



# 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



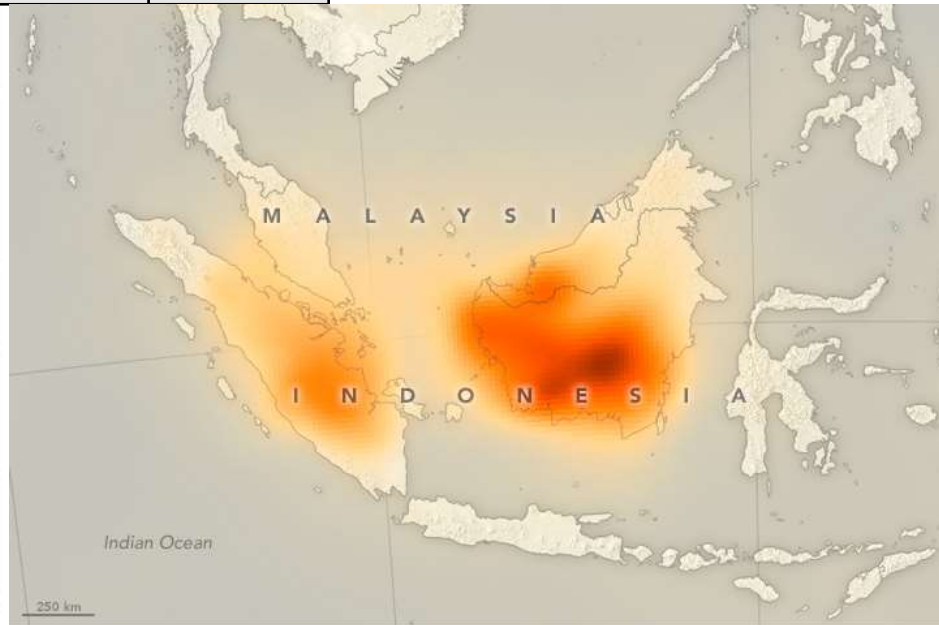
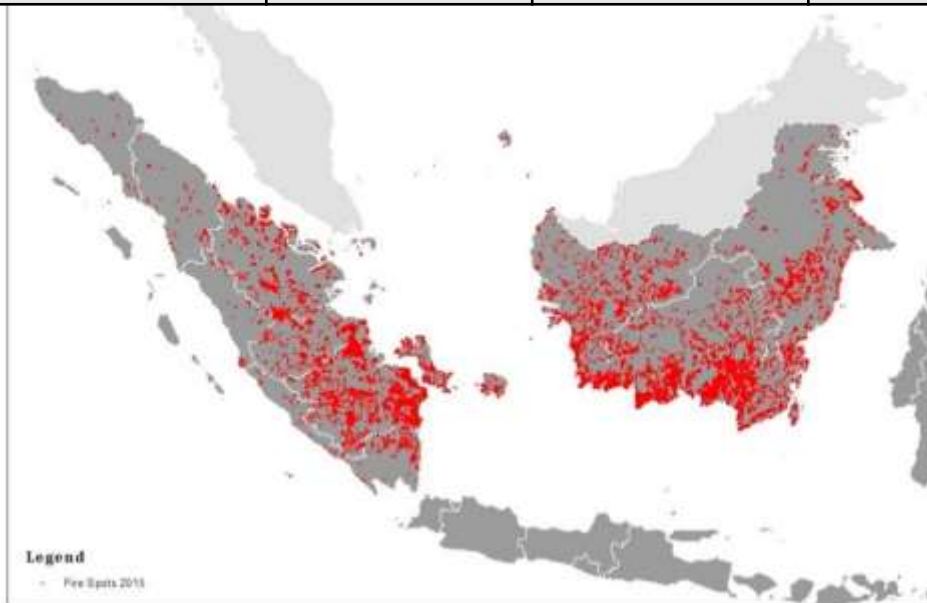
THINKING beyond the canopy



Area	Peat (ha)	Non-peat (ha)	Total	%
Sumatra	267,974	565,025	832,999	40%
Kalimantan	319,386	487,431	806,817	39%
Papua	31,214	321,977	353,191	17%
Sulawesi		30,912	30,912	1%
Bali and Nusra		30,162	30,162	1%
Jawa		18,768	18,768	1%
Maluku		17,063	17,063	1%
	618,574	1,471,338	2,089,912	100%
	30%	70%		

