Analysis on National Policy for Sustainable Forest Management in Indonesia

INDONESIA - JAPAN 60th ANNIVERSARY SEMINAR FOR FOREST SECTOR
Changing Paradigm of Forestry Policy in Indonesia:
“Toward Promotion of Community-based Sustainable Forest Management”

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Sustainable management of forest and timber supply

Natural forest

Timber supply
Sustainable management of forest and timber supply

Natural forest

Forest degradation and deforestation

Timber supply

Forest fire
Sustainable management of forest and timber supply

Natural forest

Timber supply

Agriculture crop (e.g. oil palm)

Forest degradation and deforestation

Tree plantation

Demand for land

Demand for land
Sustainable management of forest and timber supply

Natural forest

Sustainable management

Timber supply

Alternative timber supply

Tree plantation
Outline

■ Overview of the 3 major timber production schemes in Indonesia and their sustainability in recent decades

① Logging concession of natural forest (IUPHHK-HA)
② Industrial tree plantations (IUPHHK-HT)
③ Tree-farming by small-holders
Forest Zone (Kawasan Hutan)

State-owned land under the jurisdiction of Ministry of Environment and Forestry
64% of total land in Indonesia
Supervised by Forest Management Unit (FMU)

Total area of Indonesia
190 million ha

Area for other purpose (36%)
Forest Zone (64%)
Total area of Indonesia
190 million ha

- Conservation & Protected forest (27%)
- Production forest (30%)
  Including Limited Production Forest
- Convertible production forest (7%)
- Area for other purpose (36%)
Ecosystem restoration concessions (0.3%): Max. 60 years

Logging concessions in natural forest (10%) max. 55 years

Industrial tree plantations (6%) Max. 60 years

Total area of Indonesia 190 million ha

Area for other purpose (36%)

(MoEF 2016)

Ecosystem restoration concessions (0.3%): Max. 60 years

Forest Zone

Kalimantan

Sumatra

Papua
Forest cover rate of each functional zone

Forest cover rate
- Conservation & Protected forest: 80%
- Production forest: 71%
- Convertible forest: 50%
- Area for other purpose: 11%

(MoEF 2016)
Log production in Indonesia

Log supply to industry in 2016
(annual capacity > 6,000m³)
49.3 million m³

Industrial tree plantation 66%

Logging concession 11%

Small-holders 10%

Land conversion (1.3%)

Stock from last year (6%)

State Forestry Cooperation (0.2%)

(MoEF 2016)
Log supply in Indonesia and production of wood products

- Log production
- Log export
- Log export ban
- Sawn timber production
- Plywood production
- Pulp production

Million m3 or ton
Log supply in Indonesia and production of wood products

Log supply to industry (capacity > 6,000 m³/year)
- Industrial tree plantation
- Small-holders and others
- Logging concession
- Land conversion

Log production
Log export
Log export ban

Sawn timber production
Plywood production
Pulp production

Log supply to industry
(capacity > 6,000 m³/year)
Natural forest logging concession
19.3 million ha / 268 companies

Log production from logging concessions in 2016

Consumption of logs from logging concessions by industry (capacity > 6,000m3/year) in 2016

(BPS 2016)
(MoEF 2016)
<table>
<thead>
<tr>
<th>品名</th>
<th>普通合板</th>
</tr>
</thead>
<tbody>
<tr>
<td>品名</td>
<td>普通合板</td>
</tr>
<tr>
<td>尺寸</td>
<td>9.1 x 945 x 1840 mm</td>
</tr>
<tr>
<td>接着度</td>
<td>2 類</td>
</tr>
<tr>
<td>板面品質</td>
<td>1 等</td>
</tr>
<tr>
<td>ホルムアルデヒド放散</td>
<td>F★★★</td>
</tr>
<tr>
<td>製造業者</td>
<td>スヘルマス インダ ブライウッド</td>
</tr>
<tr>
<td>会社</td>
<td>株式会社 工場</td>
</tr>
</tbody>
</table>

表示年月日: 2016 JAN 25
数量: 110 Pcs
検査員: PRAYITNO
製造業者: スヘルマス インダ ブライウッド 株式会社 工場
認定番号: MALQ/P 01-LF/006
Forest just after logging
Forest a few years after logging
Rich biodiversity and ecosystem services can be maintained in natural forest logging concessions.
Decrease of natural forest logging concessions

Number of logging concessions

Total area of logging concessions

Log production by islands

(MoEF 2016)
Decrease of natural forest in logging concessions

Change of natural forest area 2003-2015

- ±5%
- -20 ~ -5%
- -30 ~ -20%
- ~ -30%

Proportion of logging concessions with change of natural forest 2003-2015

N=231
Improvement of sustainability of logging concessions

(1) Whole area resource survey every 10 years (IHMB)

(2) Long-term (10 years) management plan (RKU)

(3) Reduced impact logging

(4) Forestry certification by third-party

Harvesting plan 2011-2020

Mono-cable harvesting (TNC 2009)
Reduce forest floor destruction by bulldozers

Annual harvesting plan (RKT)
Mapping of all harvestable trees
② Industrial tree plantation

187 companies / 8.1 million ha

Number of industrial plantations

Total area of industrial tree plantations

(MoEF 2016)
Industrial tree plantation

187 companies / 8.1 million ha

Log production from Industrial tree plantations in 2016

Consumption of logs from industrial tree plantations by industry (capacity > 6,000 m³/year) in 2016

(MoEF 2016)
Monoculture plantations of fast-growing tree species
Development of an industrial tree plantation
Tree farming by small-holders

Density of tree farming households in 2013

Tree farming households / Land-owning farm households

Plannted tree species

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>No. of trees planted by farming households (million trees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sengon (<em>Albizia falcata</em>)</td>
<td>328.8</td>
</tr>
<tr>
<td>Teak (<em>Tectona grandis</em>)</td>
<td>167.4</td>
</tr>
<tr>
<td>Mahogani (<em>Swietenia macrophylla</em>)</td>
<td>71.5</td>
</tr>
<tr>
<td>Akasia (<em>Acacia mangium etc.</em>)</td>
<td>46.9</td>
</tr>
</tbody>
</table>

(Sensus Pertanian 2013)
Density of planted trees by farming households

Sengon (*Albizia falcata*)

Teak (*Tectona grandis*)

(Sensus Pertanian 2013)
③ Tree farming by small-holders

Consumption of logs from small-holders by industry (capacity > 6,000 m³/year) in 2016

(MoEF 2016)
Conclusion

- Major source of log production in Indonesia has shifted from logging concession (mainly Meranti) to industrial tree plantations (mainly Acacia) and tree-farming (mainly Sengon) in past two decades.

- Natural forest logging concession can produce valuable logs and maintain high levels of biodiversity. Continued efforts are needed to achieve sustainability.

- Industrial tree plantations are highly productive by volume, but this wood is mostly for chip and pulp and cannot substitute for the high-value timber from natural forest.

- Tree-farming by small-holders outside the Forest Zone has become an alternative source for sawn-wood and plywood, and is growing.