



Case Study:
Palm oil in Indonesia




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THE CONTEXT

Palm oil basics

- Crude Palm Oil (CPO) is produced from the fruit of the oil palm tree.
- Grown in plantations, oil palm has a considerably higher oil yield per ha than other oil seed crops.
- 87% of world CPO production comes from Indonesia and Malaysia
- Palm oil contributes largest share of the world's vegetable oil exports (57%)

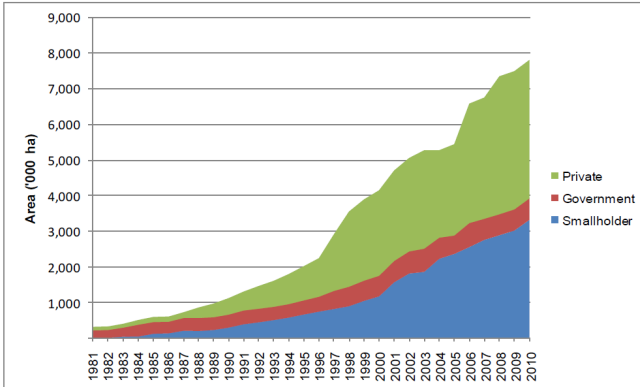


Fresh Fruit Bunches (FFBs)

Palm oil production in Indonesia

Private estates: 48%
 Smallholders: 41%
 State owned plantations: 11%

Area growth by ownership category



Data from Departemen Pertanian and IOPB.

Year	Smallholder	Government	Private	Total
1981	100	50	50	200
1985	200	100	100	400
1990	400	200	200	800
1995	800	400	400	1600
2000	1500	600	1000	3100
2005	2500	1000	1500	5000
2010	3500	1500	3000	8000



Biofuels in Indonesia

- Biofuels policy adopted in 2006; ambitious blending targets
- Many palm oil sector actors invested in biodiesel capacity
- In 2010, Indonesia's installed capacity estimated at 4 billion litres
- In 2009, total production: 104 million litres



THE CASE STUDIES

Rationale for selection of case studies

Regional case study selection

- Range of ownership types
- Entire conversion chain represented
- Allow for the study of variables over time

Local case study selection

- Representative of ownership types
- Capture key issues in the sector

Case study selection



Regional case study:

North Sumatra

- 1,026,644 ha palm oil
- One of the first regions to develop (under New Order)
- State owned enterprises. over represented (30% of area)
- Smallholders: 37% of land

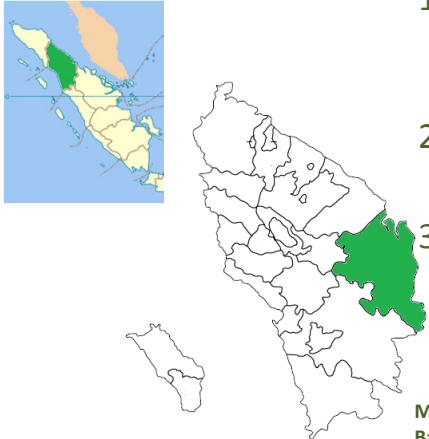


Location of North Sumatra

Case study selection

Local case studies in North Sumatra:

1. Aek Raso plantation
plantation + plasma
smallholders
2. Desa Asam Jawa
independent smallholders
3. Aek Raso palm oil mill




Map of North Sumatra highlighting Labuan Batu

The slide features a decorative background of palm leaves on the left. It contains a title, a list of three case studies, and two maps. The first map shows the island of Sumatra with North Sumatra highlighted in green. The second map shows the administrative boundaries of North Sumatra with the Labuan Batu region highlighted in green.

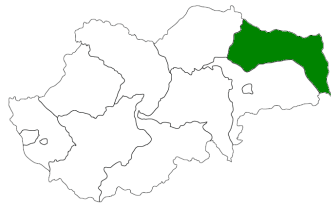
Case study selection

Contrasting local case study:

Harapan Makmur
Independent smallholders
Tanjung Jabung Timur, Jambi



Map of Sumatra highlighting Jambi Province



Map of Jambi highlighting Tanjung Jabung Timur District

The slide features a decorative background of palm leaves on the left. It contains a title, a heading for a contrasting case study, a list of details for 'Harapan Makmur', and two maps. The first map shows the island of Sumatra with Jambi Province highlighted in green. The second map shows the administrative boundaries of Jambi Province with the Tanjung Jabung Timur district highlighted in green.