(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

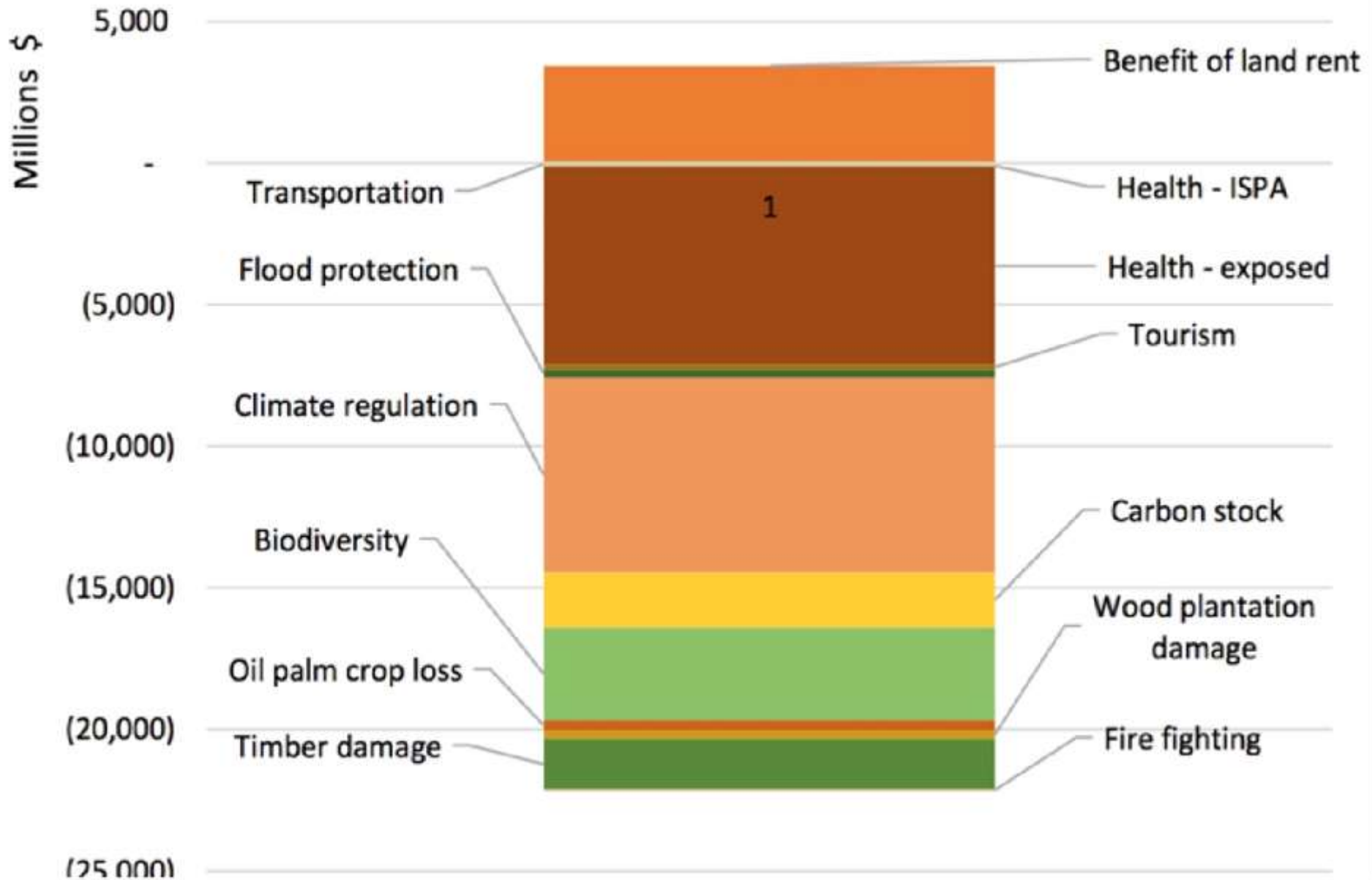
