



Thailand's forest villages

Krit Samapuddhi

Krit Samapuddhi is the former managing director of Thailand's Forest Industry Organization. He was instrumental in developing the forest village system.

The forest village system, developed by Thailand's Forest Industry Organization, offers hill tribesmen and others who practice slash and-burn agriculture considerable inducements to settle down. One of its principal aims is to keep a steady labour force on hand for the long-term needs of forestry, while at the same time providing rural families with an income and other benefits from the kind of farming they choose to practice.

Reforestation schemes in developed countries usually involve the planting of trees either on bare unproductive land or in areas where mature plantations have been harvested and replanting is called for in the second rotation. But the term reforestation in southeast Asia means something else. It means either planting valuable tree species in natural forest areas which have been overexploited and have therefore lost their economic value, or replanting trees in abandoned areas where shifting cultivation has done serious damage to the forest and the land. At almost every international conference dealing with tropical forestry shifting cultivation is an important topic of discussion, yet a truly satisfactory solution to this problem has yet to be found.

Rate of loss

In Thailand, destruction of forests through shifting cultivation is a serious problem. According to the most recent studies, including the FAO timber trend study for Thailand of 1972, it has been estimated that more than 100000 hectares of forest lands are being denuded annually by hill tribes and other farmers, especially in the northern and northeastern regions. The pattern, however, is gradually changing from shifting cultivation to illegal squatting. The lands involved are officially designated as permanent forests in accordance with the National Land Classification Policy. This destruction is undoubtedly due to increased population and the need for agricultural expansion. In many cases it is also a direct result of entrepreneurs supplying villagers with the necessary capital for moving into and clearing forests and planting farm crops. These settlers knowingly risk violating the forest law, and many refuse to move to areas designated for settlement under the jurisdiction of the government. When the time comes for carrying out reforestation programmes it is mainly these squatters who impede their execution.

Taungya, a combination of agriculture and silviculture practiced on the same land, was introduced almost half a century ago in Burma. The word *taung* in Burmese means hill and *ya* means field; *taungya* signifies "field crops on the hill." The use of this system in Thailand is chiefly aimed at inducing landless villagers practising shifting cultivation to plant teak for the Forest Department in allotted areas, at the same time growing crops such as rice, maize, beans and cotton between the rows of teak seedlings. These agricultural crops are harvested for the benefit of the villagers and without breaking the forest law or competing with forestry. The *taungya* system is therefore an economical method of reforestation and at the same time an acceptable form of agriculture for nomad or seminomad farmers. It has been practiced in Thailand now for more than 20 years.

Results vary

In some places it has been fairly successful, but in others, where the system was based on loose verbal agreements without any concrete assurances of security and welfare as inducements to form permanent settlements, it has been less satisfactory. Consequently, where the *taungya* system did not work properly the labour supply for forestry was usually uneven, sometimes abundant and sometimes scarce. Most of the reforestation work of the Forest Department has therefore to rely on direct employment of labour, and this can encounter opposition from illegal squatters who firmly refuse to quit the forest reserves.

In 1968 the Forest Industry Organization, as part of its work of supporting the Royal Forest Department's annual reforestation programme, initiated the forest village system, which is in effect a modification of the Burmese *taungya* method of agri-silviculture. Briefly, this is how the system works.

A reforestation unit is created, consisting of an officer-in-charge, a number of assistants, the necessary tree-planting tools and mechanical equipment. A forest village is established close to the area to be reforested, which is designated by the Royal Forest Department. The area should be large enough to enable work to be carried out over the period of years necessary for the rotation of the particular species planted.

Within the whole reforestation area annual tree-planting sections are designated. The area should be within the management capacity of the officer-in-charge. In the case of the Forest Industry Organization's work, about 1000 rai (160 hectares) are allotted for carrying out the annual planting and the villages comprise a maximum of 100 families. If the rotation is fixed at 60 years, the area for that unit is 60000 rai (96000 hectares).

Within the village each family is allotted 1 rai (0.16 hectare) for building a house and for backyard gardening and raising poultry or pigs.

A systematic programme of public information and the involvement of community leaders is necessary to gain public acceptance of forest villages before they are actually started. Meetings are held with the leaders of hill tribes and other influential individuals throughout the area, such as local administrative officers and senior Buddhist monks. There are discussions about the ways in which forest villages can help to solve many local social problems and at the same time develop the nation's forest resources.

People throughout the countryside are approached with the same ideas through

placards and pamphlets describing the purposes and advantages of registry as members of a forest village. Newspapers, radio broadcasts and television are employed to gain overall national acceptance of the idea.

A THREE-YEAR-OLD FOREST VILLAGE IN LAMPANG PROVINCE, THAILAND **fitting into a traditional way of life**

Films are shown of life in a forest village, the types of work villagers are expected to do, the kind of remuneration they may expect and the welfare and security to which they would be entitled.

From the villager's point of view there are numerous advantages in giving up an existence of shifting cultivation or squatting to settle down in a forest village.

THE STRUGGLE TO SAVE THE FOREST

During the past two decades Thailand has lost a tremendous amount of forest area, at an average rate of 5000 square kilometres per year. Back in 1952 forest lands reportedly represented 60 percent of our total land area but by 1972 they had been reduced to 40 percent.

Assuming that the rate of loss is increasing exponentially, that is, slowly at the beginning and accelerating to a maximum at the present time, the estimated loss of 1972 would amount to 15000 square kilometres and the extrapolation for 1975 should be around 20000 square kilometres. Were this situation to continue, Thailand would lose her natural forest resources within the next five years.

