

Teak tree collaterals: Lessons learned from regional experiences in Asia

Working paper



Overview

- Using standing teak as a collateral asset for obtaining loans from banks and credit institutions can create opportunities for smallholder farmers, which in this context, have been excluded in the past;
- The implementation of reforms covering provincial forest tenure and forest asset mortgaging in China offers a number of best practices and challenges that form important considerations for the implementation of credit governance schemes;
- The large differences in interest rates and loan subsidies are significant impediments to implementing forest mortgages in Lao PDR and Cambodia; and
- Key partners in ministries and banks in Cambodia, Lao PDR and Thailand need to explore successful mechanisms in other countries for providing access to finance for farmers and growers, especially in mortgaging forest assets.

Introduction

Rural smallholders in developing countries face increasing pressures as environmental degradation and growing state and commercial interests in land concessions threaten existing smallholder economies. Given the multiple aspects of vulnerability faced by smallholder farmers, it is imperative to employ a diverse selection of mechanisms to maximize existing assets and secure livelihoods. The extension of microcredit is a key mechanism for investing in income-generating opportunities. Smallholders benefit from short-term loans for the procurement of inputs such as labour, livestock, fertilizer, storage as well as the processing of products; and medium- to long-term loans for the acquisition of equipment and seedlings. However, small-scale enterprises can face formidable challenges with regard to accessing microfinance services (FAO 2005).

Aware of these needs, RECOFTC's ForInfo Project has been supporting the improvement of community livelihoods through teak cultivation by smallholders using sustainable forest management principles (RECOFTC 2013). As part of this support, in December 2013, RECOFTC and the State Academy on Forestry Administration (STAFSA) organized a study visit on collective forest tenure reform and community forestry in Fujian, China. This was for the benefit of key partners in ministries and banks in Cambodia, Lao PDR and Thailand. Sponsored by RECOFTC and STAFSA a parallel workshop was organized by Fujian Ecosystem Engineering School (STAFSA 2014). Workshop content was provided by representatives and experts from the State Forestry Administration, Forestry Department of Fujian Province, China, RECOFTC and other scientific institutes.

Apart from the Chinese delegation, there were 13 participants (five from Cambodia, three from Lao PDR and five from Thailand) from a range of sectors: microfinance institutions, banks, community forestry organizations, international organizations and departments of planning, agriculture and forestry. Another 16 persons working in collective forest tenure reform and rural and community forestry in China also attended.

This brief provides a summary of lessons learned and participants' responses as well as a list of key concerns and considerations in the context of creating an enabling environment for microcredit among smallholder farmers.

Forest and land tenure reform in China

Collective forests make up 58 percent of forest land in China (Xu et al. 2010) and 94 percent of its cultivated land (Kram et al. 2012). There are two main kinds of land ownership in China: state and collective. Land cannot be privately owned but use rights are allocated to individuals and groups for 30 to 70 years. Land tenure reforms were instituted in the 2000s to pave the way for farmers to obtain easier access to loans and to increase productivity. In 2008, the Central Committee issued the No. 10 Document proposing collective forest tenure reform in order to promote sustainable forest development and to increase farmers' income and productivity by providing easier access to loans. This reform proposed to give individual farmers rights to the use of farmland on leases of 30, 50 or 70 years, which could be extended indefinitely. The reforms were based on pilot projects conducted in a number of provinces.

These new titling arrangements gave rise to new loan products aimed at farmers. In 2009, the Bank of China, Ministry of Finance, China Banking Regulatory Commission, China Insurance Commission and the State Forestry Administration, jointly issued the 'Guidance on Financing Services for the Support of Forestry Development in the Context of Collective Forest Tenure Reform' (Xiao, et al. 2010). This guidance permitted farming households to obtain loans from banks by using standing timber in their contracted forestlands as collateral. By the end of the year, 25 provinces had launched forest tenure mortgage schemes to a total of RMB 22 billion yuan (Xiao, et al. 2010). In that same year, pilot forest insurance schemes in Fujian, Jiangxi and Hunan province were implemented, followed by Zhejiang, Liaoning and Yunnan provinces the following year. Insurance premiums were subsidized by the central government (30 percent of premiums) and provincial government (25 percent of premiums). According to the Forestry Law of 1998, timber harvesting is subject to quotas and the annual rate of timber growth must exceed consumption (Xiao, et al. 2010).