# The Economy



**THINKING** beyond the canopy

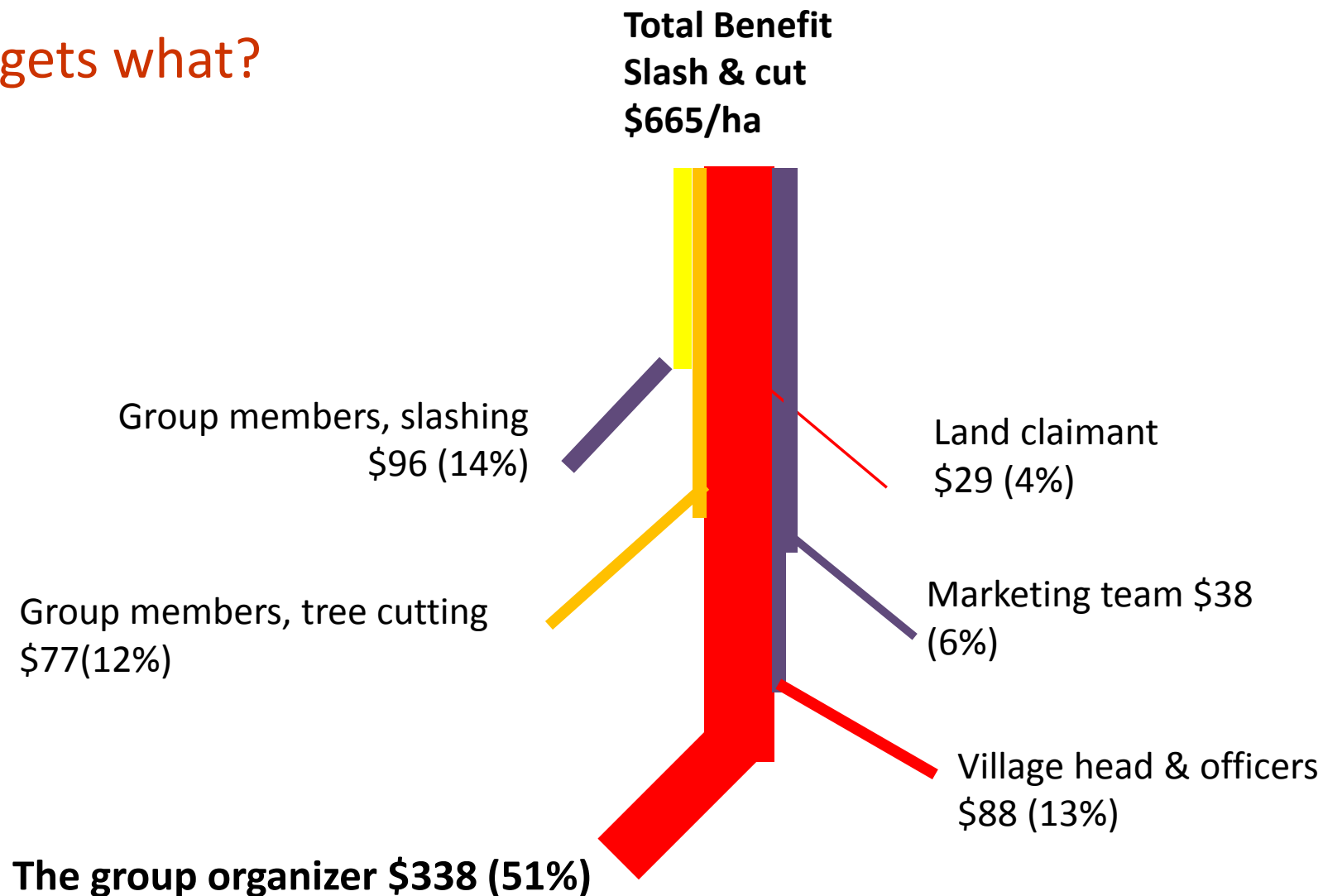


