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Blog Post

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IT'S ALL-INCLUSIVE: HOW A LARGE-SCALE BUSINESS USES AGROFORESTRY TO REBUILD POST-WAR LAOS

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Banana farmer in Laos. Photo by Phoonsab Thevongsa on Flickr.

For centuries smallholder farmers have combined crops and trees in agroforestry systems to ensure agricultural productivity and healthy ecosystems. The small-scale practice has proven to be effective for better yields, diversification and soil quality. But can it be scaled up? There is an agroforestry project in Laos that combines commercial forestry with local food production, keeping profits intact.

The Laos management team of Stora Enso, one of the largest pulp and paper industry groups in the world, pioneered a new model for timber

production. In contrast to most other plantation operations, the company's new model counterbalances interests of all the relevant stakeholders, integrating food security and commercial wood production.

How can a multinational, large-scale pulp and paper industry meet commercial goals by using practices that squeeze timber, rice and cattle production into the same space? Peter Fogde, Chief Operations Officer at Stora Enso Laos, believes it is possible, but that one has to put farmers at the centre of the approach:

"You can't work against the farmers, you need to work with them, with the people and their needs. That's how you succeed".





Photo courtesy of Peter Fogde, Stora Enso.

Treading carefully

Laos is the most heavily bombed nation per capita. Many of the bombs dropped during the Vietnam War remain undetonated. These bombs are not only life-threatening, but also block the road to food security and social development, including any on-land business operations, like forestry or agriculture.

That is why the project Stora Enso is implementing in the Saravane and Savannakhet provinces of Southern Laos builds on three pillars: bomb removal, agroforestry and development investments. Clearing the land of the bombs is technically complicated, costly and requires specially educated and accredited staff. A large part of the challenge lies in locating the bombs because they are roughly the size of an orange, and there is one bomb per hectare on average.

So, why start a project where the first step involves high-risk activities such as bomb removal?

Laos was chosen for a number of reasons. Firstly, the country has a large portion of degraded land – a tragic remnant of the country's war-torn past. During the Vietnam War, American troops sprayed Agent Orange, a tactical herbicide, on an enormous scale along the Ho Chi Minh Trail in Vietnam and Laos. The results are long-term health effects, widespread destruction and land degradation. However, because of the large areas of degraded forest land, the project could be implemented without deforesting, which, paradoxically enough, played a positive role in terms of sustainability.

Secondly, Laos has convenient access to global markets because of its geographical location.

Thirdly, the climate in Laos is perfect for planting fast growing trees, like Eucalyptus and Acacia, which are the most commonly used sources of raw material in many fibre-based products.





Photo courtesy of Peter Fogde, Stora Enso.

Establishing common ground

The Laos project started with socioeconomic surveys in 2005, plantation model development in 2006. The first agroforestry plantation was established in 2007. The Free Prior Informed Consent (**FPIC**) principle was a fundamental part of the project from the start. It means that communities are provided with all the necessary information about the project before and during its implementation, that decisions are taken on a collective basis and that all actions need to be approved by the community as well as adapted to their specific needs.

This marks a change from how things have been done in many land development projects before. Quite often the project approval was only sought from the central government with no or very limited consultation with the affected farmers. Using the FPIC approach, the project strengthened voices of the youth, women and marginal ethnic groups within the villages.

Peter Fogde admits that change is excruciatingly slow – the old social structures have cemented gender roles. Males have traditionally been the sole decision-makers in the villages and have not included women or their interests in the process, even though women do all the work on the farms. “The women see the benefit of working with agroforestry and multifunctional landscapes, and the men often don’t. The women in the villages are therefore much more prone to collaborate with Stora Enso than the men,” Peter says. He hopes that through their efforts, this agroforestry model can improve women’s livelihood and their position in the village hierarchy.





Photo courtesy of Peter Fogde, Stora Enso.