Use rights and rights to timber

Forestland use and forest asset certificates as collateral mechanisms are viewed as providing new opportunities for the development of new loan products and the entry of new finance institutional actors (Mao and Shen 2009). There are two main forms of documentation for rights to plant: use rights certificates and ownership certificates. Use rights are rights to forest land, while ownership rights are rights to timber (Mao and Shen 2009:20). Use rights vary across land use and land cover types but the law permits for the indefinite renewal of contracts. However, the law does not stipulate the processes of renewal, fee structure and extensions on contracts (Kram, et al. 2013). Forestry contracts are typically 30, 50 or 70 years long; and according to law, can be renewed pending approval by the State Forestry Administration.



Holders of use rights have the following entitlements: the right to make production decisions; the right to utilize and obtain profits from the land and its natural resources; and the right to transfer use rights to other parties through subcontracting, leasing, exchange and inheritance, although these forms of circulation are subject to the terms of the original contract. Use-rights holders are obliged to adhere to county and township land-use plans, and also to honour contracts made in the leasing, exchange and transfer of the use rights of land. However, expropriation of land by the government for the sake of 'public interest' is allowed under Chinese law, which can render any existing contract void. The law mandates compensation for land acquired by the government. Holders of use rights receive two documents – a contract from the managers of the collective land and a certificate from the local government.

Use rights can be exchanged, so they have a value defined by an actual exchange value (the price at which another person buys the rights to use the land) (Wei and Ge 2011). Use rights of 'timberland, economic forestry, fuelwood and woodland' are transferrable and can be converted into shares (Wei and Ge 2011:145).

If a farmer defaults on a loan with timber assets as collateral, use rights to the land and the ownership rights to trees are lost. In order to repay the loan, use rights must be sold as well as forestry asset ownership rights to someone for the rest of the tenure period. As these rights are allocated over 30- to 70-year terms, the new owner of these rights buys the use rights for a particular plot and/or ownership rights of forestry assets for the remainder of the tenure.

Loans based on forest mortgages

According to Wei and Ge (2011), the Lishui model (Zhejiang province) was one of the key pilot projects that provided the blueprint for establishing forest mortgage financing in China. The following section considers Mao and Shen's (2009) explanation of the Lishui model in order to understand how forest mortgage financing is implemented and to investigate if land values are included in the valuation of mortgages.

In 2006, Zhejiang province instituted new forestry reforms, at the core of which were the financial reforms and forest right mortgage loans (Mao and Shen 2009). The loans, first issued in 2007, were a way of introducing a new kind of collateral or mortgage material in the field of forest ownership rights. By May 2009, Lishui had issued a total of 10 125 forest right mortgage loans worth 428 million yuan. The loans were largely used for planting new forests for commercial production and as a secondary industry (Mao and Shen 2009). Together with a wide variety of financial reforms, including implementation of a forest rights mortgage rate and small loans to low-income farmers, the government initiated a forest insurance policy to prevent forest right mortgage loan risks. Each city will introduce forest rights mortgage-related incentives but all will be confined to small loans (20,000 to 50,000 yuan). A discount policy will also be in place for poor, low-income households. Forestry workers are given business loans at 30 percent of the county treasury discount. A financial hardship loan discount is also given to low-income households. The People's Bank of China sets the benchmark interest rate for all microfinance lending.

There are three kinds of forest mortgage loans that allow farmers to bring their legally-mandated forest rights certificates directly to the bank for use as collateral in applying for a loan. These are: 1) the small farmers' revolving loan; 2) the forest rights direct mortgage; and 3) the secured loan. For small farmers' revolving loans, borrowers first submit an application. Banks (credit unions) will then impose a credit rating on each farmer that is appropriate to the loan limit. The forest rights registration authority conducts an on-site forest rights mortgage registration. It then issues a 'certificate of registration of forest rights mortgage guarantee' before a loan is issued. For forest rights direct mortgages and secured loans, intermediary rating agencies assess the 'forest resources assets' of the borrower before forest ownership registration proceeds and forest rights mortgage loan certificates are issued. However, it is not clear how the *value* of these certificates is calculated.