# Costs and Benefits

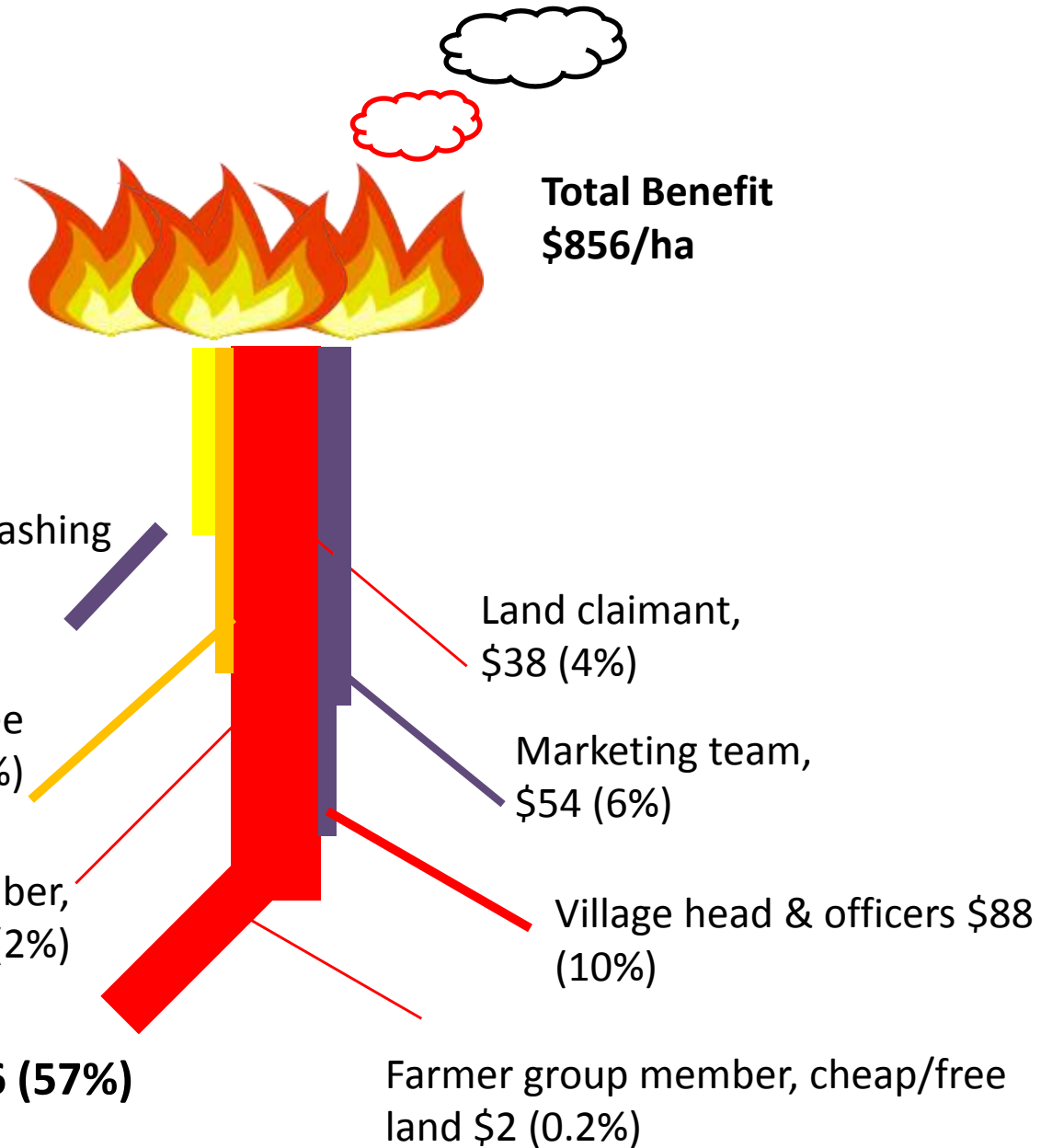


# Unsecured tenure: Illegal