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USAID LESTARI

LESSONS LEARNED TECHNICAL BRIEF

PUBLIC-PRIVATE PARTNERSHIPS FOR GREEN ENTERPRISE DEVELOPMENT

MAY 2020



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TABLE OF CONTENTS

Executive Summary	1
Ringkasan Eksekutif.....	4
Introduction	7
LESTARI's Approach to Supporting Green Enterprise Development.....	8
Experiences from Field-Level Implementation in Three Provinces.....	10
Key Challenges, Lessons Learned, and Recommendations	20

EXECUTIVE SUMMARY

USAID LESTARI partners with the Government of Indonesia (GOI) to reduce greenhouse gas (GHG) emissions and conserve biodiversity in carbon rich and biologically significant forest and mangrove ecosystems. This is achieved through improved land use governance, enhanced protected areas management and protection of key species, sustainable private sector and industry practices, and expanded constituencies for conservation among various stakeholders. To achieve objectives for private sector engagement, LESTARI implements two principle approaches – (1) supporting Green Enterprises to enhance sustainable livelihood opportunities for local communities and (2) facilitating training and adoption in Best Management Practices by land-based concession companies. This brief focuses on the first approach, including a summary of the initiatives that were undertaken, the main outcomes and impacts, and the key lessons learned from 5 years of implementation.

LESTARI assistance for Green Enterprises aimed to contribute to the achievement of the project's overall objectives in reducing deforestation and degradation, and associated land-based greenhouse gas emissions. The project theory of change for this approach is that if local communities in focal areas are able to secure sustainable and sufficient economic benefits from Green Enterprises, then pressures for forest encroachment will be reduced. LESTARI also aimed to facilitate partnerships for Green Enterprises so that they bring fair and lasting benefits to communities and their partner buyers, enabling the partnerships to continue after LESTARI closeout. This is expected to contribute to greater self-reliance of project beneficiaries.

Site selection for green enterprise initiatives was based on the potential for reducing biodiversity conservation threats to the forest and hence were largely located in communities living adjacent to protected areas or other high carbon value forest. The potential sites were also limited to the project-supported landscapes in the provinces of Aceh, Central Kalimantan, and Papua. The process for supporting a sustainable livelihood business model depended on a range of factors such as condition and threats to forests, local commodity potential, and access to markets. Some initiatives focused on fostering strong relationships between communities and forest management authorities (such as FMUs) while others focused on opening access to premium markets through sustainability certification. Below are several main principles followed by LESTARI in assisting Green Enterprises development that are common to all areas.

- Robust identification of potential field sites, including main threats and issues driving deforestation, natural resources availability, and challenges faced for reducing threats and overcoming issues
- Development of scalable business models that can be implemented across multi-stakeholders but tailored to the local needs
- Engagement and introduction of the market/buyers directly to producers/farmers to enhance direct benefits that leads to a more viable business model
- Focus on long-term commitments for sustainable market access

In Aceh, the landscape consists mostly of protected areas or high conservation value forest surrounded by smallholder agriculture and agroforestry production. The main threat impacting forest is encroachment from local communities for the development of agricultural plantations. Thus the main LESTARI initiative was to support a partnership model that allows local communities access to limited areas outside of protected forests through government programs such as social forestry.

In Central Kalimantan, one of the main threats addressed through Green Enterprises is forest and land fire, especially on peatland. LESTARI (as well as the previous USAID IFACS project) supported rubber-based business models that improved productivity of areas that were frequently burned and contributed to improved community livelihoods. At the same time, the initiative enhanced management and oversight capacity over these important peatland areas, contributing their restoration, protection, and resulting fire risk reduction.

In Papua, the LESTARI focus was to assist traditional communities to better manage their forest resources, reduce encroachment, and sustain the ecosystem services provided by forests such as protection from landslides and provision of freshwater.

The main Green Enterprise initiatives supported by LESTARI and discussed in greater detail in this report included:

- UTZ sustainability certification for cacao farmers in Gayo Lues and Aceh Tenggara Districts, Aceh Province
- Multi-stakeholder partnership for coffee agroforestry in Gayo Lues District, Aceh Province
- Rubber agroforestry to enhance productivity and reduce fire risk in Pulang Pisau District, Central Kalimantan Province
- Partnership with FMU XVII for sustainable rattan in Katingan District, Central Kalimantan Province
- Enhancing small-scale coconut oil-based businesses in Yepem Village, Papua Province
- Cultivation of vanilla agroforestry outside of Cyclops Nature Reserve, Papua Province

Green Enterprise initiatives supported by LESTARI have benefited more than 11,000 farmers and their families. 25 public-private partnerships have been formed between community groups, government agencies, and private sector buyers. Direct benefits to communities include increased incomes, improved capacity in sustainable farming practices, enhanced quality of products, and improved capacity in marketing and business management. It is important to note that the absolute number of beneficiaries may seem small compared to traditional livelihoods-focused projects focused on improving incomes in urban areas. However, the objective of LESTARI was to demonstrate viable and sustainable business models in specific landscapes aimed at reducing forest encroachment. These models can be adapted and applied to other forest bufferzone locations in Indonesia with similar conditions.

LESTARI's work supporting Green Enterprises over the 5-year project period has revealed various challenges and lessons learned, which could be useful for government agencies, donors, NGOs, private sector firms, and other stakeholders involved in the sustainable forest commodity development space in Indonesia. These are summarized below.

- Many buyers are interested in engaging with farmers and knowing exactly where their product comes from. Farmers and producers have become increasingly aware of the many opportunities that can be seized but have yet to fulfil quantity and quality demands of buyers. Both of these issues need to be addressed to cater to the market, where high product standards are applied. Where there is a commitment from the private sector to provide technical capacity, business models are likely to be more sustainable.
- Engaging the 'right' partner is a crucial key to develop a sustainable business model. The right partner will be willing to commit resources in rural areas with limited human resources, difficulty to access, and other challenges and obstacles normally found in forest bufferzone areas. The recent growth of the niche, high-end coffee and chocolate

market domestically in Indonesia is a welcome trend that indicates this sustainability-focused market potential does exist.

- Long-term commitment needs to be continuously fostered. This applies to both producers and buyers. Buyers must adhere to agreements for buying and refresher training and support. Producers must ensure product quality and quantity standards are met while maintaining commitments for sustainable agricultural practices. These commitments need to be routinely monitored and supported by relevant local government agencies.
- Bridging regulatory and oversight gaps for developing sustainable business models is essential. FMUs are often tasked as the local authorities responsible for monitoring and facilitating partnerships for Green Enterprises, but are often lacking in human resources, technical knowhow, and budget capacity. Routine multi-stakeholder dialogue to acknowledge, discuss, and address these gaps would be beneficial to all stakeholders.
- It is difficult to assess the impacts and relationship of Green Enterprise development alone on forest cover change in adjacent areas. Initial indications from interviews and ground-checking suggest reduces rates of forest encroachment in project sites. However a more scientific analysis requires studying longer-term forest cover change to allow for impacts from Green Enterprises to take place. Moreover, it is difficult to establish direct causation between Green Enterprise development and forest cover change as community actions to encroach or not are driven by a confluence of factors and circumstances. These limitations should be understood when designing livelihoods initiatives and their respective targets.

