Prospects for Green Jobs (GJ) in Indonesian Forestry Sector

(Trade Union Perspective)

Khoirul Anam - FSP KAHUTINDO
About KAHUTINDO
(Indonesian Forestry and Allied Workers’ Union)

• Founded 14 Juli 1973 as Serikat Buruh Perkayuan (Wood Labour Union)
• Coverage: Forestry (HPH-HTI-HTR), Wood Processing Industries, Plantation & allied sectors
• Membership (June 2010): 96,456 workers; 178 Unit; 25 Districts; 12 Provinces
• Main-campaign: “Sustainable Forest for Sustainable Jobs”
• National Affiliation: Confederation of Indonesian Trade Unions (KSPI-CITU): 1,3M
  International Affiliation: Building and Wood Workers International (BWI): 11M
• National Representations:
  – National Tripartite Board - LEI - DKN
  – National OHS Council - FLEGT-EU
• Global Representations:
  – UNFCCC - FSC - AFP
  – The Forest Dialogues - PEFC - ASETUC
• Joint Campaigns:
  – BWI, USW, IUF, CFMEU, ForestWorks
1. Industries and Green House Gases (GHGs) Emission in Indonesia
2. Potential of Green Jobs (GJ) in Forestry Sector
3. Real Issues: Problems and Challenges
4. Trade Union Recommendations
1. Industries and GHGs Emission
RI: 80% GHG Emission from Deforestation and Forest Degradation

Profile of RI GHG Emission in 2020 (BAU Scenario)

Source: Bappenas, 2010
80% GHGs Emission from Deforestation?

Carbon Dioxide absorbed by plants and converted to wood stores.

Mud deposits.

Carbon Dioxide released into atmosphere.

Short-term.

Carbon and methane release.

Long-term.

Peat & Coal.
Potential Activities in Forestry Sector
In RI Climate Change Mitigation

- Forest debris
- Transport
- Wood processing
- Paper & pulp
- Wood burning
- Forest fire
- Planning
- Bio-fuels
- Paper recycling
- Wood products
- Buildings
- Landfill

FOREST GROWTH
## Indonesia Forests

Indonesian Forest Coverage = 132,397,729 ha or 71% of Indonesian Land Coverage (187,787,000 Ha)

### FOREST COVER

<table>
<thead>
<tr>
<th>LAND COVER</th>
<th>FOREST AREAS</th>
<th>OTHER LAND-USE (APL)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (M ha)</td>
<td>%</td>
<td>Area (M ha)</td>
</tr>
<tr>
<td>Forested</td>
<td>92,327</td>
<td>50</td>
<td>8,412</td>
</tr>
<tr>
<td>Not Forested</td>
<td>40,071</td>
<td>21</td>
<td>46,976</td>
</tr>
<tr>
<td>Total</td>
<td>132,398</td>
<td>71</td>
<td>55,388</td>
</tr>
</tbody>
</table>

Source: MoF-Dirjen BPK

- 60% of RI GHG Emission Sourced from Forest and Peat Land (in and outside the forest areas);
- 17-20% of Global GHG Emission Sourced from Deforestation and Degradation of Forest;
- 75% Deforestation and Degradation of World’s Forest happen in Tropical zones, incl. RI.
Pace of Deforestation & Degradation of Forest

**DEFORESTATION PACE**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Indonesia</td>
<td>1,87</td>
<td>3,51</td>
<td>1,08</td>
<td>1,17</td>
<td>0,5</td>
</tr>
<tr>
<td>In the Forest Areas</td>
<td>1,37</td>
<td>2,83</td>
<td>0,78</td>
<td>0,76</td>
<td>-</td>
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<tr>
<td>Outside the Forests (APL)</td>
<td>0,50</td>
<td>0,68</td>
<td>0,30</td>
<td>0,41</td>
<td>-</td>
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</tbody>
</table>

Source: MoF-Dirjen BPK
Pace of Deforestation (Accumulated) from Deforestation Pace Data

