



Briefing paper

Revitalising rubber agroforestry in Simpang Dua, West Kalimantan, Indonesia

Lessons from the Working Landscapes programme



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Takeaways

- > Many farmers in West Kalimantan have been converting rubber agroforests to monoculture oil palm plantations, decreasing diversity in the landscape. Tropenbos Indonesia wants to reverse this trend, by making rubber agroforestry attractive again.
- > Tropenbos Indonesia worked with indigenous rubber farmers in Simpang Dua subdistrict to improve productivity through better land-use practices.
- > They helped to organize rubber farmers by establishing a Collective Rubber Processing and Marketing Unit, trained them in post-harvest treatment of the rubber to increase prices, and helped with developing direct linkages with rubber buyers.
- > They learned that financial institutions are unlikely to provide loans to new and unexperienced farmers' organizations. Non-profit organizations can help to overcome this barrier.
- > Further improving the attractiveness of diverse rubber agroforestry requires, among others, the development of value chains for organic products, and increased tenure security for rubber farmers.

Introduction

Simpang Dua subdistrict in West Kalimantan is one of the focus landscapes of the Indonesian Working Landscapes programme (Box 1). It is located in the uplands of Ketapang district, and inhabited mostly by indigenous Dayak communities. Among the Dayak farmers, it used to be common to maintain rubber agroforestry systems, consisting of a mix of rubber trees and a range of fruit and timber tree species. However, in recent years the attractiveness of rubber agroforestry has been decreasing, due to low productivity of existing rubber agroforests, and low and unstable rubber prices. Young people's interest in rubber agroforestry has been waning. And farmers with mature rubber agroforests are tempted to convert them to oil palm, which offers relatively stable prices. Many farmers in other parts of West Kalimantan have already made this choice during the last decades. Massive expansion of oil palm resulted in monotonous

landscapes and increased farmers' dependence on the oil palm companies that buy their produce.

In the view of Tropenbos Indonesia, the remaining rubber agroforests play an important role in the landscape. They provide a diversity of products for both cash and subsistence, while also enhancing carbon sequestration and biodiversity conservation. As part of the Working Landscapes programme, Tropenbos Indonesia has therefore been working with communities and other stakeholders to revitalise rubber agroforestry. This should persuade farmers to maintain existing agroforests, and possibly even to convert older, less productive oil palm plantations back to diverse rubber agroforests.



Box 1. The Working Landscapes programme

The Working Landscapes programme (2019 – 2023) is financed by the Ministry of Foreign Affairs of the Netherlands and implemented by the Tropenbos International (TBI) network — a network of autonomous organizations in Colombia, DR Congo, Ghana, Indonesia, Suriname, Viet Nam and the Netherlands, with partners in Bolivia, Ethiopia, the Philippines and Uganda. TBI members and partners offer practical, locally owned and evidence-based solutions to achieve climate-smart landscapes, where local people manage forests and trees sustainably, contributing to climate change mitigation, adaptation, improved livelihoods and biodiversity conservation. The programme is built around three strategic priorities, i.e., sustainable land-use, inclusive landscape governance, and responsible business and finance. These are considered the pillars of climate-smart landscapes. As part of the programme, several TBI members have been supporting agroforestry as a sustainable and more resilient alternative to conventional modes of agrocommodity production.

Knowledge of sustainable land-use practices

According to Tropenbos Indonesia, it is possible to increase the productivity of rubber agroforestry by combining traditional and scientific knowledge. They therefore started organizing farmer field schools, where farmers and technicians work together to improve existing rubber agroforestry practices, for example by using home-manufactured organic inputs (such as a liquid fertilizer made from decomposed bacteria) and by introducing shade tolerant coffee and ginger, which can be certified as organic produce. The farmer field schools also focussed on ways to improve rubber tapping and post-harvest processing.

Rather than having extension officers telling farmers what to do, the farmer field schools were based on the idea that improving agricultural practices requires long-term engagements, where outside experts and farmers work together on developing methods to increase the profitability of rubber agroforestry practices. Tropenbos Indonesia initially focussed on four villages, where they organized farmer field schools every two weeks, totalling 14 meetings in each village. During this period, facilitators of Tropenbos Indonesia would work together with farmers to develop pilot plots and to implement new techniques in the farmers' fields. Special attention was paid to female participation in these trainings, because it is often women who are tapping rubber and maintaining agroforestry plots.

After completion of the farmer field schools, Tropenbos Indonesia selected a number of farmers and government extension officers, and trained them to become trainers in the methods and techniques they had co-developed during the farmer field schools. These trainers then travelled to other villages to work with farmers on improving their rubber agroforestry practices. Simultaneously, Tropenbos Indonesia started working with local middle schools, to introduce 'good agricultural practices' into their local curricula, aimed at raising awareness and interest in agroforestry among younger generations while influencing their parents as well.

