွာနေပြည်သူတို့၏ လူမှုရေး၊ စီးပွားရေးနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးတို့ကို ပြေလည်စေရန်အတွက် အသွင်သစ်ဖြင့် တည်ထောင်ထားသော ဒေသခံပြည်သူ အစုအဖွဲ့ပိုင် သစ်တောစိုက်ခင်းကို အခြေခံသည့် စံပြသစ်တောကျေးရွာပုံစံကို အဆိုပြုတင်သွင်းထား ပါသည်။

A Proposal for the Sustainable Socioeconomic Development of Plantation Villagers in Myanmar

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Abstract

The research aims to explore the current socio-economic situation of the plantation villagers impacted from the present decentralization pattern of plantation forest management in Myanmar so as to find out why they become forest destructive groups and to formulate a possible development pathway to overcome that problem. The paper concluded with a program proposal for model plantation village system which operates with modified model of community forestry plantation and, covering triple bottom line aspects; social, economic and environment.

Keywords: taungya teak plantation, plantation participants, community forestry plantation, model plantation village

Contents

1. Introduction

The establishment of plantation centers or villages to solidify the plantation participants is not a new concept. Participants at the plantation sites used to build settlements near Taungya Teak Plantations (TTP) inside the reserved forests. Most of these settlements or plantation villages are temporary in nature because the plantation participants have to move along with the project. At present, Forest Department is forming permanent plantation villages so as to secure the labor force for plantation establishment at reduced cost and with increased efficiency, as well as protecting the existing natural resources including old plantations more intensively with the participation of taungya farmers. From the commencement of the plantation establishment, critics are arguing about whether the program is creating 'forest protective groups' or 'forest destructive groups'.

Past experiences suggest that taungya farmers are likely to destroy the plantations once they have been established. Unsurprisingly, there were times that taungya and plantation village system fall under disfavour (Win, 1999). However, due to its efficiency and cost effectiveness, Myanmar Forest Department has to revitalize the system whenever it needs to launch a large scale plantation project. The system is the only way out to achieve large plantation targets in remote areas, and overcome the problems of insufficient funding and insufficient labour. Still, the nature of the resource granting is a "faith-based" social program with no long term sustainable plan. As a result, farmers tended to neglect the tree crops and abuse the system. The situation is urging for a new revision to modify the system in more decentralizing way so that it is beneficial not only for the governing bodies but also from the side of plantation participants.

This paper tries to present a model plantation village system which operates with modified model of community forestry plantation and associated policies covering triple bottom line aspects; social, economic and environment. Although, companion modelling is well-accepted approach for this kind of research (Gurung et al., 2006), it was only limitedly applied in this case. The model was conceptualized and discussed with the interest groups according to realistic modeling approach so as to fit in the current policy.

2. Historical Background

In Myanmar, taungya in traditional meaning represents upland farming, in other word, shifting cultivation at hilly regions. The term TTP is used by foresters representing the growing of teak seedlings together with taungya during the earlier years of plantation establishment. TTP provides a win-win situation for both Forest Department and forest occupants as the former can establish teak plantation with low budget and the latter get the right to cultivate taungya during TTP project.

According to widely accepted opinion (e.g. Blanford, 1958; Hoe, 1969; Nair, 1993), raising teak by the taungya method was first attempted in 1856 at Tharrawaddy in the Bago Division. TTP system starts with slash and burn of degraded forest area. After that comes the intercropping of teak and other agricultural crops together. Agricultural crops are harvested at the end of the year, and that is the end of agroforestry system. Teak trees at special teak plantations are planned to be harvested after 40 years. The basic concept of taungya teak plantation system is presented in Figure 1.