Local case study 1

Aek Raso Plantation

- Owned by state owned company PTPN III
- Established 1983 – 1985 on state forest land
- Developed under 'Nucleus estate and smallholder' (NES) scheme for landless migrants
- 'Nucleus' estate: 3,782 ha + 7,248 ha 'plasma'
- Yields: 18.9 t/ha/yr. (nucleus) 14 – 18 t/ha/yr. (plasma)



Mature and replanted areas, Aek Raso Plantation

Local case study 2:

Desa Asam Jawa Independent smallholders

- Located close to plantation, mills and national highway
- Converted land from rubber
- Planting peaked 1989 – 1990
- 4,767 ha of 6,600 ha village land used for oil palm
- Large variation in practices and yields (av. 13.6 t/ha/yr.)
- Most smallholders have other income sources



Typical plantation area in Desa Asam Jawa

Local case study 3 (contrast):

Harapan Makmur Independent smallholders

- Located in an area with poor infrastructure, isolated from markets and sources of support
- Palm oil cultivation began in 2005
- Most land converted from rice paddy
- Palm oil now occupies 65% of village's 1500ha and provides main source of income
- Variation in management practices
- Average yields 9.6 t/ha/yr.



Typical plantation area Harapan Makmur.

Local case study 4:

Aek Raso palm oil mill:

- 30 t/FFB/ha processing capacity (relatively small)
- 55% FFB from Aek Raso plantation





Socio-economic impacts of palm oil production and conversion

- Economic impacts
- Employment and poverty reduction
- Working conditions
- Health impacts
- Impacts on food security
- Land use competition and conflicts
- Gender related impacts
- Risks for smallholders



SOCIO-ECONOMIC IMPACTS

Relevance of impacts

	National	Regional	Local
Economic impacts	High	Moderate	Moderate
Employment and poverty reduction	Moderate	Moderate	Moderate
Working conditions	Low	Low	Moderate
Health impacts	Low	Low	Moderate
Impacts on food security	Low	Moderate	Moderate
Land use competition and conflicts	Low	Low	Moderate
Gender related impacts	Low	Low	Moderate

Level of impact High Moderate Low

Employment creation and poverty reduction

National level/literature review

- Lack of data on aggregate employment impacts (1.7 – 3 million jobs)
- Estimates of intensity of employment vary (1 worker per 2 ha – 1 worker per 6.7 ha)
- Employment fluctuates over life cycle of plantation (regional differences)
- Issues of low wages and contract work (casualisation)
- Studies of poverty reduction impacts generally positive (impacts greatest in smallholder districts)



Employment creation and poverty reduction

Case study findings

- Low ratio of workers /area in Aek Raso plantation (1 worker per 10ha)
- Plantation workers reported to earn above minimum wage (no contract workers)
- Case study villages both reported +ve impacts on income and employment
- Desa Asam Jawa: smallholders create employment
- Harapan Makmur: additional employment lower, incomes much lower.



Food security

National level/literature review

- Links between palm oil and food security complex (regional variations)
- In some areas, contributing to deficit in cereal production (e.g. Jambi)
- Impacts on mixed livelihood strategies at a local level
- Potential conflict between uses of CPO as a biofuel and food
- Accompanying infrastructure improvements can improve farmers' access to markets
- Income benefits of palm oil can increase food access



Food security

Case study findings

- North Sumatra: conversion of rice paddy unclear from data
- Impacts on water availability and pests
- Poverty impacts (food access) unclear
- Key food issue in North Sumatra: nutritional status
- Palm oil in Aek Raso/Desa Asam Jawa no direct impact on food production
- Little change in % of household income spent on food
- Harapan Makmur: estimated 975 ha of rice paddy lost
- Net impacts difficult to assess



Land use competition and conflicts

National level/literature review

- 660 conflicts monitored in 2010 (Sawit Watch)
- Root causes: weak legal status of customary rights and weak governance
- Private and state owned companies involved
- Most disputes over land rights and unfulfilled promises



Land use competition and conflicts

Case study findings

- North Sumatra has a lower than average number of conflicts related to palm oil
- Most appear to be legacy conflicts not related to current land acquisition
- No conflicts over land rights found in case study area
- One conflict over POME reported



Concluding observations

- Significant diversity in socio-economic impacts
 - Between areas/regions (e.g. benefits and risks for smallholders)
 - Over time (e.g. Employment intensity/social conflict)
- Data collection challenges