Some common problems related to tree certificates as collateral include: inadequate capitalization due to different time frames for forestry production and loan repayment, high interest rates, inadequate competition of rural lenders leading to low rates of use, defaulting on loans, small loan amounts leading to inadequate capitalization, excessive pressure on the monetary system caused by guaranteed amounts far exceeding the capital available and inadequate assessment methodology (Mao and Shen 2009). Many of these issues mirror those of bank and financial institution representatives in Cambodia and Lao PDR *vis-à-vis* the adoption of forest certificates. In case study sites, most of the small loans currently offered have a maturity of one year and do not exceed three years, which is too short a time compared to the long production cycle associated with forestry. The dilemma posed by the forest rights mortgage loan system not meeting the capitalization needs of the forest mortgage funds is therefore a challenge. High lending rates are another impediment to wider implementation. Banks offering loans on forest rights mortgages adopt a floating rate for interest of not more than 50 percent. However, banks currently involved in lending are largely rural credit cooperatives in cities, counties and districts that exercise autonomy in determining how much interest rates float around the municipal benchmark of 50 percent. As a result, average interest rates have reached up to 1.5 times the benchmark rate. Although farmers enjoy subsidies, the high rate of interest has deterred a number of ordinary mortgage lenders (Mao and Shen 2009).

Wei and Ge (2011) noted several obstacles to forest rights mortgaging in China: high assessment fees, complex mortgage valuation, the imperfect forestry market and the lack of risk protection mechanisms, especially for lending institutions. With respect to complex mortgage valuation, there are great value differences between forest types and forest stand ages, leading to complex valuation assessments. In addition, because forest resources cannot be freely traded, are easily stolen and are subject to natural disasters, present risks to financial institutions and farmers have yet to be attenuated by insurance institutions. The trading and exchange of tenure rights also carry significant risks (STFA 2014).

In spite of these challenges, Yi et al. (2014) found that mortgage rights, together with rights to transfer forest land to other villagers and to change forest type, stimulate householders to invest in their forest land. China's forest tenure reforms, which allow for legal certification and strong contract rights for individual households to manage forest land, enhance tenure security and encourage forest investment. The positive effects on

increasing individual responsibility prompted a STAFA official to suggest awarding rights to farmers on the condition that they demonstrate responsibility in farming judiciously. He also found that it was crucial to engage third parties in conducting financial evaluations, assessments and information collection. The establishment of a forest insurance policy, as well as the support of financial and government institutions were also stressed as key measures.

This review of forest mortgage processes in China is highly selective and restricted to examples in Fujian and Zhejiang provinces. A more structured investigation of forest asset valuation best practices with fieldwork may be necessary to improve our understanding of ownership and use rights as forest mortgage, especially the inclusion or lack thereof of rights to land.

Lessons learned

Chinese land reform and the forest asset mortgage system are progressive and integrated. However, some countries do not have many of the conditions that allow for smooth implementation of these strategies.

The case of bamboo production in Yong'an City is a good example of the integration of all aspects of the supply chain. Government regulation of the supply chain means that linkages are set up among growers and processing factories, as well as buyers. Processing plants are set up near each village. Farmers take responsibility for their allocated plots of land. There is considerable transparency on commodity prices as the government broadcasts the current price of bamboo both online and electronically in front of factories, thereby helping to reduce instances of fraud. Quotas for felling bamboo are also instituted and enforced by the government. The clear livelihood-market linkages facilitated by government initiatives are an important lesson that other government offices should follow.

The large differences in interest rates and loan subsidies are significant impediments to implementing forest mortgages in Lao PDR and Cambodia. Interest rates for microloans in Fujian are around 5 to 6 percent, while in Cambodia and Lao PDR, they are 19 to 20 percent. This is due to the high interest rates at which banks in Lao PDR and Cambodia have to borrow from the central bank. Unlike in many of the Chinese cases, governments in Lao PDR and Cambodia do not subsidize loans. At such high interest rates, banks anticipate risk of default among borrowers as also high.

The high rates of loan interest are due to the absence of diversified livelihood opportunities. In the Chinese context, income from bamboo or tree planting is often supplemented by the availability of work and entrepreneurship opportunities, including the possibility of waged labour at processing and other factories nearby. In the case of smallholders in Lao PDR and Cambodia, such opportunities often do not exist close by, and income from teak and other plantation crops does not yield regular remuneration.

The establishment of a legal framework by the government before the widespread acceptance of forest asset collaterals is important. Countries in the region lack the budget, capability and links to research institutions to implement a well-integrated policy of collateralization and to undertake financial reforms. Chinese law allows individuals to manage their own land and plantations. Regionally, application of the law over land management decisions is inconsistent.