- 1990-1996: 13.09 MIO ha
- 1997-2000: 14.04 MIO ha
- 2001-2003: 3.24 MIO ha
- 2004-2006: 3.51 MIO ha

Source: MoF-Dirjen BPK
By performing 5 major activities in emission reduction, Indonesia has the potential to reduce its emissions up to 36%.
2. Potential of Green Jobs (GJ) In Forestry Industries
<table>
<thead>
<tr>
<th></th>
<th>GREENING POTENTIAL</th>
<th>GREEN JOB PROGRESS TO-DATE</th>
<th>LONG-TERM GREEN JOB POTENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renewables</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Carbon Capture and Sequestration (CCS)</td>
<td>Fair</td>
<td>None</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>BASIC INDUSTRY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Aluminium</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Cement</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Pulp and Paper</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
</tr>
<tr>
<td>Recycling</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td><strong>TRANSPORTATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel-Efficient Cars</td>
<td>Fair to Good</td>
<td>Limited</td>
<td>Good</td>
</tr>
<tr>
<td>Mass Transit</td>
<td>Excellent</td>
<td>Limited</td>
<td>Excellent</td>
</tr>
<tr>
<td>Railways</td>
<td>Excellent</td>
<td>Negative</td>
<td>Excellent</td>
</tr>
<tr>
<td>Aviation</td>
<td>Limited</td>
<td>Limited</td>
<td>Limited</td>
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</table>
# Green Jobs Progress To-date and Future Potential (2)

<table>
<thead>
<tr>
<th></th>
<th>Greening Potential</th>
<th>Green Job Progress To-date</th>
<th>Long-Term Green Job Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUILDINGS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Buildings</td>
<td>Excellent</td>
<td>Limited</td>
<td>Excellent</td>
</tr>
<tr>
<td>Retrofitting</td>
<td>Excellent</td>
<td>Limited</td>
<td>Excellent</td>
</tr>
<tr>
<td>Lighting</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>Efficient Equipment and Appliances</td>
<td>Excellent</td>
<td>Fair</td>
<td>Excellent</td>
</tr>
<tr>
<td><strong>AGRICULTURE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Scale Sustainable Farming</td>
<td>Excellent</td>
<td>Negative</td>
<td>Excellent</td>
</tr>
<tr>
<td>Organic Farming</td>
<td>Excellent</td>
<td>Limited</td>
<td>Good to Excellent</td>
</tr>
<tr>
<td>Environmental Services</td>
<td>Good</td>
<td>Limited</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>FORESTRY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reforestation/Afforestation</td>
<td>Good</td>
<td>Limited</td>
<td>Good</td>
</tr>
<tr>
<td>Agroforestry</td>
<td>Good to Excellent</td>
<td>Limited</td>
<td>Good to Excellent</td>
</tr>
<tr>
<td>Sustainable Forestry Management (SFM)</td>
<td>Excellent</td>
<td>Good</td>
<td>Excellent</td>
</tr>
</tbody>
</table>
Opportunities

CO₂ Balance & Targets - What can be done?

Reduce Product Demand
- Industry Energy Conservation

Energy Demand
- Produce Biofuels From Forest Products

Increase Forest Area:
- Increase Plantations
- Reduce deforestation
- Build new markets