RINGKASAN EKSEKUTIF

USAID LESTARI bermitra dengan Pemerintah Indonesia untuk mengurangi emisi gas rumah kaca (GRK) dan melestarikan keanekaragaman hayati dalam ekosistem hutan dan mangrove yang kaya karbon dan signifikan secara biologis. Hal ini dicapai melalui perbaikan tata kelola penggunaan lahan, peningkatan pengelolaan kawasan lindung dan perlindungan spesies kunci, sektor swasta dan praktik industri yang berkelanjutan, serta perluasan konstituensi untuk konservasi di antara berbagai pemangku kepentingan. Untuk mencapai tujuan yg berhubungan dengan keterlibatan sektor swasta, LESTARI menerapkan dua prinsip pendekatan - (1) mendukung perkembangan *Green-Enterprise* untuk meningkatkan peluang mata pencaharian berkelanjutan bagi masyarakat lokal dan (2) memfasilitasi pelatihan dan adopsi dalam Praktek Manajemen Terbaik oleh perusahaan konsesi berbasis lahan. Laporan singkat ini berfokus pada pendekatan pertama, termasuk ringkasan inisiatif yang dilakukan, hasil dan dampak utama, dan pelajaran utama yang dipetik dari 5 tahun implementasi.

Kegiatan proyek LESTARI untuk *Green-Enterprise* bertujuan untuk berkontribusi pada pencapaian tujuan keseluruhan proyek dalam mengurangi deforestasi dan degradasi lahan serta emisi gas rumah kaca. Teori untuk pendekatan ini adalah bahwa jika komunitas lokal di fokus area mampu mendapatkan manfaat ekonomi dari mata pencaharian yang berkelanjutan dan memadai dari *Green-Enterprise*, maka tekanan untuk perambahan hutan akan berkurang. LESTARI juga bertujuan untuk memfasilitasi kemitraan untuk *Green-Enterprise* sehingga mereka membawa manfaat yang adil dan berkelanjutan bagi masyarakat dan mitra mereka, sehingga memungkinkan kemitraan terus berlanjut setelah proyek LESTARI berakhir.

Pemilihan lokasi untuk inisiatif ini didasarkan pada potensi untuk mengurangi ancaman konservasi keanekaragaman hayati terhadap hutan dan karenanya sebagian besar kegiatan ini berfokus pada masyarakat yang hidup berdekatan dengan kawasan lindung atau hutan bernilai karbon tinggi untuk pengembangan mata pencaharian yang berkelanjutan. Potensial lokasi juga terbatas pada lanskap/bentang alam yang didukung proyek di provinsi Aceh, Kalimantan Tengah, dan Papua. Lebih lanjut, proses untuk mendukung model bisnis mata pencaharian yang berkelanjutan bergantung pada sejumlah faktor seperti kondisi dan ancaman terhadap hutan, potensi komoditas lokal, dan akses pasar. Beberapa inisiatif berfokus pada membina hubungan yang kuat antara masyarakat dan otoritas pengelolaan hutan (seperti KPH) sementara yang lain berfokus pada pembukaan akses terhadap pasar premium melalui sertifikasi komoditas keberlanjutan. Di bawah ini adalah beberapa prinsip utama yang diikuti oleh LESTARI dalam membantu pengembangan usaha berkelanjutan untuk semua wilayah.

- Identifikasi menyeluruh terhadap area yang mempunyai potensial kuat sebagai lokasi kegiatan proyek, termasuk ancaman utama dan masalah yang mendorong deforestasi, ketersediaan sumber daya alam, serta tantangan yang dihadapi untuk mengurangi ancaman dan mengatasi masalah
- Pengembangan model bisnis yang dapat diskalakan untuk diimplementasikan secara lintas multi-pemangku kepentingan tetapi disesuaikan dengan kebutuhan local
- Pengenalan pasar atau pengenalan pembeli langsung terhadap produsen/petani untuk meningkatkan manfaat langsung bagi semua pihak serta mendukung pengembangan model bisnis yang ada
- Fokus pada komitmen jangka panjang untuk akses pasar yang berkelanjutan

Di Aceh, sebagian besar bentang alam terdiri dari kawasan lindung atau hutan bernilai konservasi tinggi yang dikelilingi oleh pertanian skala kecil dan wanatani. Ancaman utama

yang berdampak pada hutan adalah perambahan dari masyarakat lokal untuk pengembangan perkebunan serta pertanian. Dengan demikian inisiatif utama LESTARI adalah untuk mendukung model kemitraan yang memungkinkan masyarakat lokal mengakses area terbatas pada hutan melalui program pemerintah seperti perhutanan sosial.

Di Kalimantan Tengah, salah satu ancaman utama yang ditangani melalui inisiatif *Green-Enterprise* adalah kebakaran hutan dan lahan, terutama pada lahan gambut. LESTARI (yang dimulai pada proyek USAID IFACS sebelumnya) mendukung model bisnis berbasis komoditas karet yang meningkatkan produktivitas area gambut yang sering terbakar dan berkontribusi pada peningkatan mata pencaharian masyarakat. Pada saat yang sama, prakarsa ini juga meningkatkan kemampuan manajemen dan kapasitas pengawasan atas area lahan gambut tersebut, sehingga berkontribusi dalam restorasi, perlindungan, dan pengurangan risiko kebakaran.

Di Papua, fokus LESTARI adalah membantu masyarakat tradisional untuk mengelola sumber daya hutan mereka dengan lebih baik, mengurangi perambahan, dan mempertahankan jasa ekosistem yang disediakan oleh hutan seperti perlindungan dari tanah longsor dan penyediaan air tawar.

Inisiatif-inisiatif *Green-Enterprise* untuk mendukung mata pencaharian yang berkelanjutan yang didukung oleh LESTARI dan dibahas secara lebih rinci dalam laporan ini adalah:

- Sertifikasi keberlanjutan UTZ untuk petani kakao di Kabupaten Gayo Lues dan Aceh Tenggara, Provinsi Aceh
- Kemitraan multi-pemangku kepentingan untuk agroforestri kopi di Kabupaten Gayo Lues, Provinsi Aceh
- Agroforestri karet untuk meningkatkan produktivitas dan mengurangi risiko kebakaran di Kabupaten Pulang Pisau, Kalimantan Tengah
- Kemitraan dengan FMU XVII untuk rotan berkelanjutan di Kabupaten Katingan, Kalimantan Tengah
- Meningkatkan bisnis skala kecil berbasis minyak kelapa di Desa Yepem, Provinsi Papua
- Budidaya agroforestri vanila di wilayah penyangga Cagar Alam Cyclops, Provinsi Papua

Inisiatif *Green-Enterprise* yang didukung oleh LESTARI telah memberi manfaat kepada lebih dari 11.000 petani dan keluarga mereka. Sebanyak 25 kemitraan publik-swasta telah dibentuk antara kelompok masyarakat, lembaga pemerintah, dan sektor swasta. Manfaat langsung bagi masyarakat juga telah dirasakan antara lain peningkatan pendapatan, peningkatan kapasitas dalam praktik pertanian berkelanjutan, peningkatan kualitas produk, dan peningkatan kapasitas dalam pemasaran serta manajemen bisnis. Penting untuk dicatat bahwa jumlah penerima manfaat mungkin tampak lebih kecil dibandingkan dengan proyek yang berfokus pada pengembangan mata pencaharian masyarakat. Namun, tujuan LESTARI adalah untuk menunjukkan bahwa model bisnis yang layak dan berkelanjutan dalam bentang alam tertentu (area fokus LESTARI) dapat mendukung dalam mengurangi usaha perambahan hutan. Model-model ini diharapkan dapat diadaptasi dan diterapkan ke lokasi-lokasi penyangga hutan lainnya di Indonesia dengan kondisi yang serupa.