In China, including land in mortgage calculations brings risk to farmers. Farmers could end up losing not just their crops but also the land they farm on. In Lao PDR, the attempt to take land out of the mortgage valuation could help to lower the risk attached to forest mortgages for Lao PDR smallholders.

The risks faced by banks in offering tree collaterals are outlined below:

- Low returns for farmers and growers. A community forestry representative pointed out that commodities were priced much lower at harvest than market prices; that this was also dependent on the buyer and particular relationships between buyers and growers. Market prices and international prices were not accurate reflections of price of commodity at harvest. Any loan assessment based on this higher market price would underestimate the income earned by farmers.
- Non-agricultural uses for loans. It was pointed out that there is a tendency to use loans on borrowed investing in agriculture and plantations. In Bokeo, Lao PDR loans are also used for medical expenses, to send children to school and purchase rice during rice shortages.
- Increasing prices of agricultural inputs. Loans based on prevailing market prices of crops need to take into account the rising costs of machinery, harvesters, fertilizers and transportation equipment. While international prices for crops often stay the same compared to the year before, material costs increase every year.
- Central bank policies. A representative of a bank with small loan schemes gave an example of central bank policies that made it difficult for the bank to offer loans at lower interest rates to farmers. Medium-term loans charged customers 13.5 percent with the first deposit at eight percent. The policy of the central bank is that banks cannot charge interest exceeding five percent of the difference between the loan and the deposit.
- Lack of compliance to existing laws. At times, forestry departments as well as private sector actors fail to comply with existing legal frameworks for the sale and transfer of assets. This reduces the confidence of banks operating in these areas.

Banks would be readier to accept tree certificates as collateral and concomitant risks would be mitigated if:

Clear procedures established for inventory, documentation, and contracts. Standing timber reserves should first be inventoried and then Memoranda of Understanding (MOUs) with farmers be established. Teak certificates should be produced from these MOUs and used to gain legitimacy for bank loans.

Benefits, structure and methodology of teak valuation and certification clearly communicated. The idea of teak as asset should be explained to banks and other relevant

organizations. Capacity building for these organizations should be promoted. Workshops should be organized wherein growth characteristics and valuation methods for teak are explained.

Government takes initiative to build relationships with the private sector.

Government agencies should take the initiative to forge relationships with the private sector. An example in the case of northern Lao PDR is Burapha, a timber company based in Vientiane that sources their teak timber from Luang Prabang.

Better control of product chain and oversight on prices. Government agencies need to better control product chains and give security to buyers, farmers and banks by having contracts with farmers and keeping watch on prices for these commodities. Government involvement is needed for supply and demand nodes to be linked, and also to ensure prices paid out for commodities are fair to the seller. At this point, farmers operate outside of the network of the commodities trade and have no experience linking to markets.

Legal frameworks established for forest asset collaterals. While participants appreciate the work being done to increase acceptance of teak certificates as collateral, they stressed that the laws need to be fully in place for micro financing and banking. The terms of the loans must be clear and banks and borrowers must comply. It was noted that in China, the rule of law was strong and there was a high degree of compliance with the law.

Improve processing methods. Participants from Lao PDR acknowledged that while it was difficult to enact structural changes in the short term, we could learn from the bamboo processing example in China. By improving methods of harvesting, processing and transportation of teak, we could increase smallholders' incomes. Sawmills could be established closer to teak-growing areas.

Wider recognition of certificates. Participants believed that it would be ideal if tree certificates were recognized by international organizations and governments, and that the prices stated would be secure and guaranteed. This would assure banks that farmers will obtain returns from the sale of their crops.

Need to educate financial institutions and partners on tree collaterals. Participants believed that it would be valuable to organize a similar workshop for banks to understand how teak as an asset could be used as collateral. One participant suggested organizing a workshop to discuss some of the challenges they faced working with different stakeholders in using tree certificate collaterals.



Managing risk

The adoption of forest certificates as collateral, as part of Chinese land tenure reforms in the late 2000s, presents an attractive case study for countries like Cambodia and Lao PDR, and therefore is likely to be given close attention in the coming years by forestry practitioners and state governments. As described above, a clear set of legal and financial mechanisms exists from national, provincial to county levels for the sale and processing of trees such as bamboo. The vertical integration of planting, harvesting, and processing segments of the supply chain at the village level provides a measure of security, that collateral certificates based on net present value of trees is closer to actual prices at stand maturity and harvesting.