Introducing a unique agroforestry model

The second pillar of the project, agroforestry, was specifically adapted for the area of implementation. Before, only 0.1% of land in the districts was under permanent cultivation, the rest of the land was under rice cultivation with the unsustainable **slash-and-burn** method.

The new agroforestry model mixes commercial eucalyptus plantations with rice fields, the main staple food of the farmers. Usually in tree-rice agroforestry the crops are rotated after one year, but in this particular model, which has unusually wide spacing of the tree rows, one extra year of rice cultivation was added to the planting cycle. This was done due to a very low level of food security in the project area: “We needed to enable food production and extra income for the farmers to be able to start the project,” Peter emphasizes.

Eucalyptus trees are normally planted with two by three-metre intervals in order to maximise timber yields. In this new model, the trees are instead planted in nine-metre intervals, providing enough space to cultivate rice for two years in a row. This model was previously tested in Thailand with positive results.

The planting cycle follows rotation of crops starting with rice, followed by shade resistant cassava and later by wild grass or rattan. The latter is used

as fodder for cattle that roam in the plantation fields. Even though the farmers don't own the land, they can use it as they see fit, as long as the planted trees are not damaged. After the company harvests the trees, farmers collect the leftover timber, which provides enough fuel to maintain their basic energy needs.

Interestingly enough, the yield of timber in Laos is only slightly lower in comparison to conventional plantations, which might seem counterintuitive at first. "Given the wider space between the trees, we first thought we would lose a lot of wood production. The agroforestry system actually provides better protection for the trees and we can see less damage from pests and forest fires, compared to conventional planting. Looking at the entire plantation area, the production level is almost the same, but in the meantime we can also provide food, fuel and fodder for the local people who work at the plantations," Peter explains.

He emphasizes the importance of responsive project design. According to Peter's experience, it is essential to pay attention to the specific needs of the local environment and listen to what local people have to say. This approach reduces the risk of barriers and setbacks in production that are otherwise common in conventional commercial forestry.





Photo courtesy of Peter Fogde, Stora Enso.

Empowering local communities

The last pillar of the project is the Village Development Fund, voluntarily initiated by Stora Enso. It was introduced to formally channel revenues to the communities: the company leases the land from the Government of Laos, which does not imply the villagers get direct income from land cultivation.

Setting up the fund enabled the farmers to make independent decisions about what the money should be used for. In many cases the funds have been used to improve access to electricity and clean water, to buy cattle for

the villagers, as well as for building houses for teachers. “The schools are often already there, but it is hard to attract educated teachers without offering them a place to live,” Peter explains.

At this point it is worth mentioning that Stora Enso's Laos venture is not a charity. Rather, it is a strictly commercial project. At its core is making profit from tree plantations, while striving to meet the interests of all the stakeholders. In other words, it is an all-inclusive business model.

But can this model work elsewhere? Peter speculates: “Large companies are often stuck in old habits and ways of thinking, and have difficulties changing their current models, especially after they have already been implemented.” However, the accomplishments of this project in Laos and the progress made in terms of integrating corporate and local interests are hard to ignore.

Peter continues: “When a South African colleague of mine was first introduced to the project, he said that if they had used this method from the start in his home country, they wouldn't have had the massive social

problems that they have today. This really shows the benefits of working in collaboration with local communities”.



Photo courtesy of Peter Fogde, Stora Enso.

What comes next?

When asked about the long-term goals of the project, Peter makes it clear that Stora Enso wants to keep expanding the model to include more villages

and farmland: “We have planted 3000 hectares in 10 years; we need to plant 3000 per year for it to be interesting”. If the expansion and scaling-up of this plantation goes well in terms of sustainability and profitability, it could lead to changes on multiple levels. First and foremost, agroforestry could ensure food security for many Laotian communities. Furthermore, the innovation itself behind the model, in comparison to traditional commercial projects, could catalyse change among other timber company’s business methods as well.

The three pillars of the project as well as the basis in FPIC offer a promising way to scale agroforestry. Clearly, this example proves that doing well by doing good can work in large-scale timber production.

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