SOCIAL FORESTRY AND FOOD RESILIENCE

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REPUBLIC OF INDONESIA
• **Acces inequality**
  Before 2014, forest production for timber concession, industrial plantation, and eco-tourism with proportion of 98.65% and 1.35% agroforestry.

• **Poverty:** 25,856 villages → 10.2 million (36.73% of 261 million people)

• **Food Security:**
  a. Agricultural land conversion → 30,000-50,000 hectares each year
  b. The success of food quantity was not followed by farmer’s increasing prosperity, which caused farmer regeneration was low
  c. Total of people with high level food insecurity were 36,85 million and very high level of food insecurity were 15,48 million
National Policy Direction

- Increasing community’s access rights to the forest
- Optimizing the utilization of forest plantation

2020 - 2024

- Strengthening institutional community in forest management
- Optimizing the utilization of forest plantation

2025 - 2030
Social Forestry Approaches

Social Forestry provides legal access or utilization permit/partnership for forest farmer group/community to manage forest landscape on sustainable basis, which 1-2 ha in densely populated (farmer type) or 4-5 ha (estates type in less densely populated island).

Applying Economic Equality through three pillars

1. LAND (and asset)
2. OPPORTUNITY (capital, and market access)
3. CAPACITY BUILDING (Vocational Training/facilitator)
OBJECTIVES OF SOCIAL FORESTRY

SMART OBJECTIVE Increasing land allocation for community to gain right in managing forest up to 10% of forest total in Indonesia (equal to 12.7 million ha) through Social Forestry

SHORT-TERM OUTCOMES 1. System development and adaptation, enable to provide indicator of management area and development of social forestry business process; 2. Development of social capital; 3. Development of community access to microfinance institutions (BLU), community guidance, and market access for products

MID-TERM OUTCOMES 1. Production centre of forest product; 2. alleviation of tenure conflict; 3. forest sustainability

LONG-TERM OUTCOMES Establishing more than 10 thousands production centres of forest product community –based aims to increase employment rate and decrease poverty rate in 10 thousands villages around and inside forest
## Legal Access Distribution

<table>
<thead>
<tr>
<th>Total Area (Hectare)</th>
<th>3,322,368.37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household</td>
<td>± 737,780</td>
</tr>
<tr>
<td>Social Forestry</td>
<td>5,939</td>
</tr>
<tr>
<td>Permit (Unit)</td>
<td></td>
</tr>
</tbody>
</table>

Updated 30 May, 2019

- Exponential Growth
- Gradual Growth

- 12.7 M Ha
- ± 2,668,508
- 22,600

- Updated 30 May, 2019
SOCIAL FORESTRY SUPPORT TO FOOD SECURITY AND CLIMATE RESILIENCE

**Total Area of Social Forestry Area**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Total Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKm</td>
<td>1,378,476,21</td>
</tr>
<tr>
<td>HD</td>
<td>680,918,82</td>
</tr>
<tr>
<td>HTR</td>
<td>342,983,68</td>
</tr>
<tr>
<td>Forest Partnership</td>
<td>341,360,67</td>
</tr>
<tr>
<td>HA</td>
<td>578,629,00</td>
</tr>
<tr>
<td><strong>TOTAL AREA</strong></td>
<td><strong>3,322,368,37</strong></td>
</tr>
</tbody>
</table>

**Biomass and potential emmision reduction**

(forest rehabilitation of degraded land on SF Area-Enhancement of Forest Carbon Stocks)

- Degraded land on SF (critical) : 151,816.35 Ha
- Number of tree of rehabilitation program 1100 trees/ha. Total Number of Tree : 166 Million Trees
- Carbon Stock after rehabilitation 237,52 Ton/ha (FORDA MOF, 2015)
- Estimation of carbon dioxide (CO2) sequestration in rehabilitation area 0.68-2.76 ton/ha (agathis, pinus, 4 year) (Source : Faculty of Forestry IPB, 2018)

**Social Forestry- SFM - Conservation of Forest Carbon Stocks**

- Forest covered SF Area : ± 493,828.83 ha (2017)
- Potential Emmission reduction 126,4 Million Ton CO2e

**Estimation of Food production from PIAPS-Production Forest with Agroforestry System**

- **Rice**
  - Productivity : 4.98 ton/ha

- **Corn**
  - Productivity : 4.5 ton/ha

- **Soybean**
  - Productivity : 1.4 ton/ha

**Commodity**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Production Estimation from PIAPS Area Utilization (000 Ton/Year)</th>
<th>National Demand (Yr.2018) (0000 Ton)</th>
<th>% of production to national demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>2.943.8</td>
<td>33.804</td>
<td>8.7 %</td>
</tr>
<tr>
<td>Corn</td>
<td>5.539.1</td>
<td>25.969</td>
<td>21 %</td>
</tr>
<tr>
<td>Soybean</td>
<td>1.723</td>
<td>4.359</td>
<td>39 %</td>
</tr>
</tbody>
</table>
## Key Success of Social Forestry