A key factor for the use and acceptance of tree certificates is the mitigation of risk. As participants have noted, Chinese farmers have opportunities to work for cash in order to recoup losses and to repay debt. Forest insurance plays a significant role in buffering tree growers from risks such as disease and crop failures, and provides an opening for risk-taking that may be otherwise absent (Figure 1). Harvesting before maturity is also a less common phenomenon. However, for smallholders in northern Lao PDR engaged in teak, different legal and household-scale conditions exist for predicted value to be an effective metric in mortgage considerations. As mentioned above, net present value calculations give higher stand values. This fact makes the valuation method less tenable in contexts like rural Lao PDR, where households show a high tendency of harvesting trees at times of financial needs before the trees reach more profitable diameters.

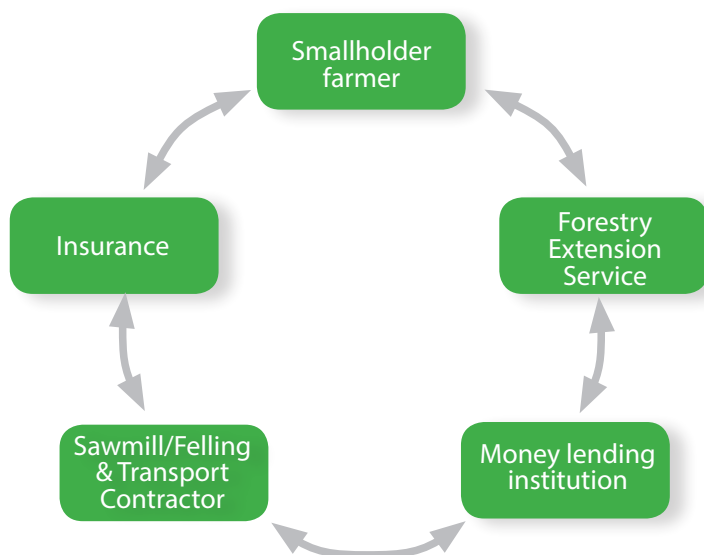


Figure 1. Economic relationships between farmers, contractors, financial institutions, and extension services in a teak economy with the role of insurance as helping to mitigate the risk of loan defaults.