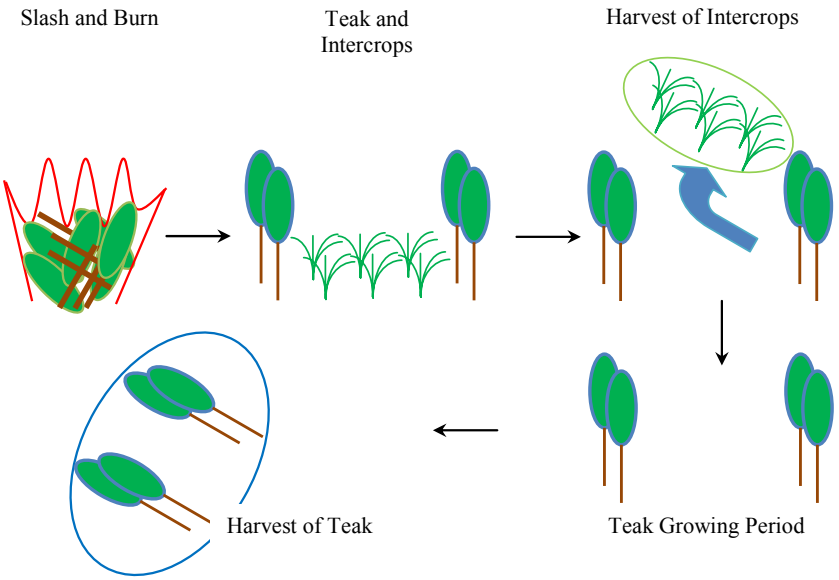

Figure 1 Taungya Teak Plantation System

At the emergence stage of taungya system, i.e. 1867 to 1917, the participants or the Karen get tax exemption from taungya cultivation, provision of land exclusive for Karen use, and the right to cut taungya wherever they pleased as long as they agree to plant teak in their taungya. However, scattered and various sized plantations put the initial taungya plantation management into disfavor.

A Uniform System using a concentrated regeneration method was introduced during 1918 to 1947. And it is this period that the first plantation village system in Myanmar was initiated.

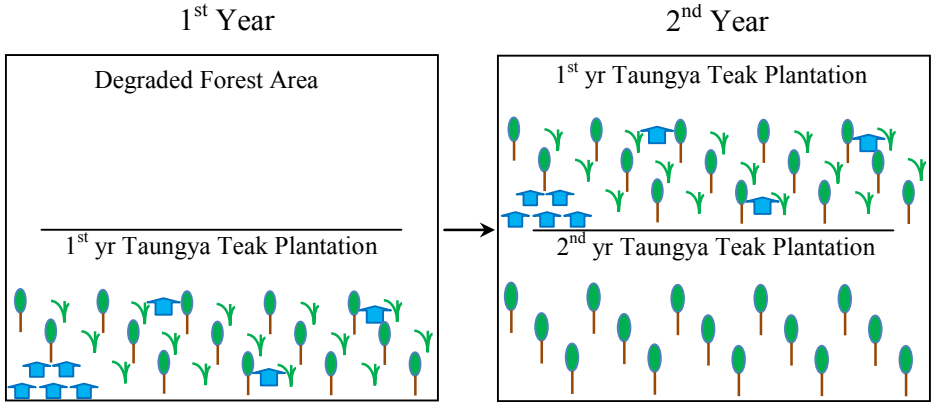

Figure 2 Plantation Village System

The participants at taungya teak plantation project can build settlements near the plantation. These are called temporary villages as the group has to move along with the project. Permanent villages are formed for securing the sustainability of labour force. The typical plantation village system can be explained by the following figure, Figure 2. At the 1st year, taungya farmers cut the degraded forest area, make temporary settlements, and establish taungya

teak plantation. At the 2nd year, they will move to another designated area, leaving the teak plantation behind.

But, plantation management using taungya system had to be reconsidered due to revolt, economic depression and the extensive attack of bee-hole borer (*Xyleutes ceramica*). As a result, the first plantation policy in Myanmar was issued in 1935stating that teak should be planted not for export but only for domestic use.

Moderately large scale plantations restarted together with East Pegu Yoma Project in 1979**.** The second attempt of establishing plantation villages also took place with this project. In those days taungya farmers had relatively high incomes, so even lowland farmers from the central plains joined the project. However, at the end of the project, the primary aims of the Forest Department for reforestation and forest protection were not achieved due to lack of a program that would provide long-term incentives to the villagers. Most of these village areas were transformed into *grey zones* of forest administration[1] and later were classified as forest destructive groups because villagers tried to carry out shifting cultivation in teak plantation areas.

Special Teak Plantation Project was launched in 1998. Forest Department had to establish 8000 ha of teak per year. To accomplish the plantation target, Township Forest Departments (TFDs) made a third attempt to establish plantation villages. Most of the above mentioned groups joined the project as experienced workers. The process of reforestation using taungya methods and establishment of plantation villages is taking place again.

