

# Environmental and Social Problems of Coal Power Plant in Indonesia

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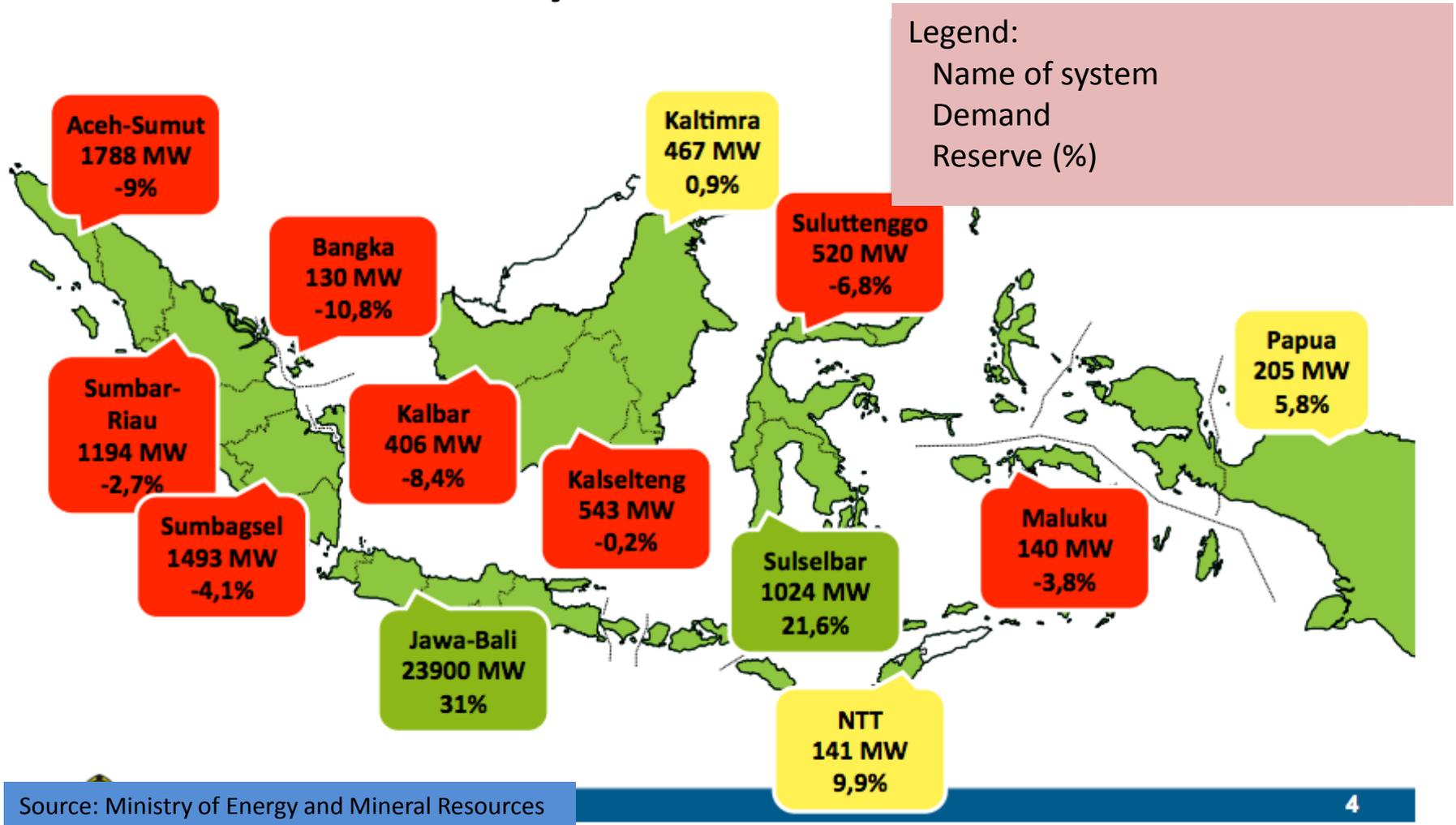
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# Social and Environmental Problem of Coal Power Plants (CPPs) in Indonesia