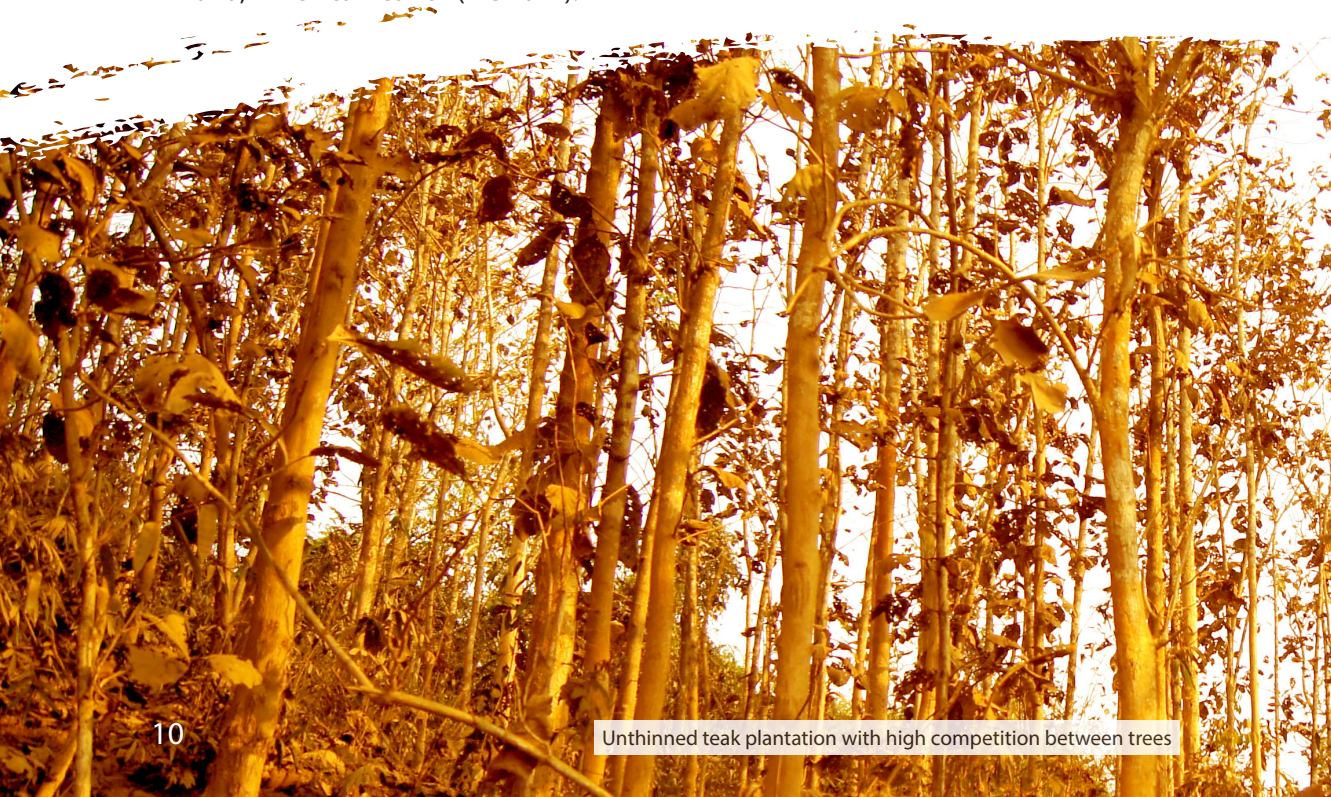
Farmers do not receive loan subsidies like in China, although in Thailand, agricultural banks can provide loans for plantation establishment. Farmers in Lao PDR harvest for a number of cash needs. These include medical expenses, to send children to school, to purchase rice during rice shortages, and to buy small hand tractors for harvesting. In such cases, using predicted value as a value estimate on collateral certificates carries a considerable amount of risk especially in the first five years after planting. For example, if a grower defaults on his debt before their trees reach the minimum age at which they can be harvested for a minimum return, they cannot harvest their timber in order to repay the loan and will be liable for a larger repayment amount as reflected in the higher valuation of trees in the collateral.



Short- and medium-term strategies

Institutional support for forest asset collaterals is necessary for the acceptance of relevant certificates. China presents an ideal case where strong government initiatives and ability to enforce the law allow for system implementation; however this cannot be easily replicated in Lao PDR and Cambodia, where financial regulations and government capacity for oversight remain poor. In the absence of strong institutional support, a number of short- and medium-term strategies could be explored. These are:

- Organize workshops to communicate and discuss best practices for teak valuation and certification with bank representatives, government officials and policy-makers at organizations involved in private sector development, structural reform and government capacity development, such as the International Finance Corporation (IFC) and the Asian Development Bank (ADB);
- Improve harvesting, transportation and processing methods to increase the profits of smallholders who can sell timber that they fell, harvest and transport to the nearest road;
- Strengthen and/or establish cooperative structures among village members to better work with financial institutions and buyers; and
- Build on existing and upcoming initiatives such as the IFC's moveable asset/collateral registry in Lao PDR (IFC 2014). The collateral registry, initiated in 2013, aims to assist small and medium enterprises in obtaining credit, as well as providing banks and lending institutions with access to the small business market. Borrowers and banks register in the online system, making it easier for lenders to obtain reliable information about their clients, assess their credit-worthiness and lower the incidences of loan defaults. There has been an emphasis to encourage alternative collateral assets to land, which carries risk (IFC 2014).



Recommendations

Using standing timber as a collateral asset can create opportunities for smallholder farmers to obtain credit from financial institutions.

The implementation of reforms covering provincial forest tenure and forest asset mortgaging in China offers a number of best practices and challenges that form important considerations for the implementation of credit governance schemes, such as the need for improved links among the different parts of the timber supply chain and the enhanced, timely acquisition of information on commodity prices.

In these contexts we advocate:

- Disseminating best practices for teak valuation and certification to bank representatives, government officials and policy-makers;
- Stimulating investment in harvesting, transportation and processing methods to increase the capacities of smallholders in felling, harvesting, transporting and selling teak;
- Strengthening village cooperative structures to improve advocacy with financial institutions and potential buyers, and to help secure buyers for teak; and
- Establishing a system of third-party actors who can help lending institutions track movable assets.



Teak plantation after thinning with good diameter increment

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Measuring top end log diameters at standing trees with a template



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