Environmental and Financial Risk Assessment

Smallholder Finance on a Landscape Level

Picture source: WWF – James Morgan
Indonesia and Malaysia are the leading CPO producers but face issues due to environmental risks, overaged trees and suboptimal farming practices.

Independent smallholder farmers account for 42% of crude palm oil production.

Smallholder farmers struggle with:
- Low productivity due to overaged trees and low quality inputs
- Lack of access to finance due to perceived high risk by financial institutions

Consequences:
- Sub-optimal production
- Further deforestation

Solution: access to investment capital, high-quality inputs, GAP intervention and continuous environmental monitoring.
<table>
<thead>
<tr>
<th><strong>Access to Finance – Challenges</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Farmers</strong></td>
</tr>
<tr>
<td>✓ Geographically dispersed and often disorganized</td>
</tr>
<tr>
<td>✓ Small individual loan sizes</td>
</tr>
<tr>
<td>✓ Lack of hard loan collateral available</td>
</tr>
<tr>
<td>✓ Insufficient savings capacity</td>
</tr>
<tr>
<td><strong>Financial Sector</strong></td>
</tr>
<tr>
<td>✓ Lack capability and willingness</td>
</tr>
<tr>
<td>✓ High operational costs</td>
</tr>
<tr>
<td>✓ Lack of quality financial info and inconsistent data</td>
</tr>
<tr>
<td><strong>Public Sector</strong></td>
</tr>
<tr>
<td>✓ Land legality issues</td>
</tr>
<tr>
<td>✓ Lack of adequate infrastructure</td>
</tr>
<tr>
<td>✓ Weak enforcement of oil palm zero expansion laws</td>
</tr>
<tr>
<td>✓ Lack of enabling environment (organization, insurance, loan subsidies and credit guarantee schemes)</td>
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</tbody>
</table>
Integrated approach needed for smallholder finance at scale: structured process and multiple stakeholders

1. Environmental & Supply Chain Analysis
   Technology: Landscape Risk Analysis
   Advisory: Supply Chain Analysis & Contracting

2. Bridging the Gap with Financial Sector
   Technology: Loan Origination & Credit Scoring
   Advisory: Portfolio Structuring

3. Capacity Building & Scale Up
   Technology: Monitoring
   Advisory: Technical Assistance
Step 1 – Identification of smallholder supply shed and overlay with land suitability and HCV areas
Step 2 – Data Collection & Analytics

Farmers are scored on risk drivers to replace the use of historical information, since such information is often not available for the unbanked/underbanked population.
Step 3 – Credit Risk Reports & Portfolio Structuring

**Smallholder Report**

**Kamto**

- **KTP Number:** 150508311278
- **City:** Sido Mukti
- **Age:** 53
- **No. of fields:** 4
- **Field size (ha):** 4.6

**Central Office Report**

**Cooperative**

ID: 123456

- **Distribution of Credit Scores**

<table>
<thead>
<tr>
<th>Credit Score</th>
<th>Affordability</th>
<th>Experience with Borrowing Money</th>
<th>Requested Credit Amount</th>
<th>Loan to Value</th>
<th>Land Title (Main Plot)</th>
<th>Collateral Coverage Ratio</th>
<th>Regional Environmental Risk Factor</th>
<th>Overlap with No Go Areas</th>
<th>Deforestation</th>
<th>Overlap with HCV Areas</th>
<th>Obtained Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-Neutral</td>
<td>Installment higher than 75% limit for loan repayment</td>
<td>Yes</td>
<td>IDR 220,000,000</td>
<td>92%</td>
<td>Sertifikat Hak Milik (SH-M)</td>
<td>1.79%</td>
<td>Low</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Mockup Version**
Step 4 – Visualization
Step 5 – Monitoring

Identify land use change
Check where and when deforestation occurred

Identify fires
Check where and when fires took place
Next Steps

1. Deliver proof of concept with pilot involving local banks, plantation companies and government

2. Take a jurisdictional approach where governments can support by creating a enabling environment. More specifically:
   - Land Rights Formalization
   - Development of integrated “strategic” subsidies
   - Encourage farmers’ organization/association and uptake of certification

3. Continued development of company-farmer partnership models;
More Information

“Innovative Replanting Financing Models for Oil Palm Smallholder Farmers in Indonesia - Potential for upscaling, improving livelihoods and supporting deforestation-free supply chains”

“Current practices and innovations in smallholder palm oil finance in Indonesia and Malaysia: Long-term financing solutions to promote sustainable supply chains”
Time for an afternoon coffee break!

*Sponsored by Control Union*