Kegiatan LESTARI yang mendukung *Green-Enterprises* selama periode proyek 5 tahun telah mengungkapkan berbagai tantangan dan pembelajaran, yang dapat berguna bagi lembaga pemerintah, donor, LSM, perusahaan sektor swasta, dan pemangku kepentingan lainnya yang terlibat dalam ruang pengembangan komoditas hutan berkelanjutan di Indonesia. Hal-hal tersebut terangkum dalam poin-poin di bawah ini:

- Meningkatnya jumlah pembeli atau pihak swasta yang tertarik untuk terlibat langsung dengan petani untuk mengetahui secara detail dari mana produk mereka berasal.

Petani/produsen juga menjadi semakin sadar akan banyak peluang yang ada tetapi masih belum dapat sepenuhnya memenuhi permintaan kuantitas dan kualitas dari pembeli. Kedua hal ini perlu ditangani untuk memenuhi permintaan pasar, di mana standar produk yang tinggi diperlukan. Sehingga komitmen dukungan dari sektor swasta untuk menyediakan pendampingan dalam meningkatkan kapasitas teknis para petani akan mendukung pengembangan model bisnis yang lebih berkelanjutan.

- Melibatkan mitra tepat adalah kunci penting untuk mengembangkan model bisnis yang berkelanjutan. Mitra yang tepat akan bersedia untuk melakukan investasi berbagai kebutuhan untuk dukungan pengembangan sumber daya di daerah pedesaan yang mempunyai keterbatasan dengan sumber daya manusia, kesulitan untuk akses pasar, dan tantangan dan hambatan lain yang biasanya ditemukan di daerah penyangga hutan. Beberapa tahun terakhir ini, pertumbuhan pasar kopi dan coklat domestik di Indonesia adalah tren yang disambut baik, yang menunjukkan bahwa potensi pasar yang berfokus pada model bisnis keberlanjutan ini memang ada.
- Komitmen jangka panjang perlu terus dipupuk. Ini berlaku untuk produsen dan pembeli. Pembeli harus mematuhi perjanjian yang ada dan terus mendukung adanya pelatihan yang kontinyu terhadap para mitra yg membutuhkan. Produsen harus memastikan standar kualitas dan kuantitas produk terpenuhi dengan tetap menjaga komitmen untuk praktik pertanian berkelanjutan. Komitmen ini perlu dipantau dan didukung secara rutin oleh lembaga pemerintah daerah terkait.
- Menjembatani kesenjangan peraturan dan pengawasan untuk mengembangkan model bisnis yang berkelanjutan adalah hal kunci. KPH sering ditugaskan sebagai otoritas lokal yang bertanggung jawab untuk memantau dan memfasilitasi kemitraan untuk *Green-Enterprise* di wilayah mereka, tetapi masih ditemui kurangnya sumber daya manusia yang mencukupi baik dalam pengetahuan teknis, dan maupun bisnis manajemen. Dialog multi-stakeholder secara rutin dapat membantu untuk menjembatani serta membantu mengatasi kesenjangan yang ada.
- Sulit menilai dampak pengembangan *Green-Enterprise* hanya dengan melihat perubahan tutupan hutan di area tersebut. Indikasi awal dari wawancara dan pengecekan lapangan menunjukkan adanya pengurangan tingkat perambahan hutan di lokasi proyek. Namun analisis yang lebih ilmiah dibutuhkan untuk melihat perubahan tutupan hutan secara jangka panjang untuk memastikan dampak dari inisiatif *Green-Enterprise* terjadi. Selain itu, sulit untuk menentukan hubungan langsung antara pengembangan *Green-Enterprise* dan perubahan tutupan hutan karena adanya berbagai faktor yang melandasi adanya perambahan hutan yang terjadi. Keterbatasan ini harus dipahami ketika merancang inisiatif *Green-Enterprise* beserta target-target yang harus dipenuhi.

INTRODUCTION

USAID LESTARI partners with the Government of Indonesia (GOI) to reduce greenhouse gas (GHG) emissions and conserve biodiversity in carbon rich and biologically significant forest and mangrove ecosystems. This is achieved through improved land use governance, enhanced protected areas management and protection of key species, sustainable private sector and industry practices, and expanded constituencies for conservation among various stakeholders. At the national level, LESTARI's main counterpart is the Directorate of Conservation Areas at the Ministry of Environment and Forestry. Key partners at the landscape level include forestry agencies in the provinces of Aceh, Central Kalimantan and Papua. LESTARI runs from August 2015 through July 2020.

Private sector engagement under the USAID LESTARI project was implemented through two principle approaches – (1) supporting Green Enterprises to enhance sustainable livelihood opportunities for local communities and (2) facilitating training and adoption in Best Management Practices by land-based concession companies. The second approach is summarized in a separate Lessons Learned Technical Brief on Improving Production Forest Management. The first approach is the topic of this brief and focuses on LESTARI's support for Green Enterprises in targeted field sites in the Indonesian Provinces of Aceh, Central Kalimantan, and Papua. The purpose of this brief is to summarize LESTARI's approach to Green Enterprises, including the initiatives that were undertaken, the main outcomes and impacts, and the key lessons learned from 5 years of implementation.

LESTARI assistance for Green Enterprises aimed to contribute to the achievement of the project's overall objectives in reducing deforestation and threats to biodiversity, and associated land-based greenhouse gas emissions. The project theory of change for this approach is that if local communities in focal areas are able to secure sustainable and sufficient economic benefits from Green Enterprises, then pressures for forest encroachment will be reduced. LESTARI also aimed to facilitate partnerships for Green Enterprises so that they bring fair and lasting benefits to communities and their partner buyers, enabling the partnerships to continue after LESTARI closeout. This is expected to contribute to greater self-reliance of project beneficiaries.

LESTARI'S APPROACH TO SUPPORTING GREEN ENTERPRISE DEVELOPMENT

LESTARI interventions are based on a 'landscape approach' that aims to synergize land use planning and sustainable forest management among multi-stakeholders. The landscape approach focuses on collaboration and partnerships such as between Forest Management Units (FMUs), local communities, and the private sector, as well as with various levels of government working across multiple sectors.

The process for designing and supporting a sustainable livelihood business model was unique for each site, depending on a range of factors such as condition and threats to forests, local commodity potential, and access to markets. Some initiatives focused on fostering strong relationships between communities and forest management authorities while others focused on opening access to premium markets through sustainability certification. Below are several main principles used by LESTARI in assisting Green Enterprises development that are common to all areas.