land market in various land uses

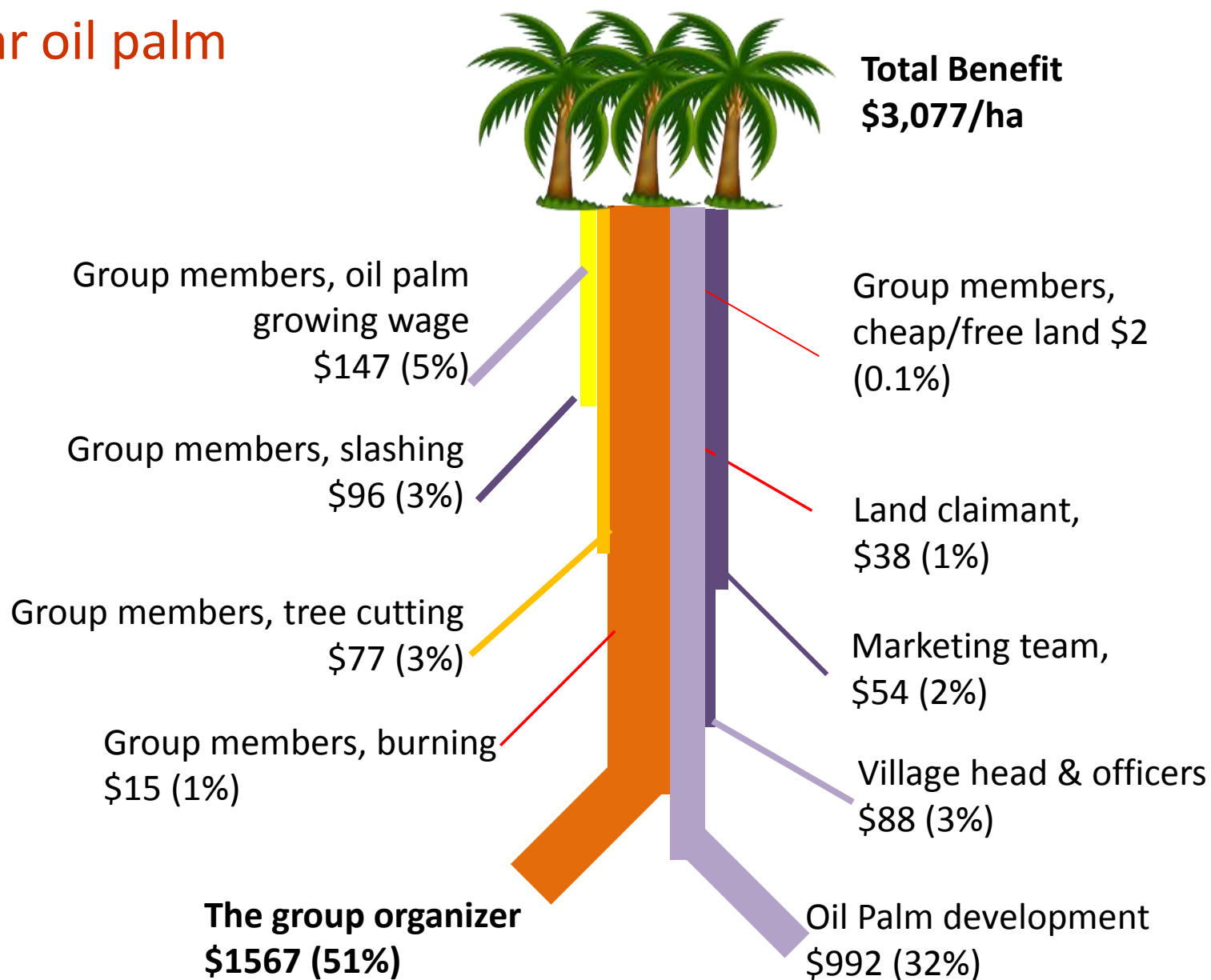
Who gets what?