Increase Forest Value
- Plantation
- Management
- Processing

Minimize Transport Costs
- Bio-fuel use
- Local industry
- Offset schemes

Environmental Services
# Projection of Forest Restoration RI

<table>
<thead>
<tr>
<th>Year</th>
<th>Community Forest (Ha)</th>
<th>Riverbank Protected Forest (Ha)</th>
<th>Planted Forest HTI + HTR (Ha)</th>
<th>Natural Conserv. Forest (Ha)</th>
<th>Partnership Comm. Forest (Ha)</th>
<th>Total (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>500.000</td>
<td>300.000</td>
<td>473.600</td>
<td>300.000</td>
<td>50.000</td>
<td>1.623.600</td>
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<tr>
<td>2011</td>
<td>500.000</td>
<td>300.000</td>
<td>503.200</td>
<td>350.000</td>
<td>50.000</td>
<td>1.703.200</td>
</tr>
<tr>
<td>2012</td>
<td>500.000</td>
<td>300.000</td>
<td>549.600</td>
<td>450.000</td>
<td>50.000</td>
<td>1.849.600</td>
</tr>
<tr>
<td>2013</td>
<td>500.000</td>
<td>350.000</td>
<td>556.800</td>
<td>650.000</td>
<td>50.000</td>
<td>2.106.800</td>
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<tr>
<td>2014</td>
<td>500.000</td>
<td>350.000</td>
<td>599.600</td>
<td>750.000</td>
<td>50.000</td>
<td>2.249.600</td>
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<tr>
<td>2015</td>
<td>500.000</td>
<td>300.000</td>
<td>449.600</td>
<td>300.000</td>
<td>50.000</td>
<td>1.599.600</td>
</tr>
<tr>
<td>2016</td>
<td>500.000</td>
<td>300.000</td>
<td>549.600</td>
<td>350.000</td>
<td>50.000</td>
<td>1.749.600</td>
</tr>
<tr>
<td>2017</td>
<td>500.000</td>
<td>350.000</td>
<td>499.600</td>
<td>450.000</td>
<td>50.000</td>
<td>1.799.600</td>
</tr>
<tr>
<td>2018</td>
<td>500.000</td>
<td>350.000</td>
<td>569.600</td>
<td>650.000</td>
<td>50.000</td>
<td>2.119.600</td>
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<tr>
<td>2019</td>
<td>500.000</td>
<td>350.000</td>
<td>549.600</td>
<td>750.000</td>
<td>50.000</td>
<td>2.199.600</td>
</tr>
<tr>
<td>2020</td>
<td>500.000</td>
<td>350.000</td>
<td>499.200</td>
<td>750.000</td>
<td>50.000</td>
<td>2.149.200</td>
</tr>
<tr>
<td><strong>Total (Ha)</strong></td>
<td><strong>5.500.000</strong></td>
<td><strong>3.550.000</strong></td>
<td><strong>5.800.000</strong></td>
<td><strong>5.750.000</strong></td>
<td><strong>550.000</strong></td>
<td><strong>21.150.000</strong></td>
</tr>
</tbody>
</table>

Source: MoF-Dirjen BPK
A. Natural Forests
- Total commercial/processable timber = 3,285 B m³.
- Commercial timber diameter 50cm up (eligible for logging and processing) = 2,036 B m³.
- Sustainably harvested potential (35 years rotation) → 2.036 M/35yrs = 58,2 M m³/yr
- From real harvesting potential outputs 56% = 32,3 M m³/yr

B. Industrial Plantation Forest
- Potential 20-60 M m³ per annum.

Source: Masyarakat Perhutanan Indonesia
Wood is a building material that is the most environment-friendly, compared to other materials, i.e., steel, aluminum, and concrete, with the following explanation:

<table>
<thead>
<tr>
<th>No.</th>
<th>Material</th>
<th>Energi yang terpakai (Fossil Fuel energy used) Mj/m3</th>
<th>Pelepasan Carbon (Carbon Released) kg/m3</th>
<th>Penyimpanan Carbon (CarbonStored) kg/m3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wood</td>
<td>750</td>
<td>15</td>
<td>250</td>
</tr>
<tr>
<td>2</td>
<td>Baja (steel)</td>
<td>266.000</td>
<td>5.320</td>
<td>0</td>
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<tr>
<td>3</td>
<td>Beton (Concrete)</td>
<td>4.800</td>
<td>120</td>
<td>0</td>
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<tr>
<td>4</td>
<td>Aluminium</td>
<td>1.100.000</td>
<td>22.000</td>
<td>0</td>
</tr>
</tbody>
</table>