- **Robust identification of potential field sites, including main threats and issues driving deforestation, natural resources availability, and challenges faced for reducing threats and overcoming issues.** First, selection of the green enterprise location was integrated with on-going and planned conservation initiatives within LESTARI landscapes. LESTARI conducted initial surveys to map areas based on the general potential of each area within the landscape and identified areas where deforestation and degradation was greatest. When potential areas were identified, cooperation with relevant stakeholders identified basic issues related to livelihoods and potential natural resources or commodities that were available to develop resulting in a unique approach and business model in each location. When potential models were identified, plans for technical assistance required were drawn up. LESTARI provided overall basic technical training including conducting surveys to identify the potential commodities chosen and advanced training to improve quality of commodities production and processing. In most cases, the training was given not only to the farmers but also to the local government and local NGO partners.
- **Development of scalable business models that can be implemented across multi-stakeholders but tailored to local needs.** After technical training was finalized and farmers implemented improved techniques for commodity production, LESTARI adapted and developed business models according to the opportunities presented in the field. LESTARI took into account potential partners or stakeholders that could be effectively involved in partnership to improve production and income as well as reduce threats to the forests. In most cases, the primary stakeholders defined the type of partnership or business model, but remained adaptable and flexible with current developments, constraints, and opportunities. LESTARI facilitated the most suitable and sustainable partnerships or business model in each initiative that generated both improved livelihoods and conservation benefits. Where possible LESTARI focused on public-private partnerships between communities, local governments, or local NGO and a private institution.
- **Engagement with and introduction of the market/buyers directly to producers/farmers to enhance sustainable business models.** LESTARI actively connected farmers with potential private sector buyers and off-takers of commodities being developed such as cacao, coffee, and rubber. There were several approaches used to engage the private sectors. LESTARI sought private sector partners with public environmental sustainability and community development commitments. Companies willing to work with communities that often have high quality commodities but with limited

volume are difficult to find and are usually limited for future scalability. As locations are always adjacent to protected forests or conservation area, the selection of commodities and availability is always challenging. The principles of 'sustainability' applied here must find a balance between a 'sustainably' viable business and keeping biodiversity and forest conservation goals front and foremost.

- **Farmers and producers must 'connect' directly with the market**, need to know latest trends or requirements to market their product and have capacity and support mechanisms available locally so that they can be competitively engaged with markets, especially in rural areas. Market-driven commodity development is usually more effective in developing sustainable business models since demand in the market is supplied. Therefore, LESTARI also sought private sector partners that were willing to be involved from the early stages of commodity development through to production. Through this development the private sector partners would have the opportunity to transfer knowledge to producers in commodity development, marketing, and finance resulting in ideal and inclusive business models.
- **Focus on long-term commitment for maintained production standards that can lead to sustainable market access.** During facilitation with farmers and producers, LESTARI focused on developing standard operating procedures (SOPs) to improve quality of products and avoid mass produced, low-quality products. During the course of the project, it was observed that many farmers still struggled to follow standards. Some failed to understand the importance of a stable, standardized product for the market (especially niche markets), despite having various trainings, while others enjoyed benefits of implementing SOPs. The strategies to improve farmer willingness to follow strict SOPs was to engage off-takers and end-buyers to explain directly to farmers in detail about their required standards and demonstrating their commitment to source high-quality products.

EXPERIENCES FROM FIELD-LEVEL IMPLEMENTATION IN THREE PROVINCES

Green Enterprise initiatives were implemented in all three focal provinces – Aceh, Central Kalimantan, and Papua. The specific sites selected were based on the criteria and selection processes described in the previous section. As of May 2020, Green Enterprise initiatives supported by LESTARI have benefited more than 11,000 farmers and their families. 25 public-private partnerships have been formed between community groups, government agencies, and private sector buyers. Direct benefits to communities include increased incomes, improved capacity in sustainable farming practices, enhanced quality of products, and improved capacity in marketing and business management. This section summarizes the main initiatives undertaken in each province.

In Aceh, the landscape consists mostly of protected areas or high conservation value forest. The main threat impacting forest is encroachment from local communities for the development of agricultural plantations. Thus the main LESTARI initiative was to support a partnership model that allows local communities access to limited areas outside of protected forests through government programs such as social forestry.

In Central Kalimantan, one of the main threats addressed through Green Enterprises is forest and land fire, especially on peatland. LESTARI (as well as the previous USAID IFACS project) supported rubber-based business models that improved land management and productivity of areas that were frequently burned. In this way, greater management and oversight capacity was given to these areas, reducing the risk of fire.

In Papua, the LESTARI focus was to assist traditional communities to better manage their forest resources, reduce encroachment, and sustain the ecosystem services provided by forests such as protection from landslides and provision of freshwater.

UTZ Certification for Sustainable Cacao in Gayo Lues and Aceh Tenggara Districts, Aceh Province

This initiative served as a pilot project for improving the livelihoods of cacao farmers in the bufferzone of a protected area through implementation of a certification standard that applies sustainable agricultural practices, improves overall production quality, and reduces the likelihood of forest encroachment into the protected area.

Originally, this initiative started under the USAID IFACS project and continued with LESTARI through technical training for cacao farmers located around high conservation value forest in the bufferzone of Leuser National Park, a biodiversity hotspot and UNESCO World Heritage Site. These farmers have cultivated this area for decades, and the local government was interested in reducing further forest encroachment while improving community livelihoods. According to a brief early survey by the LESTARI team, most of the locations of the cacao plantations indeed bordered the protected area, heightening the risk of further illegal expansion. In addition, farmers were facing the threat of losing of market access, as the largest buyer in the region, ECOM, was planning to pull out due to changing market demand. End buyers throughout the cacao value chain were increasingly demanding sustainability certified products, while farmers in this region were exclusively producing lower value conventional cacao. Given these circumstances, LESTARI facilitated a business model based on sustainability certification via the UTZ standard. The private sector partner, ECOM, financed the entire certification process while LESTARI provided technical training for farmers.

During the process, the farmers established a cooperative (*Koperasi SLA*) with LESTARI assistance in order to provide a common platform to do business with the private sector partner. The basic principle was to improve overall agricultural practices in the cacao sector based on sustainability standards. One of the main requirements for farmers to be included in the initiative was to avoid cultivation within the boundaries of protected forest areas.

The partnership model itself is quite simple. ECOM is the off-taker and finances the certification process. 300 farmers (under LESTARI assistance) have committed to implement the UTZ standard and are members of the cooperative that sells to ECOM.



Following an official external audit, the UTZ certification was successfully obtained in February 2020. This certification has already provided multiple benefits to the farmers such as gaining enhances skills and knowledge on sustainable agriculture practice, receiving higher purchased price for the cacao beans and better access toward the market. This success is expected to attract more farmers to join the partnership, and hence contribute to its growth and sustainability.



