



Livelihood Improvement through Generation and Ownership of Forest Information by Local People in Products and Services Markets

BACKGROUND

The landscape of Northern Lao PDR has been shaped by shifting cultivation, creating vast areas of secondary forest vegetation. Man-made forest fires – often emanating from tracts of land cleared for swidden farming – occur annually and are the most common source of dry-season haze pollution. Bamboo species play a key role in this system. They dominate secondary vegetation and can accumulate considerable biomass of up to 50 tons (dry)/hectare. As well as suppressing the regeneration of permanent tree species, the dead biomass accumulated over several decades creates enormous fuel loads, which are further increased by the die-back of bamboo after flowering cycles. Both mechanisms can result self-perpetuating forest fire cycles.

Two companies are in the process of establishing bamboo processing ventures in Bokeo Province's Meung District. Yon Sing Hang Co, a Chinese paper pulp company, has leased a concession of 3,200 hectares and Lao Da Zhong YaVigorgus Carbon Factory Ltd, a high-quality charcoal enterprise, has leased 550 hectares. The factories are expected to extract over 8,000 tons of bamboo per year.

The development of industrial bamboo processing in the region's secondary forests will help to prevent the buildup of biomass. It also creates realistic opportunities for the commercial extraction of bamboo. However, current low raw material prices (US\$8-\$10 per ton), combined with low harvesting efficiency (0.5 to 0.75 ton/person/day), fail to provide adequate income for local communities. As a result, villagers show little enthusiasm for bamboo harvesting, leaving the factories no choice but to hire labour from neighbouring provinces.

Through a variety of strategies, ForInfo aims to improve bamboo management, promote forest restoration, and create mutually beneficial opportunities for villagers and the private sector in the two concession areas.

APPROACH

ForInfo is working with the two companies as they develop their operational plans and facilities. Specifically, it is supporting the creation of a partnership between the paper factory and four villages, which will include fair supply arrangements and raw material pricing. Ultimately, bamboo harvesting is expected to become a significant contributor to household income either year-round or on a seasonal basis.

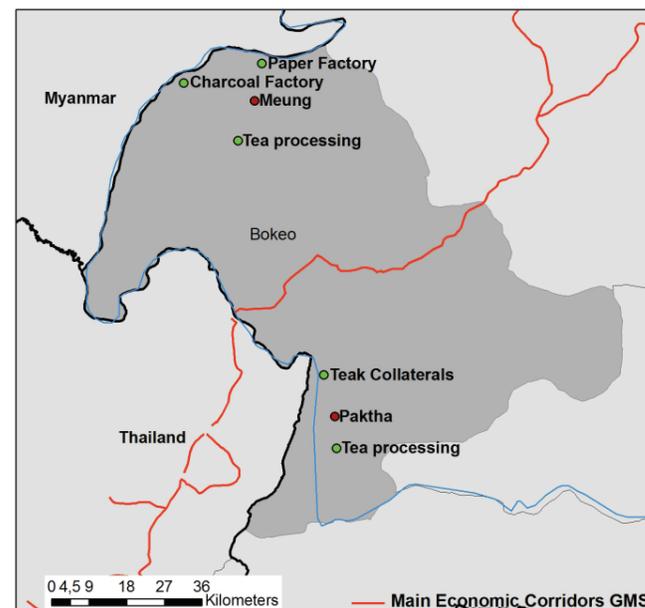
Besides private enterprise, ForInfo's project is bringing together government officials, community associations and other NGOs in order to foster wide stakeholder ownership and sharing of responsibilities in the roll out of activities.

One key activity is the identification of more efficient extraction methods to harvest bamboo, from the cutting of bamboo culms to their extraction from entangled clumps and their forwarding (skidding) to all-weather roads. These methods are being tested in comparative field trials and analyzed in terms of ergonomics and economic performance. ForInfo will help local producer groups – eventually to be organized as a provincial-level association – access microfinance credit to purchase the necessary machinery and equipment.