3. Methods and Data Sources

The research is about plantation participants, especially those who live and work in TTP as plantation villagers. For doing so, Bago Yoma region of Myanmar, which happens to be the origin of taungya system and still practicing the taungya system up to now, becomes the most suitable place. The fieldwork was mainly based on the exploratory social survey method. Research method includes questionnaire survey and personal interviews with three different interest groups, the plantation participants, administrative officials and academic professionals.

Table 1 Number of Households Selected in the Study Area

Surveyed Village	Village Type	Township	Surveyed Household (2006)	Surveyed Household (2007)
Gontaung	Permanent	Lewe	24	20
Sanpya	Permanent	Yedashe	20	20

[1] A grey zone of forest administration signifies an administrative dilemma, where the border between protective and destructive behavior is unclear.

Taungya[2]	Temporary	Kyauktaga	56	40
Yoma	Temporary	Ouk-twin	-	20
Yeaye	Permanent	Bago	-	20

As pointed out by Miller (1995), the development of the community is reflected in the efforts designed to improve social, economic and environmental well being of that community. For this reason, longitudinal research was carried out to examine the socio-economic situation of the plantation villagers in TTP conducting face-to-face interviews with plantation villagers. The first survey which was carried out in 2006 covered 90 households of three plantation villages and the second survey of 2007 covered 120 households from five plantation villages (Table 1). Based on the primary results of questionnaire survey, personal interviews had been done with the respective administrative officials of TFDs. Then, framework of model plantation village was conceptualized and presented in seminars and international conferences at Japan, Philippines and Thailand to get constructive suggestions from the academic professionals.

Finally, a proposal for the sustainable socioeconomic development of plantation villagers in Myanmar has been developed. While the proposal is not based on companion modelling which is a well-accepted approach for research relating to reformation and associated policies (Gurung et al., 2006), it is anticipated that a realistic model of plantation village can be designed, supported by all these interest groups.

4. Key Findings of Socio-economic Survey

Socio-economic survey carried out in five plantation zones in special teak plantation areas in the Bago Yoma exposed a change in the socio-economic pattern of the plantation villagers during the eight to nine years period of the special teak plantation project. Empirical analysis of these data provides insights into policies for redressing deforestation and creating forest protective groups.

The reason for the forest protective groups turning into destructive groups appears to be resulted from defects in the design of taungya project. The Forest Department chose to establish plantation villages, not with the intention of improving the quality of community life, but to overcome difficulties in the establishment of large-scale plantation projects. Local people joined the project not because they are aware of the vital role of the forests in the well-being and socio-economic development of the nation, but because they needed land to cultivate taungya for survival.

The two consecutive researches exploring the socio-economic situations of the plantation villagers reveals that the prospects of the promising living standard for permanent plantation villagers are the best at the initial stage. They are well supported with all the resources, taungya, paddy field, school, healthcare service, etc. Some of them even get the rights to establish Community Forestry Plantation (CFP). The resources for the plantation villages at

[2] Taungya village has the hill Karen whom chose to live separately on hilly regions than living together with the Bamar on more flat land so the researcher decided to analyze Karen and Bamar of Taungya Village separately at the second time.

the time of survey can be seen in Table 2. If the resources supplied are sustainable, these permanent villagers might develop into the most promising ones to become the forest protective groups.

Table 2 Authorized Resources for the Plantation Villagers

Surveyed Village	TTP	CFP	Paddy Field	School	Healthcare
Gontaung	X	X	X	X	X
Sanpya	O	O	O	O	O
Taungya	O	X	X	X	X
Yoma	O	X	X	O	X
Yeaye	O	X	X	O	X

O = Existed X = Not Existed

The empirical survey in August 2007 reveals that when TTP project is over, the permanent plantation village was left behind surrounded by teak plantations with no official land lease for agricultural cultivation. It becomes the underlying social reality of destructing plantations. The findings of Kaung (2001), and Maung and Yamamoto (2008), and the field observation at August 2007 supported the idea. Thus, the present system of resource granting, which is temporary with no long-term sustainable plan, develops as the key factor in turning permanent plantation villagers into destructive groups.

Temporary plantation villagers have sustained income, and are least likely to become forest destructive groups. However, the nature of their mobile settling makes it difficult for them to become forest protective groups. Moreover, they fall in a highly vulnerable situation from a social welfare point of view. The families of the temporary villagers face difficulties in accessing health care services and their children do not have the opportunity to attend even a primary school.