# Fire provides benefits to some people



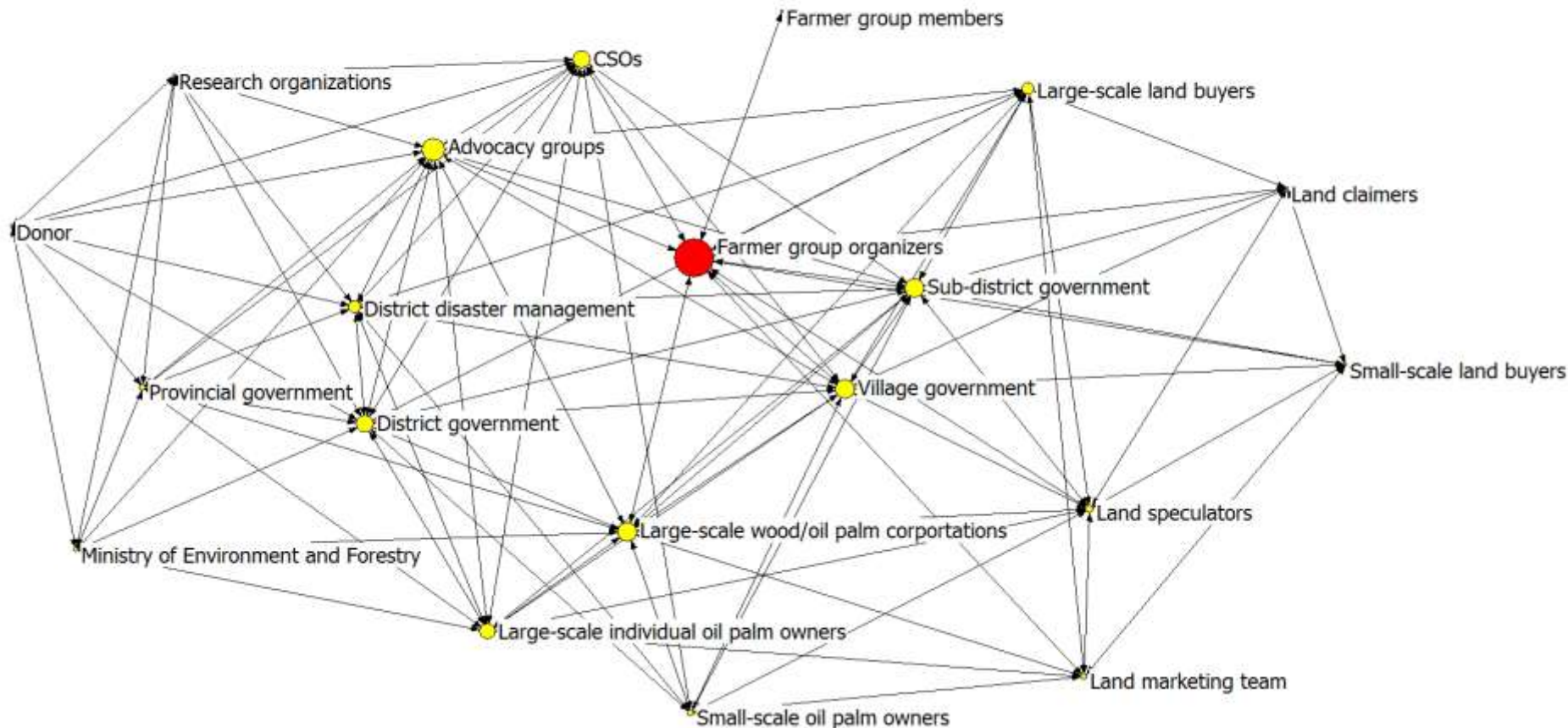
# Three-year oil palm





# Patronage Network – Illegal Institution

Local elites/*cukong* who organize farmers are the most influential actors in land transaction.