Figure 1. Basic training for farmers in UTZ certification standards

Coffee Agroforestry in Gayo Lues District, Aceh Province

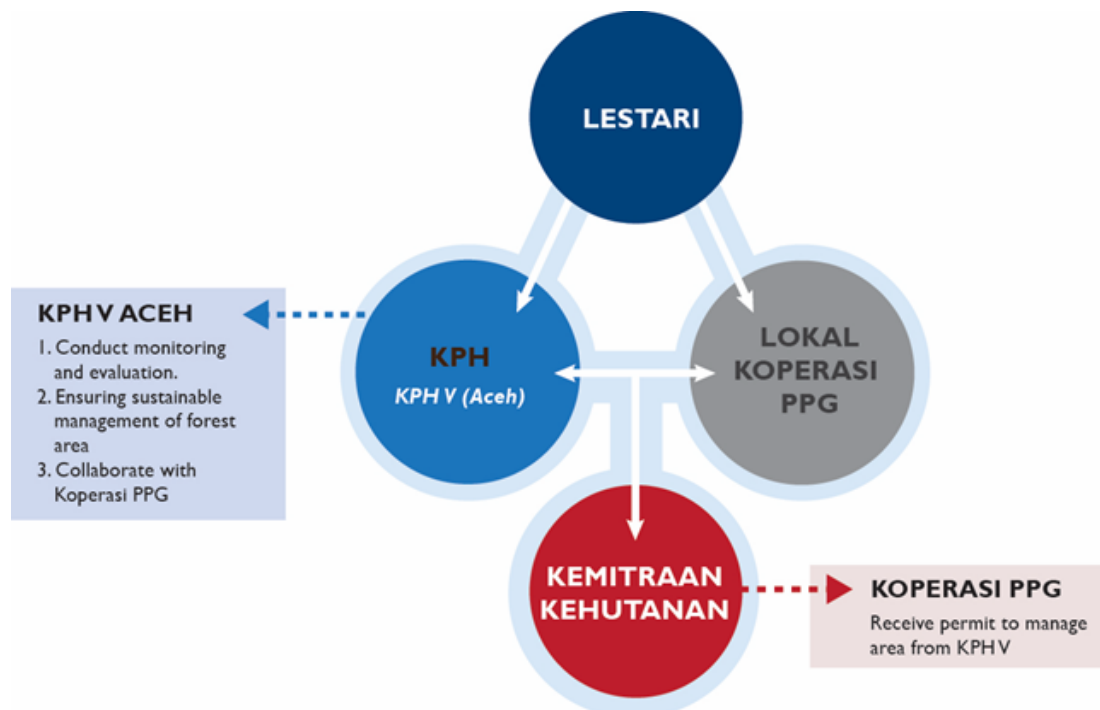
This initiative aimed to improve sustainable livelihood opportunities for the local community through multi-stakeholder partnerships with the private sector (investment and market access) and FMU (access to land and routine monitoring). Through these partnerships, it

was expected that forest encroachment will be reduced and forest rehabilitation will be increased, while local communities secure livelihood benefits through coffee agroforestry.

Similar to intercropping, agroforestry is a land use system where hardwood trees are cultivated on the same land-management units as agricultural crops in order to diversify and sustain production for increased social, economic and environmental benefits for land users at all levels. It has been shown to reduce erosion, improve soil fertility, reduce water loss, and contribute to more resilient and diversified rural economies.

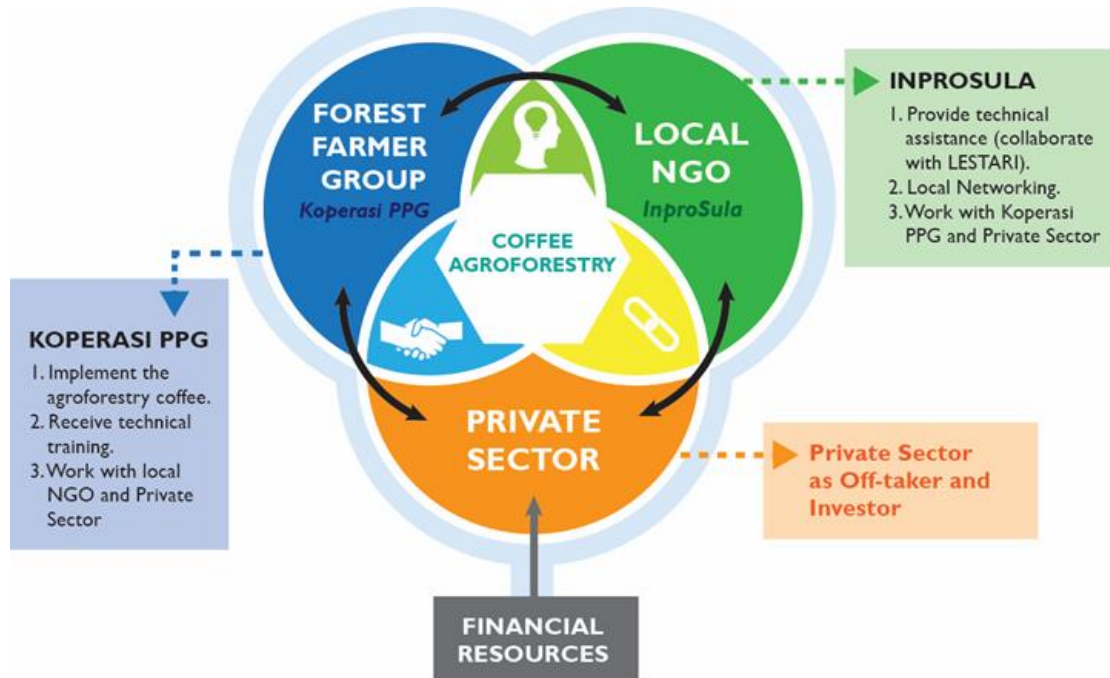
The Pantan Cuaca region in Gayo Lues District is well-known for its arabica coffee production, but farmers still struggle with conventional agriculture practices that yield low quality coffee beans. Coffee plantations are also often located inside the forest estate, which is managed by FMU V. Hence there was a significant opportunity to enhance existing production, in turn reducing further threats to forest encroachment and biodiversity loss.

LESTARI worked with FMU V and coffee farmers to acquire the necessary land use permit – *Kemitraan Kehutanan* (Forest Partnership), a type of social forestry permit. The permit proposed an area of approximately 1,000 hectares of degraded land for productive agroforestry systems with coffee and other non-timber forest product (NTFP) commodities. The permit provided access to the land for farmers while reducing the need for illegal encroachment into forest areas. The permit has a strict zero deforestation requirement, which was clearly socialized to all participant farmers. Detailed mapping was conducted jointly with farmers and FMU V. 280 hectares were planned for coffee agroforestry cultivation with the remaining areas to be restored with other allowable NTFP species. Under this mixed use system, the farmers were permitted to cultivate coffee alongside hardwood tree species such as *petai* (bitter bean), *jengkol* (dogfruit), avocado and other similar trees that have economic as well as ecological value. Cultivation is strictly limited to these 280 hectares where the area is already degraded, FMU V is the authority responsible for oversight, monitoring, and enforcement of the initiative.



Once, the permit is signed, the MoU for the purchase agreement will be finalized between the farmers’ cooperative and the private sector partner. The multi-stakeholder partnership model is illustrated in the diagram below. Under this model, LESTARI has also connected the farmers with a private sector partner. Initially, PT. PAS expressed interest to invest by

accessing the BLU¹ credit scheme under KLHK. However, the BLU funding proved difficult to secure and PT. PAS was unable to proceed. Subsequently, CV. Kobas was introduced as the alternative partner. CV Kobas agreed to invest in the initiative after the farmers were able to meet the first big purchase order, showing their commitment and capacity to providing high-quality products.