It can be concluded that permanent plantation villagers are more likely to become forest destructive groups than temporary villagers. Destruction of teak plantations, agricultural encroachment and even illegal logging can mostly be seen in the permanent villages. This destruction takes place because the villagers are surrounded by untouchable teak plantations without any formal access to resources on which to survive. This reflects the observation of Davies and Wismer (2007), who pointed out that 'When government policy restricts access to resources that local people require on a daily basis … even well-funded coercive conservation generally fails. '

This finding does not necessarily mean that permanent villages should not be established, and in fact they are critical to the quality of community life. However, it must be recognized that the sustainable socio-economic development of the plantation villagers is the key for the success of redressing deforestation through people participation. It also points out the need of land for rural people to establish agro-forestry based community forestry plantations so as to guarantee sustainable socio-economic situation. The question is from where should it start and how to handle the initial investment which cannot be afforded by rural people.

5. Framework of Model Plantation Village

There are many factors that limit the participation of local communities, including insecure land and tree tenure, social and economic uncertainty, productivity and sustainability of allotted upland farms. Unlike other forestry related models, protection and conservation will not come first in the proposal of model plantation village. Acknowledging the above criteria, they will only follow after considerations for the socio-economic problems of local communities. The proposal will set its main objective on the rights of taungya farmers who have been participating in the projects of Forest Department for several years. It will try to address the following issues:

- Settlement of permanent plantation villages;
- Ways to provide sustainable socio-economic development; and
- Responsibility of permanent plantation villagers.

For establishing model plantation villages, it would be beneficial to identify areas for TTP, for at least a 5-year project. The village could be established in the middle of a planned 5-year project area so that the plantation villagers would have secure income for at least five years.

To prevent the cause of increased in-migration and further degradation, this kind of land lease must be limited to those who participate in TTP establishment at the initial stage. Further land lease for forest occupants should follow depending on the success and failure of this program.

Model plantation village should be established on a manageable scale in terms of sharing the resources and the feasibility for the Forest Department to grant land allocation to the villagers for agroforestry practice. For this matter, it is planned to follow the step of presently managing plantation village formation. According to field surveys during 2006 and 2007, minimum household of the plantation village is 20 with the population of 88 and the maximum is 57 with the population of 280 (Table 3). Thus, the model plantation village should be within 20 to 50 households with population not more than 300.

Table 3 Minimum, Maximum Households and Population

	Minimum	Maximum	Mean	Std. Deviation
Households	20	57	42.6	18.05
Population	88	280	202	87.82

Regarding to the permanent settlement, although there are lots of examples in allowing the establishment of permanent plantation villages, it will be better to get a prior agreement from the administrative officials. From the experiences of Gontaung and Sanpya, each family can get a land granting permit from 335 m^2 up to 446 m^2. If the villagers are willing to establish home gardens, 446 m^2 should be granted and if not, 335 m^2 is enough for a family to settle in.

The next issue is the sustainable socio-economic development. The new program proposal has been made to develop Community Forestry Plantations (CFP) under the provisions of Myanmar Forest Policy (Ministry of Forestry, 1996) and Forest Law (Govt. Myanmar, 1992) and Community Forestry Instructions (Forest Department, 1995). First of all, TFDs need to have formal instruction and permission from the Director General of the Forest Department to establish village owned plantations and then they can be transferred to be maintained and used as CFP by referring Forest Law 15.A[3] and Community Forestry Instructions 4.B[4]. Apart from gardening and shifting cultivation, plantation villagers must have the right to practice agroforestry system. It is important that Forest Department establishes and transfers CFP to plantation villagers with its own fund or in cooperation with other NGOs because plantation participants who are living from hand to mouth have no time or money to establish forest plantations.

Issues needed to be addressed the program formulation after the establishment of community forests: What will it take to make community forests as sustainable source of economic income? What will it take to make plantation villagers accept the new cultivation model? What will it take to make Ministry of Forestry to accept the program proposal?