Opportunities will also be created for villagers to use secondary forests through planting of improved varieties of bamboo, other non-timber forest products and timber species under the umbrella concept of forest restoration. These will be linked to ongoing activities in biodiversity conservation areas and production forests in the Northern provinces. Additionally, forest fire monitoring for Meung District will be integrated into the project, eventually leading to a possible REDD+ (reducing emissions from deforestation and forest degradation) approach at the district level. Benefits from future payments from REDD+ schemes to local communities are being studied. ForInfo will capture the effects of the fuel load reduction strategy on bamboo carbon sinks following a new voluntary carbon standard-based methodology currently being developed by the International Network for Bamboo and Rattan (INBAR).

As part of its strategy, ForInfo aims to raise local communities' awareness of environmental issues related to secondary bamboo forests, such as fire prevention, an overall shift to perennial cropping systems and improved forest management. In this regard ForInfo supports innovative information, education and communication campaigns in partnership with government agencies, local NGOs and other partners. Also planned are exchange visits and comparative biomass inventories, with small-scale bamboo producer groups in the Ngao Model Forest in Thailand's Lampang Province, where secondary bamboo forests have been managed through harvesting for local handicrafts and charcoal manufacturing.

The regular extraction of bamboo in harvesting cycles of five to six years should be able to prevent the accumulation of dead biomass, therefore leading to reduced fuel loads and a lower incidence of forest fires.



Manual loading of Bamboo poles for transport

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About RECOFTC

RECOFTC – The Center for People and Forests is an international organization with a vision of local communities actively managing forests in Asia and the Pacific to ensure optimal social, economic, and environmental benefits. Headquartered in Bangkok, Thailand, RECOFTC works throughout Asia and the Pacific. Learn more at RECOFTC.org.

Baseline

Two bamboo processing industries with annual consumption of approximately 8,000 tons have been established in Meung District.

Current bamboo harvesting methods and practices allow for daily income options at a maximum of US\$5 per day (compared with US\$10 for rubber harvesting).

Local communities are not involved in commercial scale bamboo harvesting.

Targets

Interest in further investment in the bamboo sector is raised through dissemination of information through regional platforms.

Improved bamboo harvesting technologies lead to increased harvesting efficiency, creating income opportunities at a minimum of US\$12/day/person.

Local communities are involved in sustainable commercial scale bamboo extraction in two existing concession areas of Meung District.

PROJECT OUTPUTS

1. Inventory methods and carbon storage assessment of bamboo that meet Voluntary Carbon Standards (VCM) and Clean Development Mechanisms (CDM) standards are in place. Management plans for the target village areas are used to guarantee the sustainable supply of at least 8,000 tons of bamboo per year for the two bamboo processing enterprises.
2. Appropriate and innovative harvesting methods are tested and financially assessed to extract bamboo by manual operations including: (a) up and downhill skidding with horses/mules (b) downhill skidding with two-wheel handsulkies and (c) rubber-tracked mini-skidders for inaccessible and steep terrains.
3. Better market information improves the raw material supply chain between villages and factory and is used to attract further investments in Lao PDR's bamboo sector.

PROJECT OUTCOMES & IMPACT

ForInfo's technical experts have trained forestry officials on the use of tools like Global Positioning Systems (GPS) and mapping software, and conducting on-site plantation registration surveys, forest inventories, and issuance of plantation certificates. These certificates have resulted in stronger and clearer teak tenure rights in Bokeo province. Staff have also received training in database management of the certificates to give smallholders more information and thus greater market access to sawmills and traders.

Helping teak farmers to harvest more mature trees and increase the value of their holdings is only part of ForInfo's objectives in Bokeo. Ultimately, the project aims to lay the groundwork for a sustainable, efficient and competitive forest-based livelihoods system through the use of innovative approaches and closer collaboration between smallholders, forestry officials, sawmill owners, timber traders and credit associations. -



After the harvest: a Farmer inspects the bamboo culm.



Ready for transport: the ForInfo bamboo crawler is loaded with over 350 kg's of fresh bamboo.



MINISTRY FOR FOREIGN AFFAIRS OF FINLAND



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About ForInfo

ForInfo, a two-million-euro project funded by the Ministry of Foreign Affairs of Finland, supports communities in Lao PDR, Cambodia, Thailand, and Vietnam by linking them with existing and new markets, such as ecosystem services. The project helps communities maximize their profits while using their forests sustainably and efficiently. ForInfo's work generates key information to enable communities to improve their access to markets and achieve stability in their livelihoods. Learn more at <http://www.recoftc.org/site/resources/ForInfo/>