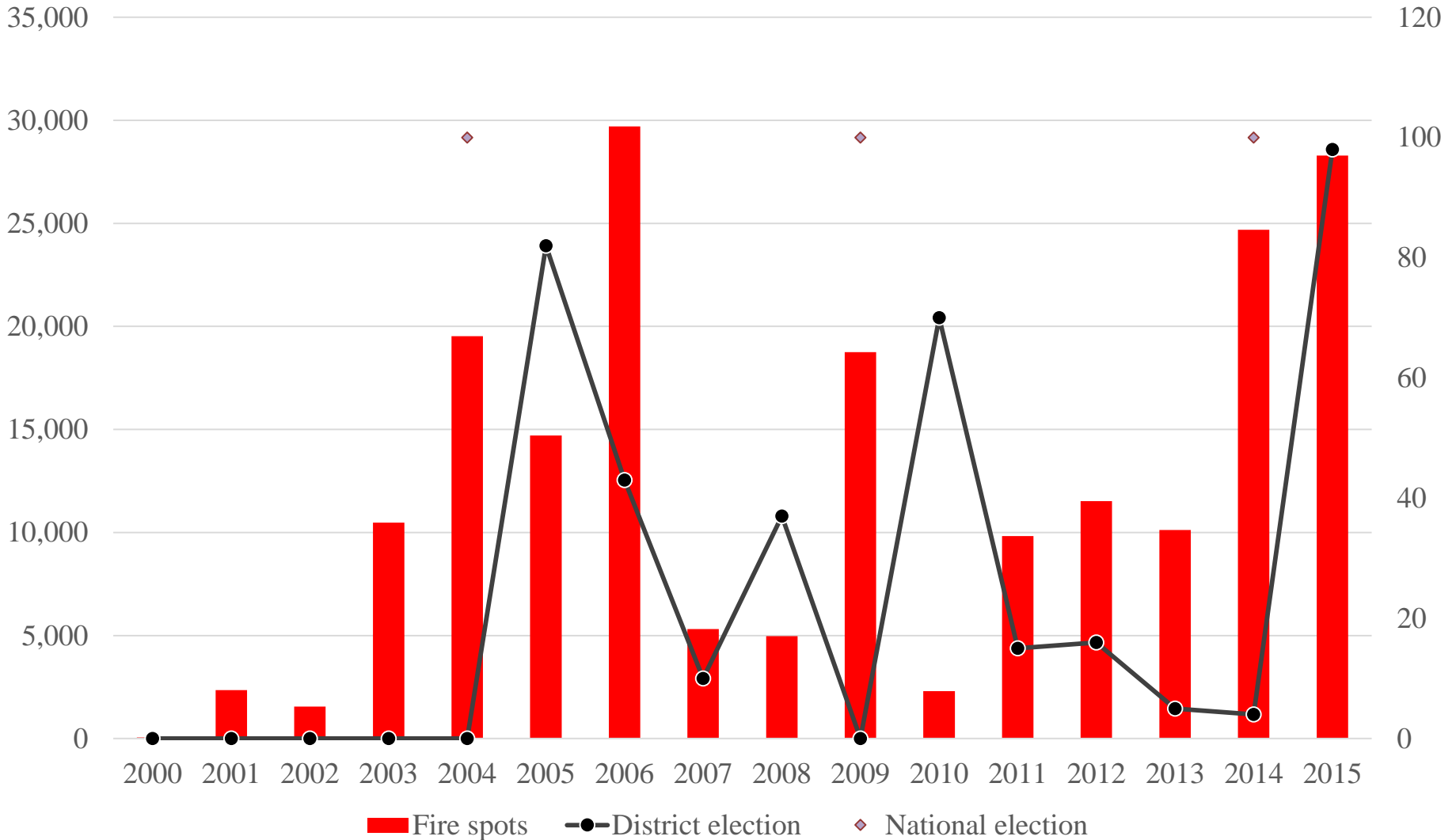
# The Politics



**THINKING** beyond the canopy



# Hotspots and District Elections



# Model

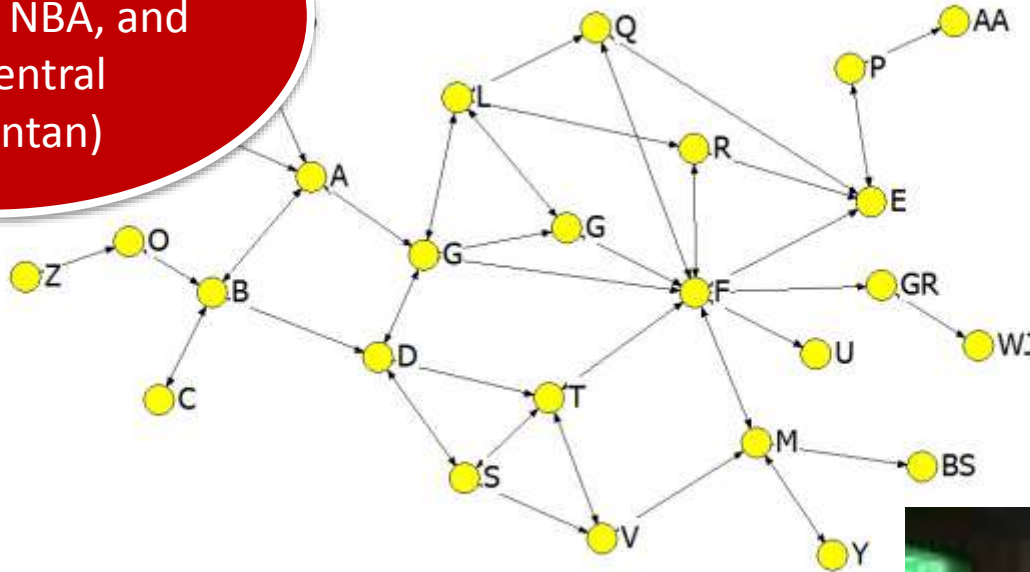
$$\text{Log } F_t = 0.937 \log F_{t-2} + 0.0219 E_{t+1}$$

- 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)



<http://news.liputan6.com/read/2321284/11-perusahaan-jadi-tersangka-pembakaran-hutan-dan-lahan>