The slopping uplands of Bago Yoma need a distinct ecosystem focus. As Rhoades (1992) stated, "research that is removed from the ecosystem context often leads to shortsighted policies and programs". Besides, there is Ingty and Goswami (1979) caution that abrupt change from shifting cultivation to permanent cultivation may not succeed. It needs the involvement of shifting cultivators firstly as taungya cultivators, and gradually efforts may be made for permanent cultivation. Acknowledging these factors, it is planned to practice modified model of fallow improvement system for sloping agricultural land as a fundamental system in CFP.

[3] According to Forest Law 15 (A), the firewood plantation established by the Forest Department for a certain period and then transferred to be maintained and used as village-owned in a reserved forest or protected public forest or on land at the disposal of the Government in the vicinity of the village can be transferred to manage as community forest with the permission granted from the Director General.

[4] According to CFI 4 (b), village owned fuelwood plantations established with the permission of the Director General of the Forest Department can be transferred to manage as community forests.

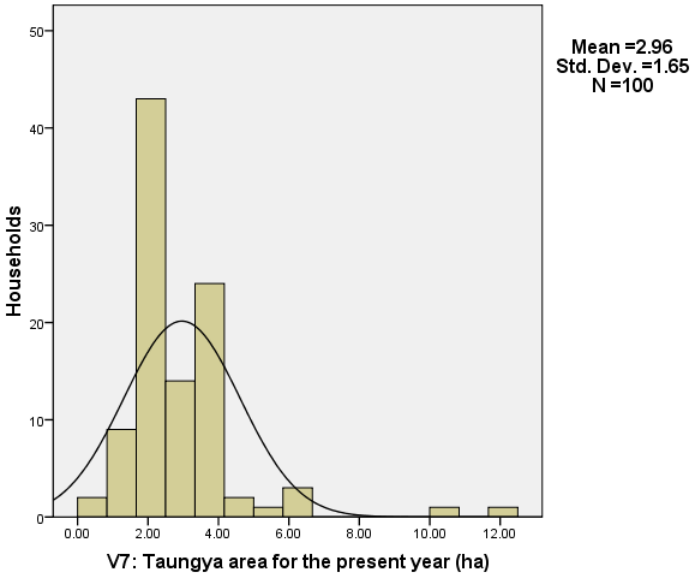

Figure 3 Cultivated Taungya Area per Household per Year in the Study Area

Land allocation right should be given at the beginning of the project for sustaining the income as soon as the project is finished. Since it is a 5 year project, the total area of taungya will be 2000 ha. From Figure 3, it can be seen that the mean taungya area per household per year is 3 ha, and that most of the households cultivate 2 ha of taungya per year. Even if TFDs give plantation villagers land allocation right of 2 ha per household to establish community forestry plantation, the total area will not exceed 5% of the whole TTP project. Cultivation of agricultural crops will be activated at the end of 5-year project.

To give land allocation right of 2 ha per household might be seen as huge amount by Forest Department. However, according to this proposal, the actual cultivable land per household per year for agricultural crops will not exceed 0.4 ha which is equal to one acre. That judgment is based on the observation of Garrity (1995) that the system is subject to absorb a large proportion of the household's available labor to manage pruning (3 to 10 times per year depending on management system). It would normally limit the land area that can be farmed to less than 0.5 ha.

Under this proposal, the allotted community forestry plantation would be divided into individual units. The number of the individual units may vary depending on the households of the plantation village. This individual unit of each family, approximately 2 ha, will be subdivided into five equal blocks. According to this fallow improvement system, agricultural crops is planned to be cultivated for two consecutive years in each block. The whole area is worked over in the cycle of 10 years, Figure 4.

