The Political Economy of Fire and Haze

Herry Purnomo

APFW 2016

Fire and haze: Politics, economics and landscape transformation
23 February 2016, Clark, the Philippines
<table>
<thead>
<tr>
<th>Area</th>
<th>Peat (ha)</th>
<th>Non-peat (ha)</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatra</td>
<td>267,974</td>
<td>565,025</td>
<td>832,999</td>
<td>40%</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>319,386</td>
<td>487,431</td>
<td>806,817</td>
<td>39%</td>
</tr>
<tr>
<td>Papua</td>
<td>31,214</td>
<td>321,977</td>
<td>353,191</td>
<td>17%</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>30,912</td>
<td>30,912</td>
<td>30,912</td>
<td>1%</td>
</tr>
<tr>
<td>Bali and Nusra</td>
<td>30,162</td>
<td>30,162</td>
<td>30,162</td>
<td>1%</td>
</tr>
<tr>
<td>Jawa</td>
<td>18,768</td>
<td>18,768</td>
<td>18,768</td>
<td>1%</td>
</tr>
<tr>
<td>Maluku</td>
<td>17,063</td>
<td>17,063</td>
<td>17,063</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>618,574</td>
<td>1,471,338</td>
<td>2,089,912</td>
<td>100%</td>
</tr>
</tbody>
</table>

(LAPAN, 2015)

(NASA 2015)
FIRE AND HAZE 2015

- 2.6 million ha of land burnt and $15-30 billions of economic losses
- 43 million people exposed to haze
- ½ million victims of acute respiratory infections
- 19 people reported dead
- 25,000 fire and security personnel deployed to suppress fires
The Economy
Unsecured tenure: Illegal land market in various land uses

Who gets what?

Total Benefit
Slash & cut
$665/ha

Group members, slashing
$96 (14%)

Group members, tree cutting
$77 (12%)

The group organizer $338 (51%)

Land claimant
$29 (4%)

Marketing team $38 (6%)

Village head & officers
$88 (13%)
Fire provides benefits to some people

Total Benefit $856/ha

- Village head & officers $88 (10%)
- Land claimant, tree cutting $38 (4%)
- Group members, tree cutting $77 (9%)
- Group members, slashing $96 (11%)
- Marketing team, burning $15 (2%)
- Marketing team, cheap/free land $2 (0.2%)
- Farmer group member, burning $486 (57%)
- Village head & officers $88 (10%)

The group organizer $486 (57%)
Three-year oil palm

Total Benefit: $3,077/ha

- Group members, oil palm growing wage: $147 (5%)
- Group members, slashing: $96 (3%)
- Group members, tree cutting: $77 (3%)
- Group members, burning: $15 (1%)
- The group organizer: $1567 (51%)
- Oil Palm development: $992 (32%)
- Marketing team: $54 (2%)
- Village head & officers: $88 (3%)
- Land claimant: $38 (1%)
- Group members, cheap/free land: $2 (0.1%)
Local elites/cukong who organize farmers are the most influential actors in land transaction.
The Politics
Hotspots and District Elections

![Graph showing Hotspots and District Elections]

- **Fire spots**
- **District election**
- **National election**
Model

\[ \log F_t = 0.937 \log F_{t-2} + 0.0219 E_{t+1} \]

- Fire hotspots in year \( t \) (\( F_t \)) is a function of hotspots in year \( t-2 \) and next year local election (\( E_{t+1} \))
- Average error 9%
- Riau migrants: Land for Votes
Corporate actors connected to elites at various levels

BMH, RPP, RPS (South Sumatra), LIH (Riau) GAP, NBA, and ASP (Central Kalimantan)

The Landscape Transformation
<table>
<thead>
<tr>
<th>Land uses</th>
<th>Extent</th>
<th>Hotspots</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ha</td>
<td>%</td>
</tr>
<tr>
<td>Corporation managed land (34% of land uses; 45% hotspots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logging concession</td>
<td>12,501,285</td>
<td>12</td>
</tr>
<tr>
<td>Wood plantation</td>
<td>8,443,633</td>
<td>8</td>
</tr>
<tr>
<td>Oil palm plantation</td>
<td>8,951,386</td>
<td>9</td>
</tr>
<tr>
<td>Other land uses (APL)</td>
<td>8,951,386</td>
<td>9</td>
</tr>
<tr>
<td>Forest area</td>
<td>2,791,974</td>
<td>3</td>
</tr>
<tr>
<td>Overlapped</td>
<td>2,374,943</td>
<td>2</td>
</tr>
<tr>
<td>Private, community and government managed land (66% land uses and 55% hotspots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APL (community, private and state lands)</td>
<td>29,876,742</td>
<td>29</td>
</tr>
<tr>
<td>Forest area (Protected and conservation areas)</td>
<td>36,851,699</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>101,791,661</td>
<td>100</td>
</tr>
</tbody>
</table>

Data sources: NASA, WRI, Ministry of Environment and Forestry Indonesia
Fire Density (hotspots/million ha)

- Logging concession
- Wood plantation
- Oil palm in APL
- Oil palm in forest area
- Overlapped
- Community/private land
- Protection and conservation...

Values:
- 0
- 50
- 100
- 150
- 200
- 250
- 300
- 350
- 400
- 450
- 500
Fire and haze project actions

- Fire and Haze *Expert Meeting* (Aug 2015)
- Communicating to local, national and international *mass media*
- Presenting/hearing with *parliament, NGOs* and *governments.*
- Capacity building of fire prevention at *Dompas* Village, Riau (2015-2016)
- Presenting at Global Landscapes Forum, Paris (Dec 2015) and at Asia Pacific Forestry Week, the Philippines (Feb 2016)
- Riau-based *Forum Negeri Bebas Jerebu*
  - *Establishment* (Nov 2015)
  - *Dialogue and training* (Feb 2016)
**Strengthening Actions**

- Raising accountability of public institutions and government.
- Reforming land use policies and spatial planning.
  - Peat collaborative water management – upstream and downstream.
- Public investments (healthcare, job creation, incentives for non-fire agriculture).
- Engaging banks and financial institutions to curb inappropriate investments.
- Social movement to fight against bad actors.