KOLTIVA

Empowering Indonesia's Small-Scale Producers through KOLTIVA Capacity Building Programme & Traceability Platform

Helping Businesses Achieve 100% Traceability, Advancing Smallholder Success

KOLTIVA Supports Agri-Businesses in Elevating Small-scale Palm Oil Producers in Indonesia

For over a decade, KOLTIVA has been at the forefront of transforming supply chains with traceability and sustainability at its core. From agri-enterprises and multinational corporations to public sector institutions, NGO's and MSMEs, KOLTIVA empowers organizations to achieve 100% traceability while setting new benchmarks for sustainability and driving global impact.

The Trusted Global Partner in Transparent and Sustainable Palm Oil Supply Chain Solutions

Since entering the palm oil sector in 2017, we have deepened our commitment to advancing sustainable, deforestation-free production **helping over 20 palm oil businesses, enterprise & organizations** across **12 provinces** in Indonesia to create lasting impact and more transparent palm oil supply chains.

Aceh · **North Sumatra** · **West Sumatra** · **Riau** · **Jambi** · **South Sumatra** · **Lampung** · **Bangka Belitung** · **West Borneo** · **Central Borneo** · **East Borneo** · **South Borneo**

Improving Palm Oil Producers Livelihood

170,188
Producers Registered

2,486
Businesses Registered

At KOLTIVA, we transform the palm oil supply chain by placing **smallholder producers at the heart** of sustainable operations. Our expertise lies in enabling businesses to create transparent, traceable systems, ensuring that every step from the farm to the global market meets the highest sustainability standards.

By integrating **smallholders as the driving force** behind these efforts, we deliver impact through digital traceability solutions, training, and capacity building, while offering land legality support and certification readiness.

Our comprehensive approach enhances productivity, strengthens livelihoods, and improves farming practices, ensuring adherence to sustainability standards, while meeting the traceability and quality requirements of **global buyers in the market**. Financial inclusion initiatives further **open doors to market access**, driving long-term resilience. This collaborative model fosters trust and shared commitment between producers and downstream partners, resulting in a more inclusive, transparent, and sustainable palm oil supply chain.

Our Action Areas:

- Producers Mapping & Surveying
- Training & Coaching
- Traceability Support
- Certification Readiness
- Financial Inclusion
- Good Agricultural Practices
- Enabling Businesses Achieve 100% Traceability to Plantation

A Snapshot from the Program in Indonesia
We Help Businesses with the Capacity Building Achievement

- Extensive coaching sessions delivered, amounting to thousands of hours.
- Comprehensive surveys conducted across numerous palm oil farm plots.
- Verification completed for significant areas of producers' plots.
- A notable number of producers have received RSPO Certification.

#1 Challenges Identification

In 2023, Indonesia produced 47 million tonnes of crude palm oil, solidfying its status as the world's largest exporter, contributing 54% to global palm oil exports (SEI, 2023). This industry is a cornerstone of Indonesia's economy, providing millions of jobs and significant revenue. However, it faces substantial challenges that hinder its global competitiveness. Many producers lack access to **adequate training in sustainable practices**, which limits their ability to meet international standards. Additionally, there are significant barries to understanding and **achieving compliance** with **certifications** such as the Roundtable on Sustainable Palm Oil (RSPO), which are crucial for accessing **premium markets**.

In Aceh and North Sumatra provinces, regions which are among the largest palm oil producers in Indonesia, with vast plantations and a significant contribution to the country's palm oil export market, the adoption of sustainable practices is crucial. These provinces are home to 500,000 smallholder households who rely on palm oil cultivation for their livelihoods, making it vital to implement initiatives that enhance sustainability, improve yield, and ensure compliance with global standards like the RSPO **(BPS Aceh, 2023; BPS North Sumatra, 2023)**.