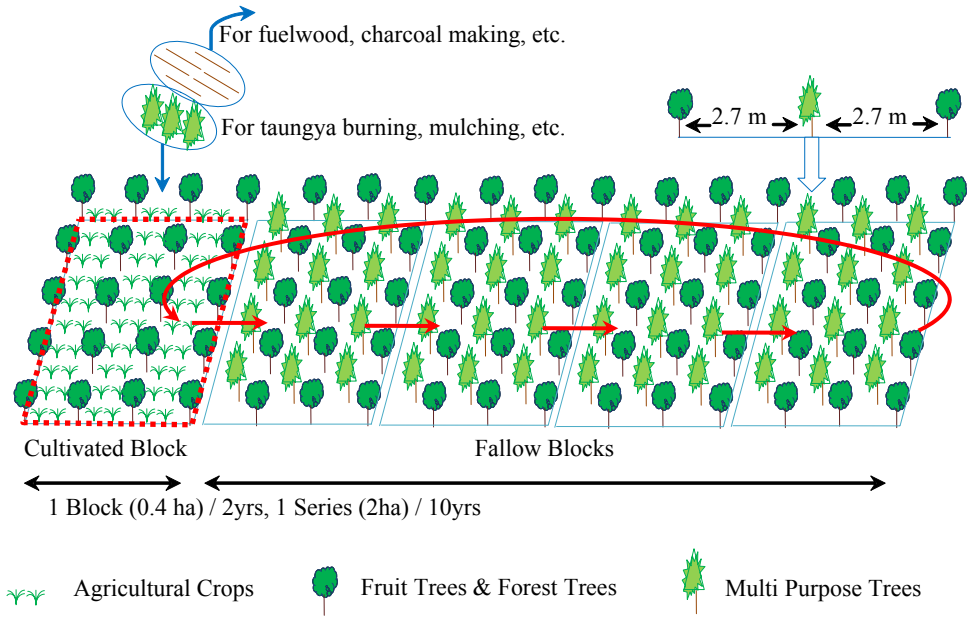

Figure 4 Model of Fallow Improvement System

Using Ruthenberg (1976) definition, 'R = (C x 100) / (C+F), with C referring to length of the cropping phase (years), F referring to length of the fallow period (years), the cultivation factor', R will be 20. It has to admit that since R < 30, the system is more similar to permanent basis rotational shifting cultivation than semi-permanent agriculture. Young and Wright (1980) stated that the available technology cannot guarantee to grow food crops in tropical regions without either soil degradation or use of inputs at an impracticable or uneconomic level. They concluded that at all level of farming, the rest period or the fallow period is essential depending on soil and climate conditions. The rest period of the proposed system for Bago Yoma region, which has undulating topography with the soil mainly of reddish brown or yellowish oxisol type with sandy loam soil texture, seems slightly lower than Young (1989) and Nair (1993) suggestion for rest period requirement of oxisol soil under traditional cropping, which is 23. However, it is expected that the fallow improvement system with a well managed agroforestry approach through conservation and restoration measures could overcome the problem and achieve sustainability with high productivity.

The duration of land lease for the establishment of CFP is initially set for 30 years which can be extended depending on the performance and the desire of the owner. Technical assistance and expertise necessary for the establishment can be obtained free of charge from the Forest Department. Benefits which can be expected by model plantation villagers are:

1. Permanent settlement acknowledged by Forest Department and local authorities;
2. Primary school and basic health care services;

3. The right to select the species composition of forest and fruit trees;
4. The right to select agricultural crops;
5. Exploitation of forest products from community forestry plantation with the approval of Forest Department, and in some cases, only after affixing the mark in the manner prescribed;
6. No tax should be levied for personal use exploitation;
7. The right to freely sell the charcoal, post, pole and timber from community forestry plantation for domestic use after paying the royalties;
8. Formation of income generation groups if possible.

The main responsibilities of model plantation villagers are to protect the special teak plantation area planted within five years, to participate in cultural operations for the development of both plantations and natural forests, and to prevent illegal land use activities. If the owners are found to neglect or violate the above instructions, rules, regulations and prohibitions, Forest Department has the right to revoke their status as model plantation villagers.

6. Conclusion

The proposal to develop modified model of CFP is assumed to serve as economic outlet for plantation villagers and also as buffer zone for the state-owned teak plantations. The research aims to take awareness of the changing socio-political environment and to review and develop strategy options. However, it has to admit that each country is a special case. For instance, Ghana's revenue sharing proposal (Agyeman, et al., 2003) cannot be asked to apply in Myanmar, and the findings based on Myanmar may not be directly applicable world-wide. It could only contribute to the idea of modifying the taungya system with more decentralization and devolution measures. The ways of approach and the levels of success may vary slightly or totally depending on the social and political situations of the respective area or country. Even so, it is anticipated that the research could take a step towards a participatory natural resource management through effective decentralization.

Instead of criticizing the top down forest management and weakness in benefit sharing regarding to state-owned teak plantations, the proposal tries to present a possible development pathway. There is no need to make distinct policy change in activating this proposal. The only thing that needed is the support and encouragement of the planners which could clear the confusion of township level officers, and giving them confidence about their work, which in turn will lead to efficient and consistent performance on ground.