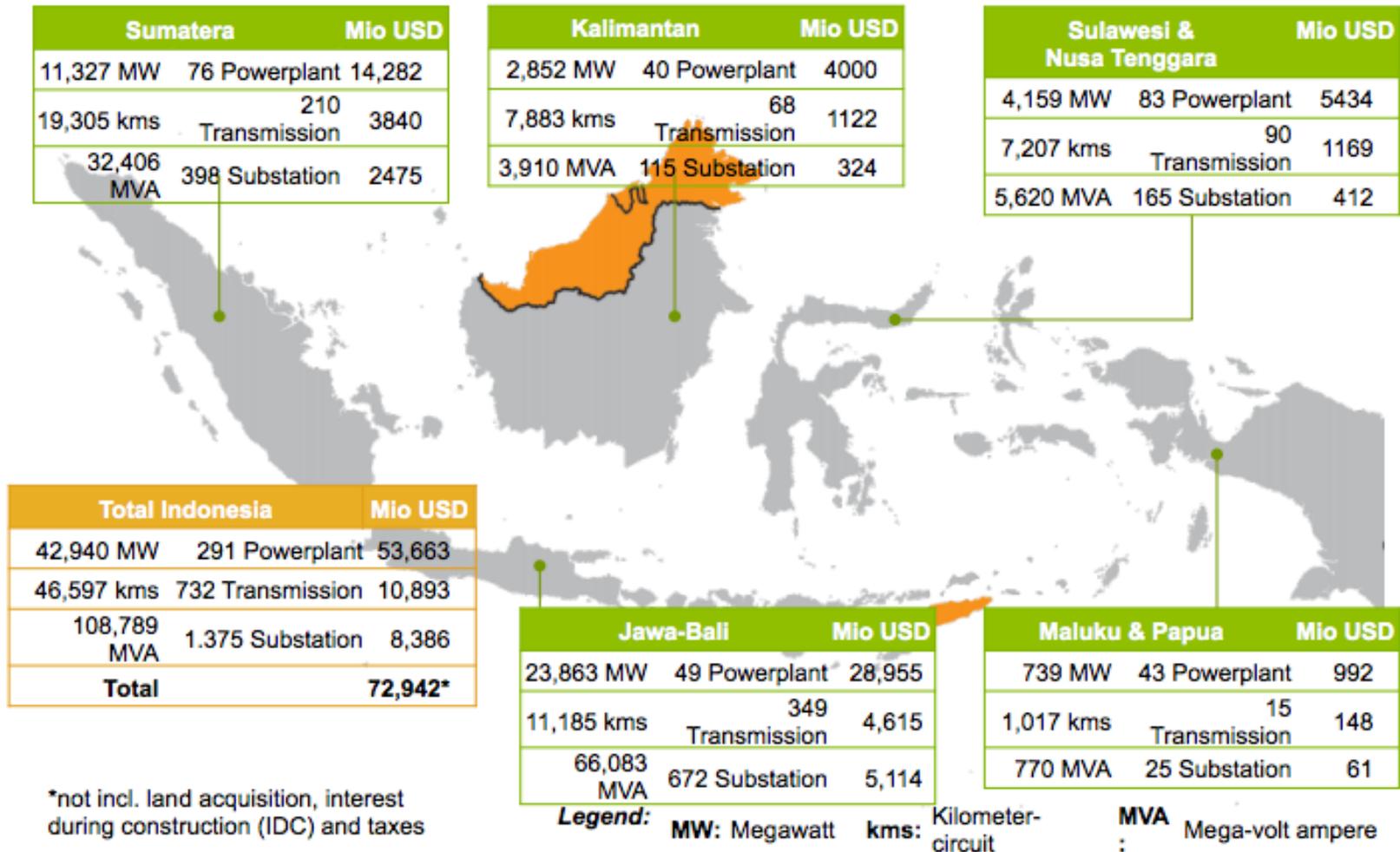
- Forced land acquisition and human rights abuses
- Weak environmental regulations
- Decreasing source of livelihood
- Health Impact

# Map of Crisis Electricity in Dry Season 2014



**Java has been surplus 31%**

# Yet CPPs Build Mostly In Java



Electricity Program 35,000 MW (2014-2019)  
and Other Ongoing Projects

# Investor for 35,000 MW (2014-2019)

No	Country of Origin	Capacity (MW)	Percentage
1	China	8008	46%
2	Japan	5195	30%
3	Korea	1490	9%
4	Malaysia	1390	8%
5	Indonesia	1078	6%
6	Turkey	120	1%
7	USA	120	1%
	TOTAL	17331	100%

source: PLN's report

Investor: Japan is 2<sup>nd</sup> Biggest Investor

# Forced Land Acquisition and Human Rights Abuses



- Government started to use Law 2/2012 for forced land acquisition for building power plants. Started in Batang, Central Java.
- Community resisting land acquisition in:
  - Batang, Central Java (2,000MW, JBIC is considering)
  - Indramayu, West Java (1,000MW, JICA is considering)
  - Cirebon, West Java (660 MW, JBIC funded) (Expansion 1,000MW, JBIC is expected)