Upon examining the challenges faced by Indonesia's palm oil industry, we identified several key issues:

Undocumented Farming Practice:

Many producers lack proper land legality documentation, such as land ownership certificate and cultivation registrations (STDB). Data from a recent study by the Indonesian Ministry of Agriculture shows that over 50% of land parcels are passed down through generations without adequate legal recognition (KAMI, 2023). This lack of formal registration poses barriers to certification and access to markets.

Knowledge Gap on Good Agricultural Practices (GAP) and Farming Practice Required by Sustainability Standard:

Producers in Aceh and North Sumatra face a significant knowledge gap regarding Good Agricultural Practices (GAP) and have neither received nor implemented sustainable farming, which are essential for meeting international standards and obtaining certifications like those from the Roundtable on Sustainable Palm Oil (RSPO). About 40% of palm oil production comes from independent smallholders, many of whom rely on informal networks for support, resulting in significant gaps in knowledge and certification readiness (RSPO, 2022).

RSPO Certification Knowledge Deficiency:

Most producers in Aceh and North Sumatra are not RSPO certified yet. There is a critical gap in knowledge regarding the Roundtable on Sustainable Palm Oil (RSPO) certification among producers. Without this certification, they miss opportunities to market their products to wider, sustainable commodity markets.

Business Hurdles in the Palm Oil Sector:

In Aceh alone, palm oil production in 2023 reached approximately 459,727 tons (BPS Aceh, 2023). Corporations are fulfilling the demand through plantations in Aceh and North Sumatra. It is crucial for the businesses to adhere to regulatory standards to maintain market access and empower producers to achieve regulatory compliance.

#2 Innovation, Initiatives & Results

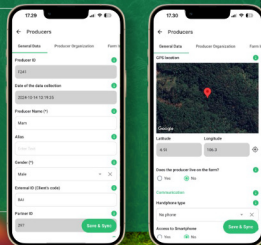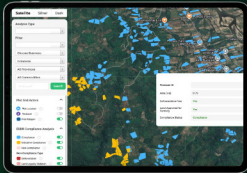### Supporting Producers' Land Legality and Farm Verification

Without legal land ownership, producers risk disputes, evictions, and loss of livelihoods. Secure land titles protect them from these threat while unlocking access to goverment support agricultural services, and financial opportunities.

A core focus of this program is empowering smallholders to verify their land legality—an essential milestone for certification and obtaining Surat Tanda Daftar Budidaya (STDB). We have collaborated with palm oil multinational businesses to verify extensive areas of smallholder plots, assisting a substantial number of producers and surveying thousands of farm plots. This support ensures producers meet the documentation requirements for both STDB and RSPO.

The **verified data provides** critical support for smallholders in their **STDB application** and aligns with sustainability certification standards, reinforcing KOLTIVA's commitment to help businesses in fostering transparency and traceability in agricultural practices.

We facilitate Field Agents (FA) to support smallholders in **securing land legality,** addressing one of the biggest challenges in obtaining the Surat Tanda Daftar Budidaya (STDB): **verifying legal ownership.** By leveraging our KoltiTrace MIS FarmXtension technology, the field agents help producers map their land polygons accurately.

Producers Mapping and Farm Polygon Support

Our process includes assessing land legality status, uploading documents, utilizing our **technology ecosystem**, KoltiTrace MIS FarmXtension and guiding them through the steps to secure ownership.

Our Key Action Areas

Socialization and Trust-Building

Field agents engage directly with producers to emphasize the importance of registration and build trust within the community, encouraging them to participate in the registration process.

Capacity Building

KOLTIVA provides training focused on Good Agricultural Practices (GAP) to enhance producers' knowledge and skills, promoting sustainable farming methods.

Producers Profiles

Field agents collect comprehensive data on producers and their families, which is stored in the KoltiTrace FarmXtension app. This data includes essential information that support their profiles and future compliance.

Obtaining STDB (Farming Registry)

Assist smallholders in obtaining the STDB, ensuring they are officially registered in government databases, not only legitimizes farming practices but also compliance, i.e. RSPO.

A major challenge in issuing STDB certificates lies in verifying the legal ownership of smallholder plantations. KOLTIVA addresses this by leveraging the KoltiTrace MIS FarmXtension to map land polygons accurately.