Wood extraction is also a renewable natural source product compared to other sectors.
Work Force and Sectors

- Agriculture, Forestry, Plantation, Hunting, Fisheries
- Mining and Excavating
- Processing Industries
- Electricity, Gas, Water
- Building
- Trade, Restaurant, Hotel
- Transportation, Warehouse, Communication
- Finance, Insurance, Building and Land Rental, Company Services
- Community, Social and Individual Services

Source: BPS (2009)
<table>
<thead>
<tr>
<th>Environment</th>
<th>Decent Work</th>
<th>Green Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>NO</td>
<td>NO GREEN JOBS</td>
</tr>
<tr>
<td>NO</td>
<td>YES</td>
<td>NO GREEN JOBS</td>
</tr>
<tr>
<td>YES</td>
<td>NO</td>
<td>GREEN JOBS</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>GREEN JOBS</td>
</tr>
</tbody>
</table>

Environmental and Decent Work considerations for Green Jobs.
3. Real Issues: Problems and Issues (1)

• Conditions of RI Forestry Industries:

INVESTMENT PERFORMANCE

Total investment in forestry sector of US$ 27,77 Billions consisting of:

- Pulp & Paper US$ 16 B (58 %),
- Plywood US$ 3,3 B (12 %),
- Logging US$ 3,28 B (12 %),
- Forest Plantation US$ 3,00 B (11 %),
- Wood Processing US$ 1,03 B (4 %),
- Furniture US$ 0,80 B (3%)
- Wood Joint US$ 0,19 B (1 %)
- Handycraft US$ 0,17 B (1 %).

WORKFORCE

Directly employed 2,35 M, indirectly employed 1,5 M workers.

- Plywood 492.500 workers
- Furniture 472.000 workers
- Woodworking 370.000 workers
- Pulp & paper  178.624
- Industrial Plantation Forest 185.000 workers
- Logging 576.521 workers
- Handycraft 70.000 workers

Source: Masyarakat Perhutanan Indonesia
Workers Conditions in Forestry and Plantation Sectors (Nursery, planting, maintenance, harvesting, logging):

- Low Skills
- Low Wages and Welfare
- High risks on occupational health and safety
- Minimum provision of Social Security and Health Insurance
- Child labour
- Discrimination of women workers wage and welfare
- Short employment contract & sub-contract (Labor Supplier)
- Temporary/seasonal work
- Informalised work
3. Real Issues: Problems & Challenges (3)

- Workers Conditions in Forest and Plantation Products Processing Industries (Sawmills, Woodworking, Plywood, Pulp & paper, PKS/CPO, Rubber, Cacao):
  - Generally labour intensive (except for pulp & paper: capital-intensive)
  - Low wages and welfare (pulp & paper relatively higher)
  - High risks on occupational health & safety
  - Minimum provision of Social Security and Health Insurance
  - Short employment contract & sub-contracting (Labor Supplier)
4. Trade Union Recommendation (1)

• Upgrading Forestry & Plantation Sectors
  – Combat against Illegal Logging
  – Revitalizing Forestry Industries
  – Restoration of Indonesian Forests
  – Investments (State & Private) for HPH-HTI-Biofuels
  – Law enforcement and Delineation
  – ‘Large’ Scale vs ‘Small’ Scale; Minimalising informalisation of industry and work

• Political Will Government/Regulator to support Sustainable Development

• Promoting Sustainable Forest Management (SFM) and Premium Price for Wood & Bio-fuels Certification
4. Trade Union Recommendations (2)

• Enforcement of Labour Laws and Workers Rights:
  – Freedom of Associations
  – Rights to Collective Bargaining
  – Anti-discrimination

• Improvement of working conditions
  – Minimise risks and hazards at work

• Improvement of Welfare & Productivity
  – Social security, health & pension insurances

• Improvement of workers skills through vocational trainings

• Long-term employment
Wood is Good
Decent Work is Better

Thank You