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicator</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional set-up</td>
<td>Farmer group</td>
<td></td>
<td>Cooperative/village enterprises</td>
</tr>
<tr>
<td>Forest Management</td>
<td>Long-term Development Plan</td>
<td></td>
<td>Increased of forest cover</td>
</tr>
<tr>
<td>Business Development</td>
<td>• Business plan</td>
<td>• Village center production</td>
<td>• Increased income</td>
</tr>
<tr>
<td></td>
<td>• Village center production</td>
<td></td>
<td>• Poverty alleviation</td>
</tr>
</tbody>
</table>
MAPS OF SOCIAL FORESTRY PRODUCTS DISTRIBUTION

Potency:
- Cocoa, Candlenut, Cotylelobium Pierre, Duabanga moluccana, Pterospermum javanicum

Potency: Coffee, Candlenut, Avocado, Calliandra, Mahogany, Shorea, Gnetum gnemon, Rubber, Benzoin

Potency: Rubber, Bamboo, Benzoin, Pangium edule, resin torch

Potency: Rubber, Albizia chinensis, sugar cane, corn, aloeswood, nutmeg, sugar palm, coffee, durian, avocado, coconut, Parcia speciosa

Potency: Payment Environmental Service, Eco-tourism, Cassava, Spices, Armophophallus Muelleri BL

Potency: Aloeswood, Pepper, Lansium paratiticun, Shorea app, White Teak, mahogany

Potency: Schima wallichi, Ebuyu, Albizia chinensis, Bay-leaves, Jackfruit, Eco-tourism, mahogany coffee
Classification of Social Forestry Enterprise Group in 2016 to 2019

Blue
1. Legally acknowledged as Social Forestry Enterprise Group (KUPS)
2. Identified potency of the commodities

Silver
1. Legally acknowledged as Social Forestry Enterprise Group (KUPS)
2. Identified potency of the commodities
3. Activity Planning (RPHD/RKU/RPH/RKT)
4. Enterprise Unit

Gold:
1. Legally acknowledged as Social Forestry Enterprise Group (KUPS)
2. Identified potency of the commodities
3. Activity Planning (RPHD/RKU/RPH/RKT)
4. Enterprise Unit
5. Enforced commodities’ process /tourism facility
6. Obtained capital access (independent/support/loan)
7. Linked to market/local tourist

Platinum:
1. Legally acknowledged as Social Forestry Enterprise Group (KUPS)
2. Identified potency of the commodities
3. Activity Planning (RPHD/RKU/RPH/RKT)
4. Enterprise Unit
5. Enforced commodities’ process /tourism facility
6. Obtained capital access (independent/support/loan)
7. Linked to market/tourist (local)
8. Linked to market/tourist (regional)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>3.445</td>
<td>1.624</td>
</tr>
<tr>
<td>Silver</td>
<td>1.624</td>
<td>1.624</td>
</tr>
<tr>
<td>Gold</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Platinum</td>
<td>143</td>
<td>143</td>
</tr>
</tbody>
</table>
SOCIAL FORESTRY PRODUCT ONLINE MARKET

icoffeex.id

INDONESIA COFFEE EXCHANGE
BURSA KOPI NUSANTARA
kami punya misi - tidak ambisi - namun pasti

HOME SUMATERA JAWA BALI-NUSA KALIMANTAN SULAWESI MALUKU PAPUA BACK

MODULE

KODEFIKASI PRODUK KOPI DAN RASA
DOWNLOAD QR CODE SCANNER
REGISTRASI KEANGgotaAN

42364-001 Kopi Kobaki
70854-001 Rajamadu
92767-001 Lebah Trigona
1. BENCHMARK SOCIAL FORESTRY IN EAST JAVA: LUMAJANG DISTRICT

Social Forestry for 940 Ha to farmer group Wono Lestari for 367 member is located in mountain range and exactly lays on slope of Mount Semeru.

FMU:
1. Spatial landuse by concensus
2. Agroforestry silvopastural
Number of cows in Village Burno is 804 individuals and owned by 216 breeders. Those cows produce 5,172 liter milk every year and it is priced Rp 5,300/liter.