Field staff conduct on-site measurements, walking the plantations to capture precise boundary data. This information is cross-referenced with satellite imagery to confirm the land lies outside protected areas, ensuring no overlapping ownership or usage rights. The verified data strengthens producers' applications for land legality certificates.

Our Key Actions

Preparations of Documents
Includes the producers' profile, detailed farm information, and verification of legal compliance.

Farm Practices Documentation
Ongoing recording of farming practices throughout the certification application period.

Training and Capacity Building
Provide training on Good Agricultural Practices (GAP), farm business management, labor rights, health and safety (HSE), and Good Environmental Practices.

Group Registration
Producers must register under a cooperative or formal farmer group to enhance collaboration and compliance.

Audit and Corrective Actions
Conduct audits and implement corrective measures to address any identified gaps in compliance.
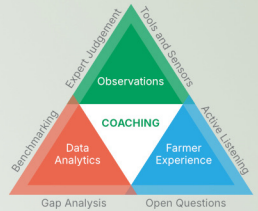
Certification Approval and Issuance
Once all requirements are met, final certification is granted and officially issued.

Capacity Building for 8,185 Palm Oil Producers for a Resilient Future

Our extension training program for RSPO certification equips smallholders with the knowledge and practical skills needed to meet sustainable palm oil standards. **Through expert-led sessions,** producers get training and coaching required for RSPO Certification, including topics such as Farm Business Operation, Labor Rights, Health, Safety, Environment, sustainable practices, compliance requirements, fostering collaboration and building capacity for certification success.

Expert Judgement
Tools and Sensors
Observations
Benchmarking
COACHING
Active Listening
Data Analytics
Farmer Experience
Gap Analysis
Open Questions

Group Training
Collaborative learning approach to equip multiple smallholders with the knowledge and skills covering key topics such as sustainable farming practices, environmental protection, labor rights, compliance with RSPO principles.

Data-Driven One-on-One Coaching
Farm assessment data and interaction with producers identifies knowledge gaps, which become the topics addressed during a coaching session.

#3 Project Scalability to Support Smallholder Producers & Other Palm Oil Businesses

KOLTIVA's certification initiative supports palm oil producers across regions by aligning practices with global standards. Through data-driven analysis, it reshapes farming methods to meet sustainability requirements, focusing on RSPO compliance. Training programs are tailored to local contexts, with materials translated and adapted for different commodities. Data gathered during certification improves industry practices, enhancing sustainability and production. KOLTIVA also provides ongoing support through comprehensive training, real-time monitoring, and capacity building to help producers meet stringent certification criteria.

Unlocking Scalability: AI Pest Management Solutions Advanced eTraining, and Closed-Loop Ecosystem Expansion

AI-powered Pest and Disease Identification Tool

In the future, there's a potential scalability to introduce an AI-powered pest and disease identification tool, along with expanded eTraining in GAP topics such as pest management, termites, palm oil sustainability certification, and integrated weed management. The AI tool will empower producers to upload photos of crops affected by pests or diseases, which are becoming more prevalent due to climate change.

Another feature will assist producers in managing fertilizers and pesticides, enabling them to record fertilizer amount in kilograms and track pesticide applications, ensuring informed decisions and compliance with agricultural standards. These tools will also streamline agricultural monitoring during the RSPO certification process.

Improve Financial Inclusion with Closed-Loop Ecosystem Expansion

The key component of FarmCloud is the integration of KoltiPay, a responsible digital wallet within KOLTIVA's technology ecosystem. KoltiPay provides rural communities with access to essential financial services, including savings accounts, daily transactions, crop insurance, and credit. It also offers a pay-later option for purchasing agricultural inputs, with repayments tied to future harvests.

This closed-loop financial system promotes economic inclusion, empowering producers to invest in their farms, leading to higher yields and improved product quality. By enhancing access to financial resources, KoltiPay strengthens livelihoods, support poverty alleviation, and encourages sustainable farming practices.

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