To date, various technical and managerial trainings have been provided to the members of the cooperative. LESTARI also facilitated meetings with potential buyers and coordinated with national and sub-national government agencies to provide equipment for improved coffee bean processing. LESTARI has observed significant improvement in the quality of coffee beans that has increased the price fetched by 25-50%. Farmers have already signed an agreement for a large purchase order with an off-taker company. From time to time, quality issues of the product still arise. However this was expected, as the new techniques require a long-term learning process by the farmers.



Figure 2. Coffee seedlings and training to improve coffee bean quality

¹ BLU (*Badan Layanan Umum*, or Public Service Agency) is an agency under Ministry of Environment and Forestry that provides soft loans for projects that support reducing forest degradation and improving sustainable livelihoods for local communities. Around mid-2019, the BLU underwent a major organizational restructuring that led to significant delays in evaluating proposals.

In addition to the above, LESTARI observed changes in practices that demonstrate increased awareness of farmers in maintaining healthy surrounding forest ecosystems. Prior to the project, approximately 86 hectares of lemongrass plantations existed in the area. Driven by the high price of essential oils, this lemongrass cultivation was being conducted unsustainably and contributing to forest loss. Along with this coffee agroforestry initiative, a total of 36 hectares of this area were voluntarily converted by the farmers themselves into a coffee agroforestry area, thus adding to the total degraded areas restored to productive forests.

Development of Sustainable Rattan Business in Katingan District, Central Kalimantan Province

This pilot project aimed to provide training for the FMU in sustainable forest-based business development. This is an important responsibility of FMUs, but capacity is often lacking in these new and emerging institutions. It was expected that building the capacity of FMUs, including facilitating partnerships with local communities and the private sector for fair benefit-sharing, will lead to improved sustainable forest management and improved community livelihoods.

Under this initiative, LESTARI collaborated with FMU XVII on sustainable rattan development. Based on surveys with local communities and FMU XVII, rattan was selected as it was already a widely available local commodity in Katingan District. However, the local rattan businesses had been struggling due to stringent regulations regarding rattan transportation between islands as well as limitation on exports of raw materials. Under this initiative, LESTARI facilitated a two-way partnership between a Forest Farmer Group (*Kelompok Tani Hutan – KTH*) and private sector, with the FMU (represented by the FMU Employee Cooperative – *Koperasi Karyawan*) acting as the middle manager. In this model, the FMU *Koperasi Karyawan* is the central player that has agreements with both the KTH (to buy) and private sector (to sell). Through direct involvement of the FMU, the initiative aimed to enhance FMU capacity in facilitating, monitoring, and managing similar partnerships for sustainable NTFP utilization.



Through the KTH, the community receives several types of income: (1) for raw rattan material sales to the FMU *Koperasi Karyawan* (2) wages for rattan processing (smoking) work, and (3) sales of processed rattan to the FMU *Koperasi Karyawan*.

Overall, the opportunity for processed rattan from Central Kalimantan is quite large due to high demand. However, the process of preparing and processing rattan in community groups needs to be intensified so that the volume of rattan needed by potential buyers can be met. In addition, the licensing mechanism through the FMU needs to be simplified so that the process of selling rattan runs smoothly without excessive administrative burden.



Figure 3. Rattan processing training with farmers and FMU XVII

Rubber Agroforestry in Pulang Pisau District, Central Kalimantan Province

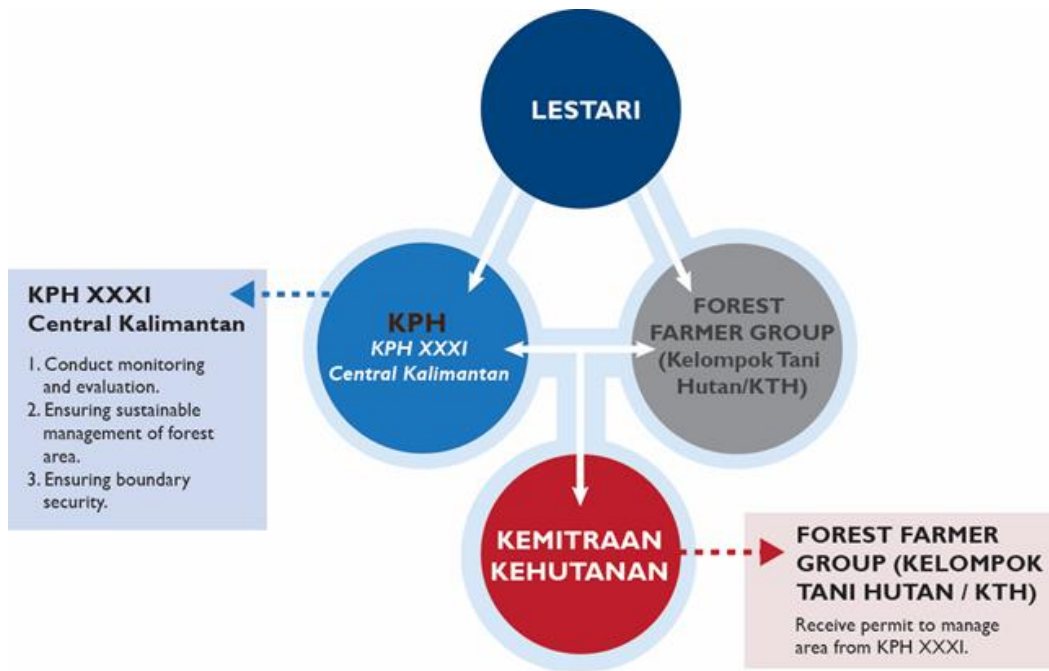
This pilot initiative aimed to support peatland restoration and fire risk mitigation through enhancing productivity, management, and oversight capacity of rubber production. It was expected that improved incomes (through higher rubber quality, market access) for farmers will incentivize greater protection and responsible management over peatland areas that reduce the risk of fire.

This initiative primarily focused on developing rubber on degraded peatland areas in Pulang Pisau District. Work with rubber farmer groups in Pulang Pisau started during the previous USAID IFACS (2010-2015) project. Under LESTARI, the initiative continued with technical training on rubber plantation development, harvesting, and post-harvesting techniques to produce high-quality product for the market.