Gajah Grass for livestock’s feeding
Farmers make benefit from forest to plant gajah grass as cow and goat feed in 133 ha which yield average number of grass production around 1,700 sheaf of grass.

Dairy Cows of LMDH Wono Lestari
Number of cows in Village Burno is 804 individuals and owned by 216 breeders. Those cows produce 5,172 liter milk every year and it is priced Rp 5,300/liter.
<table>
<thead>
<tr>
<th></th>
<th>5 YEAR INCOME</th>
<th>WEEKLY INCOME</th>
<th>DAILY INCOME</th>
<th>RUMPUT GAJAH/ODOT (FEEDING GRASS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Production</strong></td>
<td><strong>SENGON</strong> Production 300 m²/Ha, Price Rp.630.000/m², Revenue Production Rp.189.000.000/ha/6 years</td>
<td><strong>KIRANA BANANA</strong> 2,5 Tons/week, Price Rp. 6.300/Kg, Revenue Production Rp.15.750.000/week</td>
<td><strong>TARO</strong> 2 Tons/week Price Rp. 3.000/Kg, Revenue Production Rp.6.000.000/week</td>
<td><strong>DAIRY</strong> 5.172 liter/day Price Rp. 5.300/liter, Revenue Production Rp.27.411.600/day</td>
</tr>
<tr>
<td><strong>OFF-TAKER</strong></td>
<td><strong>Perum PERHUTANI (State Forest Enterprises)</strong></td>
<td><strong>PT Sewu Segar Primatama</strong></td>
<td><strong>PT Maksindo karya anugerah</strong></td>
<td><strong>NESTLE</strong> 1.700 bundle of grass Price Rp. 15.000/bundle</td>
</tr>
</tbody>
</table>
MODEL BUSINESS OF WONO LESTARI SOCIAL FORESTRY, BURNO VILLAGE, LUMAJANG

1. Community-Based Forest Management Cooperation

2. Partnership of off-taker

3. Recommendation

4. Budgeting

5. Financial Support to Community

- Timber, Kirana Banana, Taro Chips, Dairy Milk

- Kirana Banana, Taro Chips, Dairy Milk

- Individual budgeting to farmer for commodity

- BNI

- BUMDes

PT Mitra BUMDes Nusantara
Technical Service for Felling, Loading, Containing

LMDH

- Perhutani

Sengon
Muna Forest Plantation community based operates sustainable teak plantation on its concession. They planted local teakwood, meanwhile the community runs a small laboratory producing teak wood juveniles through tissue culture. Around 1.000 juveniles are produced and shipped by this community each day.
Social Forestry provides equal opportunity to increase average income (multiple 16.04). The village forest increase monthly income from Rp2,500,000,-/month to Rp40,098,124,-/month.

Value gained from 3 years ahead estimation of learning and development process of Crab Cultivation (Silvofishery), Kelulut Bee Cultivation, Waste Use of Arang Batok (charcoal of coconut shell)
3. SILVOFISHERY: COMMUNITY FOREST IN LUBUK KERTANG

Northern Part of Sumatera Island

- Tenure conflict --> illegal cutting for palm oil by corporation (coastal countermeasures)
- Community movement as a response of tidal flood which impacts to crops and infrastructure
- Rehabilitation in 400 ha coastal area using mangrove
Healthy mangrove for shrimp, fish, and crab production -> applying local wisdom: harvest season, fish trap (*bubu*) using to harvest big fish only

Community is allowed to create pond with maximum size is 0.08 ha/household, with the total area of 10 ha
4. AGROFORESTRY: KASEPUHAN KARANG ADAT CUSTOMARY FOREST

There have been change of forest cover from mix dry land to secondary dry forest land

<table>
<thead>
<tr>
<th>Area of Community Forest</th>
<th>Year</th>
<th>Secondary Dry Forest Land</th>
<th>Dry Land Agriculture</th>
<th>Mix Dry Land Agriculture</th>
<th>Rice Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandiri, Kalibiru village</td>
<td>2009</td>
<td>-</td>
<td>19,85</td>
<td>113,77</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>-</td>
<td>-</td>
<td>113,77</td>
<td>19,85</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>113,77</td>
<td>-</td>
<td>-</td>
<td>19,85</td>
</tr>
</tbody>
</table>

Source: Modified from Ministry of Environment and Forestry (2018)
There have been a reduction of secondary dry forest land for 2,919 hectares and increasing mix dry land agriculture (agroforestry).