Tenure security

In Simpang Dua, most rubber agroforests were established many decades ago, on lands that the Dayak consider part of their customary territory. The state, however, has classified most of these lands as production forest (*Hutan Produksi*) or convertible production forest (*Hutan Produksi yang Dapat Dikonversi*). This means that the government can decide to lease out these lands as concessions to commercial companies, potentially leading to conflicts between companies and communities. Without a legal certificate to the lands they cultivate, rubber farmers are at risk of being evicted from their lands.



Indonesia's social forestry programme makes it possible for communities to apply for various types of permits that give them the legal right to use state forest lands. On lands that are classified as (convertible) production forest, a community can apply for a community forestry (*Hutan Kemasyarakatan* — HKM) permit, which would formally allow them to maintain their rubber agroforests. However, the permit is only valid for 35 years (with the possibility of extension for another 35 years). Many Dayak communities refuse to apply for such a permit. To them, it would imply the acknowledgement of the state's ownership over the lands they consider theirs.

Economic feasibility

In addition to the low productivity of existing rubber agroforests, one of the reasons for farmers to switch to oil palm is the low and unstable price of rubber. Farmers can improve their income from rubber through investments in post-harvest processing and the development of direct linkages with rubber buyers, but this requires that farmers get organized, for example in the form of a Collective Rubber Processing and Marketing Unit (*Unit Pengolahan dan Pemasaran Bokar* — UPPB). Although there is a government programme to facilitate the development of such units, at the start of the Working Landscapes programme there was no UPPB operating in the landscape.

The lack of organization among rubber farmers was seen as a major constraint to increasing the feasibility of rubber agroforestry. Tropenbos Indonesia therefore facilitated the establishment of a UPPB involving 121 rubber farmers, including a technical division to support farmers' capacity for post-harvest treatment, improving rubber quality to meet the standards of larger buyers. The technical division has also been encouraging members to improve their rubber agroforestry management. In the future, the UPPB is expected to accommodate the agroforest's secondary products, such as spices and fruits.

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Tropenbos Indonesia also helped the UPPB with developing an agreement with a rubber factory located in the city of Pontianak, to secure offtake. The UPPB then required capital to purchase the first batch of rubber

from the participating farmers, but financial institutions operating in the landscape did not have mechanisms in place that make it possible to provide loans to starting farmers' organizations that do not yet have a track record. To overcome this hurdle, Tropenbos Indonesia used its own finances to provide the UPPB with a zero-interest loan. This enabled them to start buying rubber from the participating farmers. The UPPB is now up and running, and it is estimated that the individual farmers' income from selling rubber will increase with 30%. By developing a portfolio, the UPPB will have better possibilities to access loans in the future.

Future priorities

- Tropenbos Indonesia will continue to collaborate with local financial institutions to develop mechanisms that make funds accessible for newly starting farmers' organizations.
- Lessons from Simpang Dua must be shared with other UPPBs being established in West Kalimantan, as well as with the provincial government, so it can develop more effective programmes to support UPPBs throughout the province.
- Government extension agencies can learn from the farmer field school approach, with an emphasis on developing and testing innovations together with farmers.
- Rubber farmers need to be linked to promising value chains. In addition to the growing national and international value chains for sustainable natural rubber, possibilities need to be explored to tap into growing markets for organic foods in the rapidly expanding urban centres of West Kalimantan.
- Young people from Simpang Dua who left their villages for secondary education often have strong links to the urban areas where they went to school. There are opportunities to engage them in developing value chains of organic products from rubber agroforests.
- The UPPB is expected to increase rubber prices for farmers, by cutting out the middlemen and improving rubber quality. However, the global rubber price will remain fluctuating and could



decrease. Farmers who grow a variety of marketable products have alternative income sources when the global rubber price is low, which may prevent them from converting their rubber agroforests to oil palm. There is a need for long-term monitoring in the field to better understand these relationships.

- The issue of Dayak tenure rights within areas that the government considers state forest lands remains highly sensitive. There is a need to continue and open conversation with Dayak communities about the pros and cons of var-

ious options. Communities that want to apply for HKM permits may need assistance to go through the administrative steps.

- There is a need to further our understanding of how land-use choices at the plot level (e.g. oil palm plantations, rubber monocultures and diverse agroforests) relate to environmental functions (such as climate regulation and biodiversity conservation) at the landscape level.

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Illustration:	Generic representation of a multistory agroforest, it does not represent the system described in this brief - Juanita Franco

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