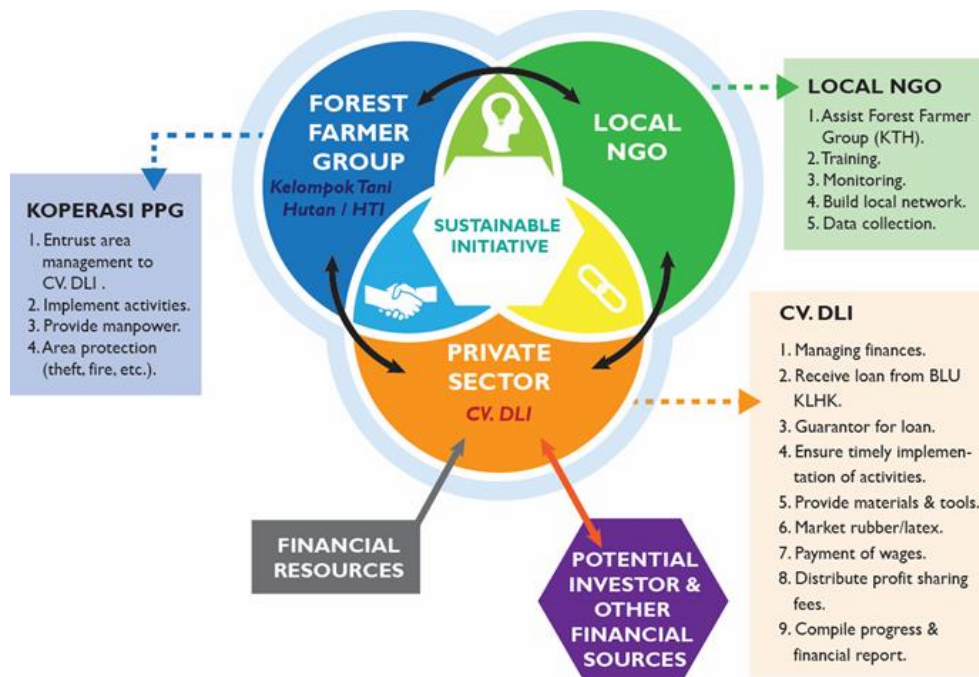
Ensuring good agricultural practices is particularly important on peatland areas in this province, which is regularly devastated by forest and land fires. Central Kalimantan was one of the worst hit regions during the 2015 forest and land fire crisis, which resulted in more than USD 16 billion in damages nationwide. Impacts were felt across communities and sectors including health, economy, and education in addition to forest and biodiversity loss. The man-made disaster was rooted in the unsustainable draining and clearing of peatlands. Hence this Green Enterprise initiative ultimately aimed to improve productivity and sustainable management of land, ensuring local communities exercise greater stewardship in protecting their land from fire risk.

The rubber agroforestry initiative was developed under a Forestry Partnership (*Kemitraan Kehutanan*) between local communities represented by Forest Farmer Groups (*Kelompok Tani Hutan - KTH*) and FMU XXXI as the official manager of the forest area. KTH in the villages of Garung and Gohong were given legal access to manage a 400-hectare area.

The business model for this partnership was based on an agreement between three stakeholders: KTH, FMU XXXI, and the private sector partner (DLI). All were involved in the development of the model including their individual roles and responsibilities. As well as rubber, a survey of other potential commodities identified *Calliandra* and pineapple that could be grown in the permitted area.



This was the first time such a partnership was developed in Central Kalimantan. LESTARI provided intensive technical assistance from the early stages in connecting various stakeholders, facilitating necessary permits, developing the business model as well as conducting surveys for other potential commodities. Through this type of partnership, local communities will have improved incomes from the business partnership itself as well as improved cultivation practices that they can carry forward. Moreover, LESTARI also provided technical assistance in accessing potential funding and up-front investment required for the initiative by engaging with the private sector partner (DLI). DLI has secured required investment for approximately USD 1.7 million (IDR 27 billion) while the MoU between DLI and KTH has been signed.



With the implementation of this initiative, a total of 400 hectares of degraded area will be rehabilitated while at the same time enhancing rubber commodity production that benefits

local livelihoods. If the area is well maintained in line with agroforestry principles, the risk of forest and land fire will also be reduced.



Figure 4. Signing ceremony for rubber agroforestry partnership; nursery development in preparation of planting activities

Development of local coconut oil-based product in Yepem Village, Papua Province

This initiative focused on the development of sustainable small-scale businesses, utilizing available NTFPs to support the improvement of local livelihoods and strengthen efforts for sustainable natural resource management.

The socioeconomic and environmental conditions in Papua are quite different compared to Aceh and Central Kalimantan. Local communities still largely depend on neighboring forest for their everyday needs. Traditional communities live on their ancestral lands and derive spiritual and cultural value from these lands. Access to outside markets is often difficult and costly due to low population density and lack of infrastructure. The threat of encroachment from local communities is generally very small. Therefore, the LESTARI model for green enterprises has been to support local communities improve local business potential that incorporates principles of conservation and sustainable natural resource management.

In Yepem Village, LESTARI has focused support for Green Enterprises on the establishment of a functioning Village-Owned Enterprise (*Badan Usaha Milik Kampung – BUMK*) as the catalyst and driver for improving local livelihoods. In turn the BUMK has attracted regional government support to develop a business based on local products such as coconut oil and vegetables that can be sold collectively in the district capital. Previously, individual farmers would take their own products to the market, incurring large transportation costs and time. LESTARI has provided technical training to improve the quality and quantity of produce that is then marketed by the BUMK. The number of members supplying the BUMK are still limited, but expected to grow as BUMK grows in confidence and influence in the village.

This initiative also addressed forest conservation and sustainable forest management. The BUMK has been assigned management of village assets, such as a water resource that supplies the District town of Agats. The forest area is regularly patrolled by a BUMK-funded Forest Protection Group and has attracted support from both the Asmat Regional Government as well as from the village development funds (*Anggaran Dana Desa*) for their operations. While this is not a sustainable business model *per se*, the operational BUMK with available funding, marketing commodities from the village and actively protecting the forest area is contributing significantly to forest and biodiversity conservation.



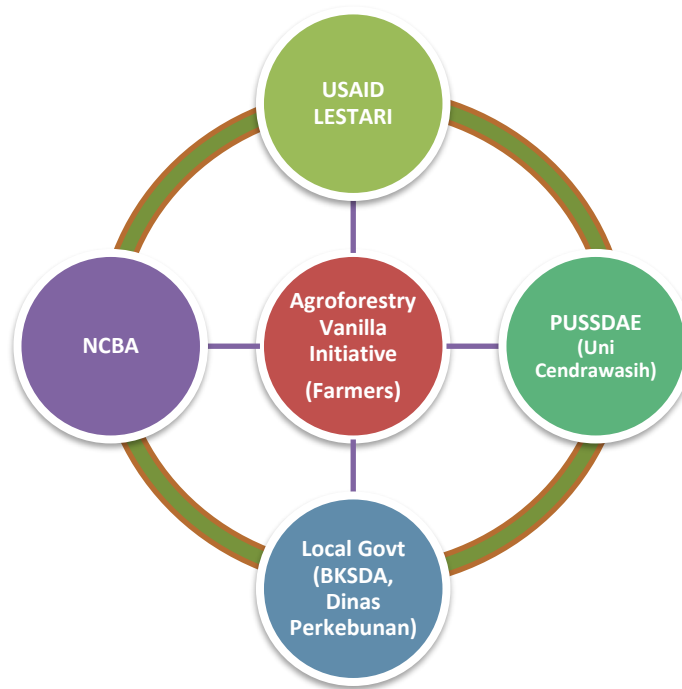
Figure 5. Yepem community members making coconut-based products to be sold through the BUMK

Cultivation of Vanilla Agroforestry in the Bufferzone of Cyclops Nature Reserve, Papua Province

This pilot initiative aimed to reduce encroachment and illegal agricultural activities within the protected area through the development of sustainable agricultural opportunities for local communities in areas located strictly outside of the nature reserve.

