Green development and oil palm in Indonesia: Observations from East Kalimantan

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Contents

1. Context
   - Oil palm in Indonesia
   - Deforestation and CO_2 emissions
   - Green development concept(s)
   - Policy "mix" in Indonesia
2. East Kalimantan province
   - Oil palm in East Kalimantan
   - Scenarios for oil palm development
   - Trade-offs
3. Conclusions

Oil palm in Indonesia

10.9
Million hectares cultivated

33.0
Million tons CPO

3.0
Tons CPO/ha/yr

52%
global CPO supply

Indonesia

Labor
4.5
Million people

Smallholders
42%
of total cultivated area

10
corporate groups control most of the supply

800
Palm oil mills

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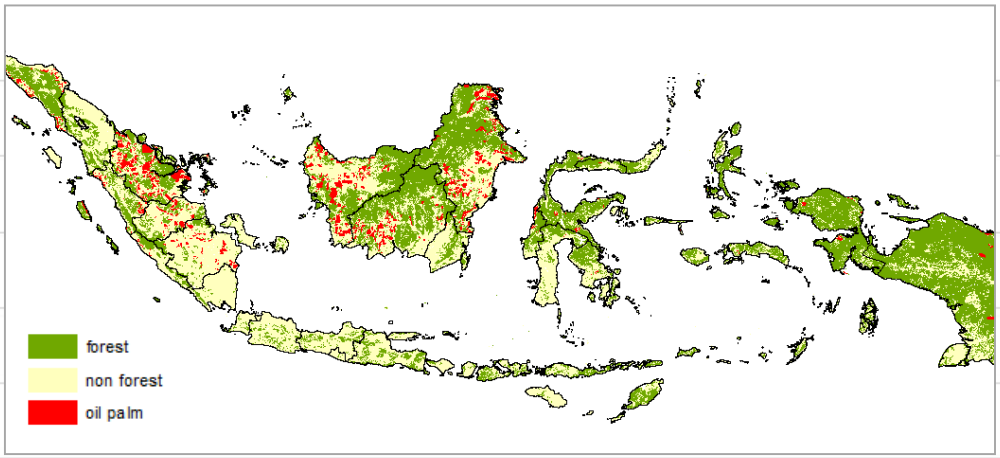
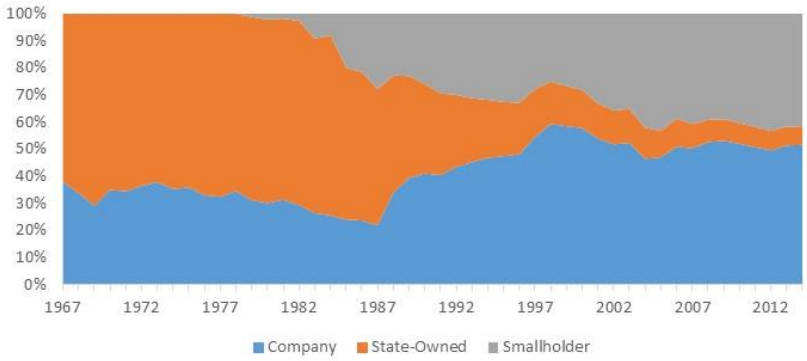
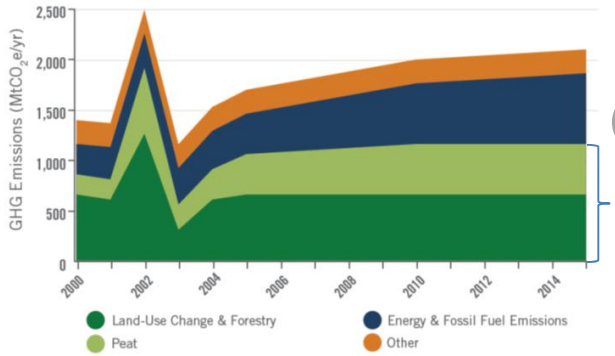
Planted area and CPO production







1.2 Gt

Oil palm accounts for 60%

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Factors shaping the current trend of oil palm development

- **Economic** – oil palm contributes to generate state revenues, employment, and profits are comparatively higher
- **Institutional** – tenure regulations facilitate allocation of permits in forested lands, very weak law enforcement
- **Political** – oil palm permits seen as a source of economic rent, institutional disconnect among different levels of government, influence of private sector