# Forced Land Acquisition and Human Rights Abuses



## Batang Power Plant:

- Owned by Itochu, J-POWER and Adaro Indonesia.
- Land acquisition started since 2011 by company.
- Since then, military and police came to community houses to force them to sell the land to the company.
- Company in collaboration with the government using the Law 2/2012 since 2014. Using military engineer.
- Company in collaboration with thug to intimidate communities, and also activists.
- Community sued Governor of Central Java in Aug 2015 for issuing a decree on Land for Batang Power Plant. Communities lost in Regional and Supreme Courts.
- However, Law No.2/2012 Land Acquisition for Development in Public Interest should not be applied in this case (Non retroactive. Non public project).

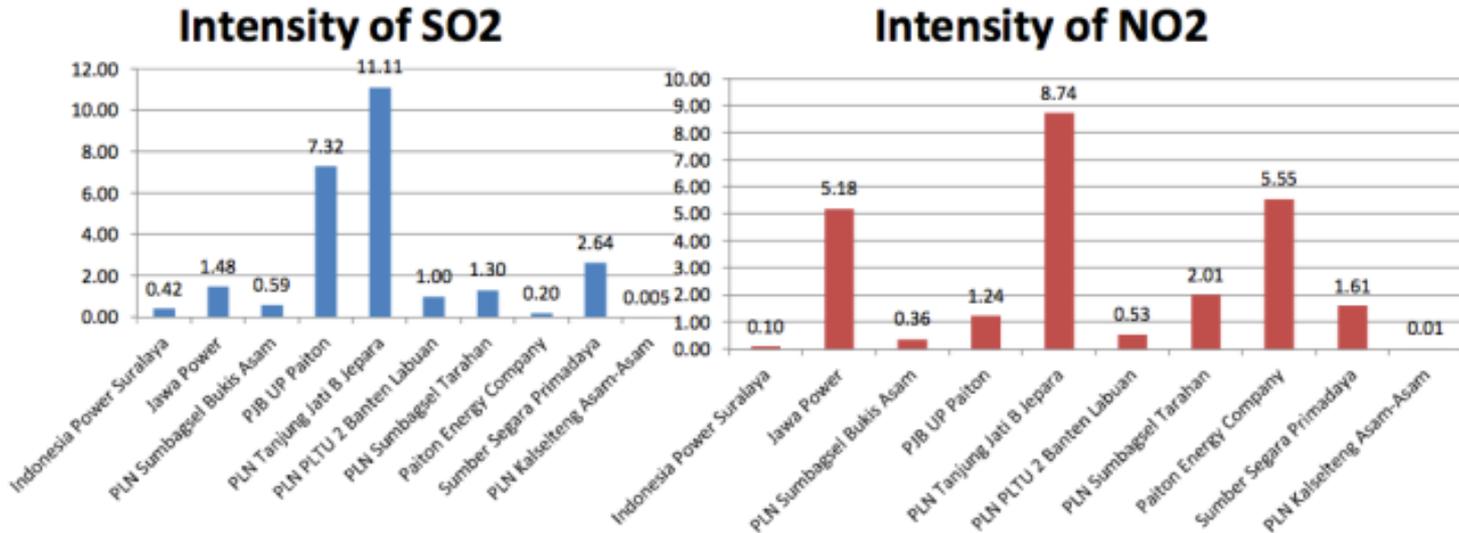
# Indonesia Low Environmental Protection Compare to Japan