This initiative was implemented in the Cyclops Nature Reserve region and encouraged relocation of encroachers to the bufferzone area of the nature reserve. The model is based on a collaboration between LESTARI and USAID's Sustainable Cooperative Agreement Alliance (SCAA) project, which is implemented by the National Cooperative Business Association (NCBA), a U.S.-based farming cooperative. Under this collaboration LESTARI was responsible for identification of suitable locations and farmer groups while NCBA was responsible for providing training to develop sustainable agroforestry systems with vanilla as the main commodity. Local government agencies also contributed equipment, seedlings, and trainings for participating farmers. NCBA will also be the permanent off-taker of vanilla beans from farmers. Over 175 farmers have received trainings in agroforestry vanilla and sustainable land use management and LESTARI has worked together with the local government to optimize technical assistance and scale up the business model to improve land and forest management in the Cyclops region.

Implementation was significantly disrupted due to flash floods in February 2019 which damaged many agroforestry areas and SCAA's nursery and the plantation. This flood was caused by deforestation in the Cyclops area and is clear evidence of the need to reduce deforestation and degradation within the nature reserve. After the flooding, LESTARI worked with the Center for Natural Resources and Ecosystem Studies (*Pusat Studi Sumber Daya Alam dan Ekosistem* – PUSSDAE) affiliated with Universitas Cendrawasih (and with NCBA) to slowly bring the initiative back on track. Collaboration with PUSSDAE is a strategy to enhance the sustainability of the project beyond LESTARI. PUSSDAE and NCBA have committed to providing guidance and necessary support to farmer groups in the future.



The main challenge for this initiative is ensuring that the partner farmers cease illegal agricultural activities within the nature reserve. One key strategy is to collaborate with NCBA to ensure they will not purchase from farmers that continue illegal cultivation. Economically, the project has started to show initial results. Vanilla requires about three years to mature and produce vanilla beans. However, the price of vanilla is currently high (fresh harvested vanilla beans sell between IDR 500-700k), encouraging farmers to abandon encroachment and join this initiative. A survey conducted to measure impact of the project on livelihoods and encroachment in the nature reserve revealed a high level of awareness about the importance of forest protection on their own livelihoods, realizing the main cause of the floods. 60% of respondents stated they do not practice illegal agriculture and are focusing on vanilla. However, many still have no alternatives due to lack of access to land².

² Illegal agricultural activities are mostly conducted by immigrant farmers coming from highland areas. They lack access to land and hence encroach within the boundaries of the nature reserve. LESTARI has collaborated with NCBA and local government through this initiative to allow land access for immigrant farmers in limited areas outside of the nature reserve. Some of the local communities have supported this while others are still reluctant due to underlying tensions surrounding migration.

KEY CHALLENGES, LESSONS LEARNED, AND RECOMMENDATIONS

LESTARI's work supporting Green Enterprises over the 5-year project period has revealed various challenges and lessons learned, which could be useful for government agencies, donors, NGOs, and private sector firms involved in the sustainable forest commodity development space in Indonesia. These are summarized below.

- **Recognizing the growing market-driven diversification is one of the major contributors for sustainable business model.** The result of direct meeting with buyers/off-takers, based on events facilitated by LESTARI resulted in interesting insights. Firstly, buyers are interested in engaging with farmers and knowing exactly where their product comes from. This has led to direct deals in a few cases. Secondly, farmers and producers become increasingly aware of the many opportunities that can be seized but have yet to fulfil quantity and quality demands of buyers. Both of these issues need to be addressed to cater to the market, where high product standards are applied. Technical assistance and facilitation is probably required on a continuous basis (albeit at a lower intensity) to ensure that future opportunities arising can be capitalized on by farmers and producers, and not regress to the old business-as-usual scenario before LESTARI intervention. Where there is a commitment from the private sector to provide this technical capacity, business models are likely to be more sustainable.
- **Engaging the 'right' partner is a crucial key to develop a sustainable business model.** The right partner will be willing to commit resources in rural areas with limited human resources, difficulty to access, and other challenges and obstacles normally found in forest bufferzone areas. The recent growth of the niche, high-end coffee and chocolate market domestically in Indonesia is a welcome trend that indicates this sustainability and responsibly-sourced market potential does exist.
- **Long-term commitment needs to be continuously fostered.** This is a classic challenge that is faced by many buyers. LESTARI has been providing technical trainings, internship, and direct communication with the buyers to mitigate this issue. The willingness to follow certain SOPs, regulations, and agreements needs to be continuously cultivated from the beginning. Through technical trainings, the farmers are trained to develop proper SOPs for their product, while through internship in some companies they can observe direct processing at a professional level. LESTARI also facilitated direct communications with potential buyers/off-takers so that the farmers will be able to hear first-hand information regarding the specific requirement to sell the products.

Aside from commitment for business aspects, sustainability includes a commitment for the environment. For all Green Enterprise initiatives, LESTARI emphasized the importance of sustainable agricultural practices and avoiding encroachment on forest areas. Going forward, these commitments need to be continuously monitored and enforced by the responsible local government agencies.

- **Bridging regulatory and oversight gaps for developing sustainable business models is essential.** FMUs are often tasked as the local authorities responsible for monitoring and facilitating partnerships for Green Enterprises, but are often lacking in human resources, technical knowhow, and budget capacity. Moreover, many local regulations regarding allowable forms of partnerships for forest-based community livelihoods lack detailed implementation guidance. Routine multi-stakeholder dialogue to acknowledge, discuss, and address these gaps would be beneficial to all stakeholders.

- **It is difficult to assess the impacts and relationship of Green Enterprise development alone on forest cover change in adjacent areas.** The basic theory of change under which LESTARI supported Green Enterprises was that improved livelihoods opportunities in targeted areas will reduce pressures for forest encroachment. Initial indications from interviews and ground-checking suggest reduces rates of forest encroachment in project sites. However a more scientific analysis requires studying longer-term forest cover change to allow for impacts from Green Enterprises to take place. Moreover, it is difficult to establish direct causation between Green Enterprise development and forest cover change. Community actions to encroach or not are driven by a confluence of factors and circumstances. It is difficult to disentangle all of these factors and definitively conclude whether a particular livelihoods intervention led to increased or decreased forest loss. These limitations should be understood when designing livelihoods initiatives and their respective targets.

More broadly, enabling conditions need to be considered and addressed in order to foster the sustainability of green enterprises and related conservation objectives.

- From local government agencies, there is a need for sufficient technical, financial, and regulatory oversight and support for green enterprise initiatives. LESTARI experience at the landscape level showed that local government support was a crucial factor in advancing the initiatives. Meanwhile some initiatives struggled to move forward due to gaps in regulatory/legal issues, difficulty in securing financial resources, and perception among buyers that long-term technical assistance for farmers would be lacking beyond the LESTARI project.
- Market access and capacity to adapt to market conditions are important factors. As explained above, market demand has evolved quite rapidly in favor of higher-value and sustainability certified forest commodities. The supply of rural forest commodities should be able to evolve and adapt accordingly, and growers should be able to tap into efficient and responsive technical support and training when needed. With improved market access, local commodities can become more attractive for potential partners or buyers.
- Stronger monitoring and enforcement against forest crimes and encroachment into protected areas should be implemented. In addition to improving conservation outcomes, this would also give buyers and traders greater confidence in the sustainability claims of forest commodities.
- Various forms of innovative financing should be streamlined to help address the financial risks for sustainable livelihood programs in rural areas and improve the commercial viability of the initiatives. This can be implemented through blended finance where private capital can be combined with public funding (i.e., government and international donors).

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