This assumption may seem too extreme, but we can state without hesitation that all legally accessible natural forests will have been exploited within the next five years. Only those areas theoretically set aside for special purposes such as watershed, national forest and wild, life reserve areas, which the Government is under strong obligation to protect, will survive. Accordingly, the Faculty of Forestry of Kasetsart University is expected to play a major role in national forestry, providing men trained for the management and utilization of artificial forests. Courses and research may involve plantation management, seed technique, studies of fast-growing species and so forth. Meanwhile, natural forests will not be entirely neglected, but education will be directed toward the modern concept of the multiple use of forests.

Another important aspect is extension work, which is now receiving full support: faculty members and forestry students actually participate in extension programmes, imparting information on the advantage of forests to the community, delivering lectures at elementary schools, planting city roadside trees, to help create a better informed public. For one of the conceivable factors causing excessive forest destruction is, precisely, a lack of cooperation from society, and this, in turn, obviously results from the failure of society to supply itself with the proper information.

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Apart from being provided with 1 rai of land on which to live, each family is allotted 10 rais (1.6 hectares) a year for clearing and tree planting. In between the rows of tree seedlings, which are usually spaced 4X4 metres apart, they may plant any cash crops they wish. If the tree seedlings have a minimum survival of 70 percent at the end of the year, the family also receives 60 baht (US\$3.00) per rai, in addition to the proceeds from the sale of their own cash crops. If a family works industriously for three consecutive years on an area of at least 30 rais (4.8 hectares) they earn a

bonus of 1500 baht (\$75.00). From then on, for every additional year they work the annual allotment of 10 rais they are paid an extra 500 baht. The officer-in-charge is also requested to keep the members of the village informed about market conditions and prices for their crops, and he may assist them in transporting their products to market. There are other benefits as well. After a house is built it is supplied with water and electricity. Children are entitled to free education in the village primary school, which is also under the sponsorship of the Forest Industry Organization. A doctor or nurse will visit the village to advise on sanitary conditions and to see to the health of family members.

A COMMON ASIAN LANDSCAPE, DEFORESTATION BY SLASH-AND BORN METHODS after a year of rice, centuries of weeds

To ensure continuity of employment, labour for a whole range of forestry tasks - tree nursery work, weeding, pruning, thinning, pesticide spraying - is recruited from families registered in the village, and this adds substantially to the level of income.

But useful as the forest village system can be, those who attempt to put it into effect should not be overly optimistic. Persistence, patience and an understanding of human nature are required. In regions or countries where unutilized lands are still plentiful and where, regardless of laws, people can still take possession of land merely by settling on it, it is not easy to institute forest villages, even though the economic and social advantages may seem obvious.

A FARMER IN THE PHILIPPINES ENGAGED IN REFORESTATION *it also means an income*

Meeting traditions

The forest village system can fit into the traditional way of life of shifting cultivators because it allows them to move on periodically, clearing new land as they are accustomed to do, but at the same time it develops a kind of society in which the nomadic life is discouraged. Scattered groups of people, nomadic by nature and tradition and therefore difficult to control, to guide and to educate, can be drawn together to form strong and orderly societies, and these societies can provide important labour forces for the benefit of the forests instead of their wanton destruction.

"... The human factors ... require flexibility, understanding and patience from officials"

RIFAT ALWI

In northern Luzon, the main island of the Philippines, the Forest Service has two ways of dealing with squatters who practice shifting cultivation. Some are allowed to remain, while others must move but are given a choice of locations where they may legally settle. All are assisted in various ways as a means of encouraging permanence and stability.

Rosalio B. Goze, District Forester in Luzon's Upper Agno river basin, is in charge of three sites where he deals with the settlement of shifting cultivators. He believes that the approach is succeeding, but emphasizes that the human factors involved require flexibility, understanding and patience from officials. About 80 percent of those who

traditionally practiced shifting cultivation in this area have been settled officially. The problem will now be to keep them settled.

When families are officially settled they are given leases and the land involved is declassified. They can use part of their holding for growing crops, must agree to desist from illegal cutting and are promised paid work in forestry. Cabbages, carrots, potatoes, and *pechay*, a Chinese vegetable which resembles an open cabbage, are the main crops grown. As a result of the nationwide martial law in September 1972 severe penalties have been imposed on unauthorized logging.

This combined settlement and reforestation work in northern Luzon is also being assisted by the FAO/UN World Food Programme (WFP). Over the past six years the food aid investment here has totalled US\$734000, used mainly as part-payment to settlers for tree planting and other forestry work. The same people who have made barren of vegetation the river banks, causing serious erosion and flooding, are now replanting these slopes with seedlings. Between 5000 and 6000 families were rehabilitated under this project, and 8000 hectares of forest land saved from almost certain slash-and-burn destruction.

Visitors to this area can see families working for from eight to ten hours a day in groups of about a dozen, climbing up and down the hills with bags full of Banguet pine seedlings. About 45000 million seedlings have been planted in the three forest districts of Itogen, Ambuklao and Baguio, and many kilometres of forest trails have been cut, roads maintained and check dams constructed to stop erosion and flooding.

Vincente C. Magno is the forester in the area in charge of fire prevention and control, and like most fire wardens he believes in punishment for those who set forest fires. Contrary to past practice, prison sentences are now being handed out. They are not severe, however, as clearing forest to plant food crops is hardly a crime in the minds of people who have always existed this way. Between 1972 and 1974, 20 persons were sentenced to one week in prison-an example more than a punishment-after which they were made to promise that they would no longer engage in illegal forest burning and would set to work planting seedlings in burnt-out areas.

The combination of law enforcement and fire prevention, using firebreaks and lookout towers, has resulted in a reduction in the number of forest fires from 189 in 1973 to 50 during the first six months of 1974, and these latter fires were much less damaging than those in the past.