<table>
<thead>
<tr>
<th>Area of Community Forest</th>
<th>Year</th>
<th>Secondary Dry Forest Land</th>
<th>Dry Land Agriculture</th>
<th>Mix Dry Land Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinar Mulya Pekon Sukamaju</td>
<td>2009</td>
<td>66.76</td>
<td>531.34</td>
<td>325.32</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>63.85</td>
<td>179.34</td>
<td>680.23</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>63.85</td>
<td>179.34</td>
<td>680.23</td>
</tr>
</tbody>
</table>

Source: Modified from Ministry of Environment and Forestry (2018)
6. COMMUNITY OIL PALM PLANTATION RESTORATION PERIOD STRATEGY: IMPLEMENTING STAGES

- Oil palm plantation in forest area is: 2,8-3,4 million Ha;
- 40% smallholder’s oil palm plantation is in need of completion.
- Presidential Decree No.8/2018 Regarding Oil Palm Moratorium and License Evaluation Also Increasing Oil Palm Plantation Productivity → new license moratorium, government focused on increasing productivity of smallholder oil palm plantation and clearing up land ownership status.
- Ministerial Decree No. 83/2016 Regarding Social Forestry article 56(5) and 65(h) about smallholder oil palm plantation in the forest can be approached by Restoration Period Strategy
Agroforestry as the most rational choice:

- ** Adoptability**: higher possibility to be adopted by community
- **Productivity**: increasing farmer’s household resilience
- **Legality**: possibility of access rights through Social Forestry Programme
- **Sustainability**: improving ecosystem’s structure and function as a whole

Source: Modified from Faculty of Forestry UGM (2019)
# Oil Palm and *Shorea spp*

<table>
<thead>
<tr>
<th>Information</th>
<th>Oil Palm &amp; <em>Shorea spp</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>Kuamang Kuning, Jambi</td>
</tr>
<tr>
<td><strong>Planting year</strong></td>
<td>2000</td>
</tr>
<tr>
<td><strong>Area (ha)</strong></td>
<td>2 hectares</td>
</tr>
<tr>
<td><strong>Reason</strong></td>
<td>Wood scarcity to build house</td>
</tr>
<tr>
<td><strong>Area status</strong></td>
<td>Private forest</td>
</tr>
<tr>
<td><strong>Planting distance</strong></td>
<td>9x9 meter for palm oil</td>
</tr>
<tr>
<td></td>
<td>3x3 meter for <em>Shorea spp</em></td>
</tr>
<tr>
<td><strong>Palm oil tonnage</strong></td>
<td>700 kg/2 weeks</td>
</tr>
</tbody>
</table>

Source: Modified from Faculty of Forestry UGM (2019)
## Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>Sei Gohong, Palangka Raya</td>
</tr>
<tr>
<td><strong>Planting year</strong></td>
<td>2008</td>
</tr>
<tr>
<td><strong>Area (ha)</strong></td>
<td>4 hectares</td>
</tr>
<tr>
<td><strong>Reason</strong></td>
<td>Products’ price instability; for income stability</td>
</tr>
<tr>
<td><strong>Area status</strong></td>
<td>Private forest</td>
</tr>
<tr>
<td><strong>Planting distance</strong></td>
<td>Irregular pattern, around 80 palm oil tree / ha</td>
</tr>
<tr>
<td><strong>Oil Palm produced</strong></td>
<td>400 kg/2 weeks</td>
</tr>
</tbody>
</table>

Source: Modified from Faculty of Forestry UGM (2019)
## Oil Palm Players Typology

<table>
<thead>
<tr>
<th>Management Unit</th>
<th>Area</th>
<th>Land Management Model</th>
<th>Commodity</th>
<th>Motivation</th>
</tr>
</thead>
</table>
| Small           | Less than 3 Ha | Mixed palm oil (not organized) | • Non-certified palm oil seed  
• Livestock | • Limited land  
• Diversification/income stability  
• Lack of knowledge |
| Medium          | 3 – 10 Ha | Mixed palm oil (well-organized) | • Non-certified palm oil seed  
• Rubber plant / Sengon (*Albizia chinensis*)  
• *Dyera costulata*, *Parkia speciosa*, pineapple, etc. | • Limited land  
• Diversification/income stability  
• Lack of knowledge |
| Large / Industry| > 10 Ha | Mixed palm oil (well-organized) industrial scale | • Certified and non-certified palm oil seed  
• Rubber plant / Sengon (*Albizia chinensis*) / agarwood  
• Pathway system | • Profit optimization  
• Result diversification  
• Knowledgeable and experienced |

Source: Modified from Faculty of Forestry UGM (2019)
Cost-Benefit Analysis of Smallholder Oil Palm Business

- Average profit: less than 1 million Rupiah/month/hectare
- Benefit starts from the 7th year
- Peak profit on the 7th-12th year
THANK YOU