Name of Power Plant	JBIC under review	JBIC Supported		Existing coal-fired power plant in Japan				
	Batang	Cirebon	JEPARA II	Isogo New 2	Isogo New 1	Hekinan 5	Niichi 2	Hekinan 1
Proponent	BPI (J-Power)	CEP	CJP	J-Power	J-Power	Chubu	Souma Kyodo	Chubu
Location	Indonesia	Indonesia	Indonesia	Kanagawa	Kanagawa	Aichi	Fukushima	Aichi
Capacity (MW)	1000*2 (2000)	660	660*2 (1320)	600	600	1000	1000	700
Operation year	2018 (proposed)	July 2012	Feb 2012	July 2009	April 2002	November 2002	July 1995	October 1991
Type of Power Generation	ULTRSC	SUPERC	SUBCR	ULTRSC	ULTRSC	ULTRSC	SUPERC	SUPERC
Hight of stack (m)	240	280	240	200	200	200	200	200
Mitigation measure against SOx	SWFGD	CF	WLST	DFGD	DFGD	FGD (Type of FGD is unknown)	FGD etc. (Type of FGD is unknown)	FGD etc. (Type of FGD is unknown)
Emission concentration (ppm)	SO2 = 105 (SO2 = 300 mg/Nm3)	SO2 = 227 (SO2 = 649 mg/Nm3)	SO2 = 106 (SO2 = 300 mg/Nm3)	10	20	25	100	50 (28) ( ) = after improvement in 2002
Mitigation measure against NOx	LNB	LNB	LNB	SCR / LNB / TSC	SCR / LNB / TSC	SCR / LNB / TSC	SCR etc.	SCR etc.
Emission concentration (ppm)	NO2 = 127 (NO2 = 260 mg/Nm3)	NO2 = 404 (NOx = 829 mg/Nm3)	NO2 = 229 (NOx = 465 mg/Nm3)	13	20	15	60	45 (30)
Mitigaion measure against PM	BH	ESP	ESP	ESP	ESP	ESP	ESP	ESP
Emission concentration (mg/Nm3)	50	29	50	5	10	5	30	10 (5)

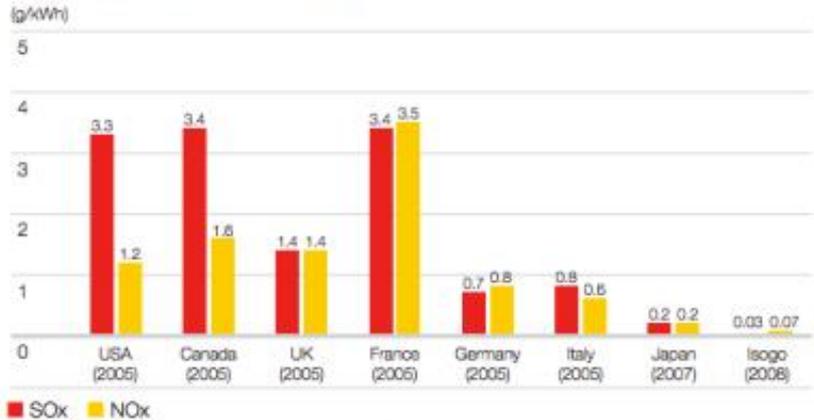
Source: FoE Japan

# Environmental Protection Regulation

Intensity of Pollutants (ton/MWh)



INTERNATIONAL COMPARISON OF SO<sub>x</sub> AND NO<sub>x</sub> EMISSIONS PER VOLUME OF THERMAL POWER GENERATION



Source: The Federation of Electric Power Companies  
 \* Figures for Japan include combined data from 10 EPCOs and J-POWER.  
 \* Figures for Isogo are actual results for fiscal 2008.

- Generally, CPPs in Indonesia have higher emissions per volume of SO<sub>x</sub> and NO<sub>x</sub>, compare to the ones in developed countries.
- Emissions per volume of SO<sub>2</sub> and NO<sub>2</sub> of JBIC-funded CPP (Tanjung Jati B, Paiton Energy Company) is high in Indonesia.

# Environmental Protection Regulation



- Community in Celukan Bawang , Bali, protest about close distance (2 meter) of China-funded coal power plant's waste disposal to community housing.

# Decreasing Source of Livelihood



Egg plants, chili covered with dust nearby Tanjung Jati B coal power plants (2640 MW, JBIC-funded), reducing vegetables productivity in Jebara, Central Java

Lower quality and productivity of tobacco leaves presumably covered with fly ash nearby Paiton power plants (A few plants were funded by JBIC) in East Java



# Decreasing Source of Livelihood



Salt pond turn to black because pollution into sea water presumably from JBIC-funded coal power plant in Cirebon, West Java

# Decreasing Source of Livelihood



Fisher folk communities reported about more than 50% reduction of fish catchment in Cirebon and Jepara. Shrimps has been sucking into the water intake in Jepara.

Small shrimp and fish as well as various types of shellfish in the coastal area nearby Cirebon Power Plant has been decreasing.

# Health Impact



6,500 people of Indonesia died prematurely every year because of pollution from coal power plants.

(Human Cost of Coal Power, How Coal Powered Power Plants Threaten the Health of Indonesians, Greenpeace 2015)

# Message

- Japan and G7 Countries should stop funding new coal power plant in Indonesia because :
  - It is triggering violence and human rights violation into communities (fishery folks and peasants).
  - It is triggering land grab for power plants
  - It is worsening health condition of communities.
- Japan and G7 countries should help provide safe renewable energy for Indonesian communities.

Thank you/Arigatou gozaimasu