# The Landscape Transformation

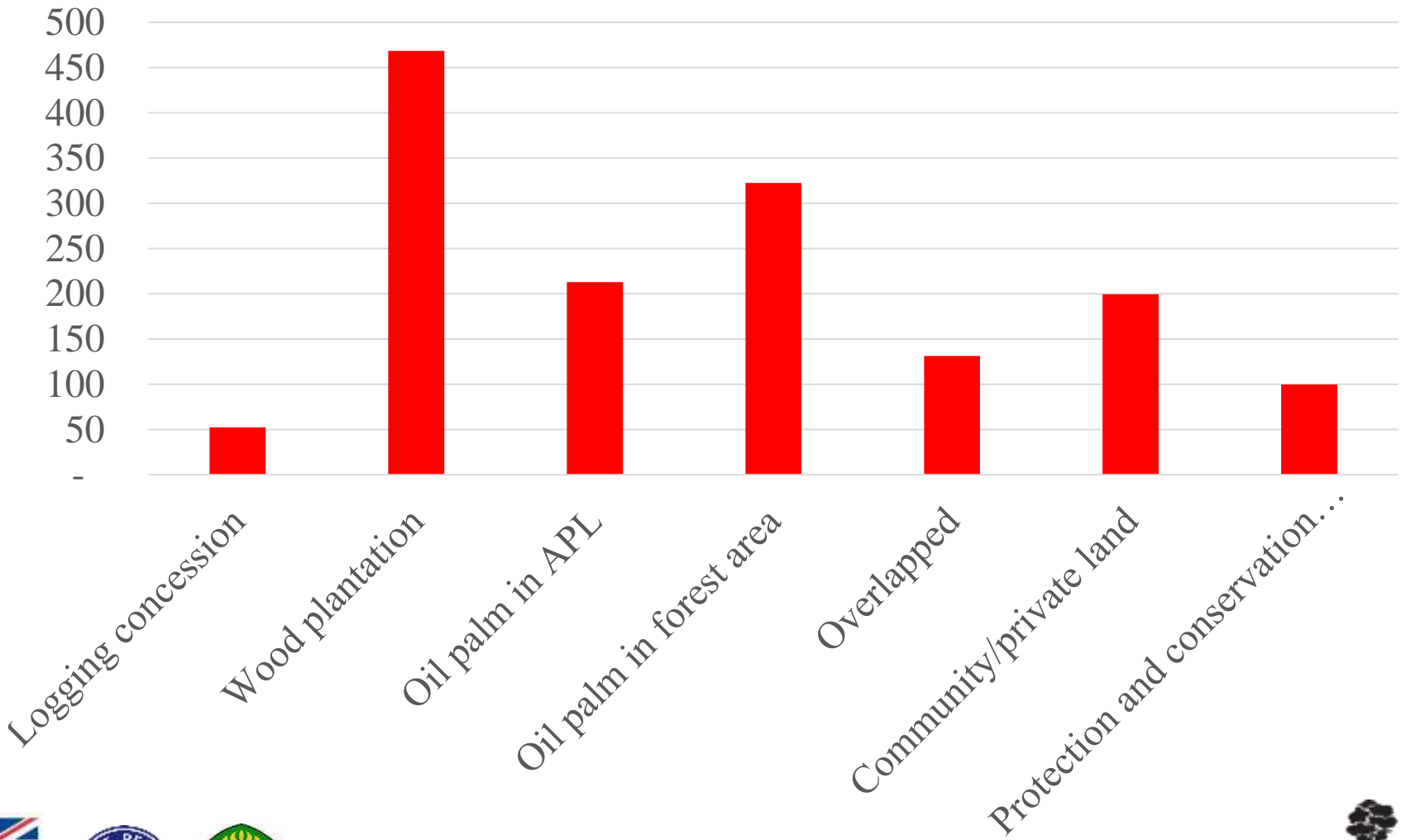


# Land uses Vs. Hotspots

Land uses		Extent		Hotspots		
		Ha	%	Number	%	
Corporation managed land (34% of land uses; 45% hotspots)	Logging concession		12,501,285	12	545	4
	Wood plantation		8,443,633	8	3,297	23
	Oil palm plantation	Other land uses (APL)	8,951,386	9	1,589	11
		Forest area	2,791,974	3	750	5
	Overlapped		2,374,943	2	260	2
Private, community and government managed land (66% land uses and 55% hotspots)	APL (community, private and state lands)		29,876,742	29	4,963	21
	Forest area (Protected and conservation areas)		36,851,699	36	3,057	34
Total		101,791,661	100	14,459	100	

Data sources: NASA, WRI, Ministry of Environment and Forestry Indonesia

# Fire Density (hotspots/million ha)





# Fire and haze project actions

- Fire and Haze **Expert Meeting** (Aug 2015)
- Conducting high-level **National Policy Dialogue** (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