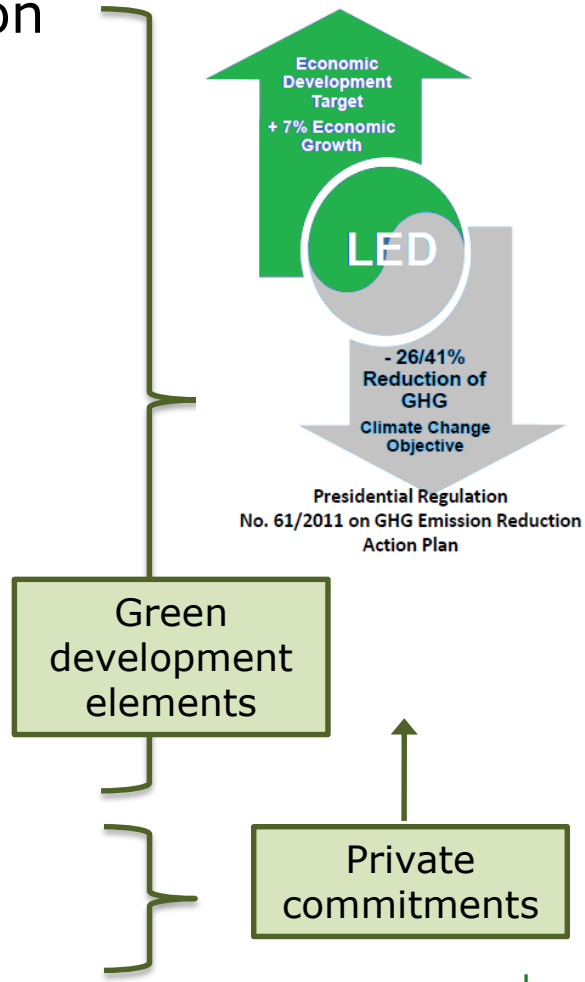
Green development concept(s)

- Largely a hypothetical win-win for economic growth and mitigation/reduction of environmental externalities
- Assumes green technologies can sustain profits and economic development while environmentally neutral
- Driven largely by the private sector, as the main actor leading adoption of improved practices and technologies
- The role of government still key in providing an enabling environment and incentives to favor the transition
- Debates on "hybrid" governance schemes involving public and private regulations and arrangements
- The challenge: translating green development into practice in a way that result in socio-environmental benefits

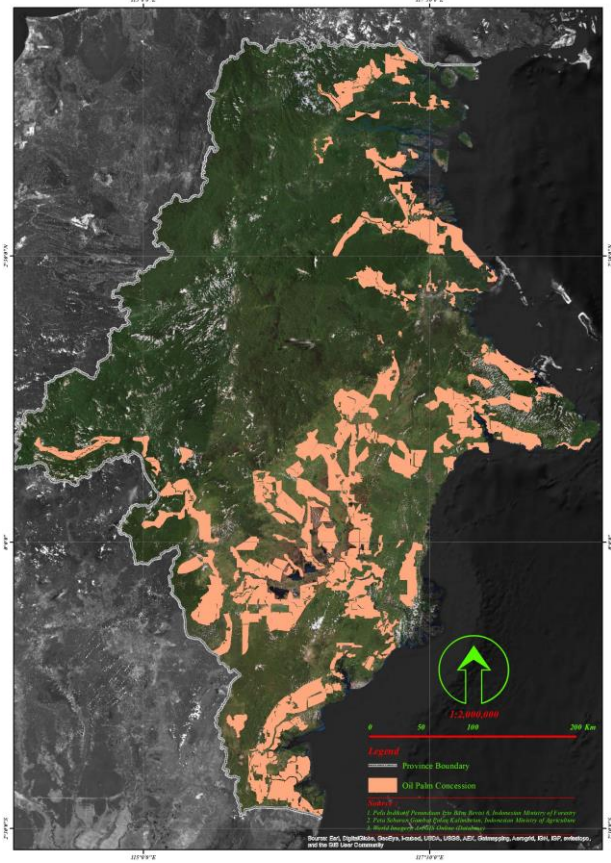
Green development policy "mix"

- Intended Nationally Determined Contribution (INDC) – 26% CO_2 reduction by 2020
- Indonesia Climate Change Trust Fund
- Plans for GHG emissions reduction
  - RAN-GRK (national)
  - RAD-GRK (province)
  - SRAK (district)
- NAMAs Financing Support Program
- Moratorium [since 2011]
- Sustainable palm oil standards (ISPO)

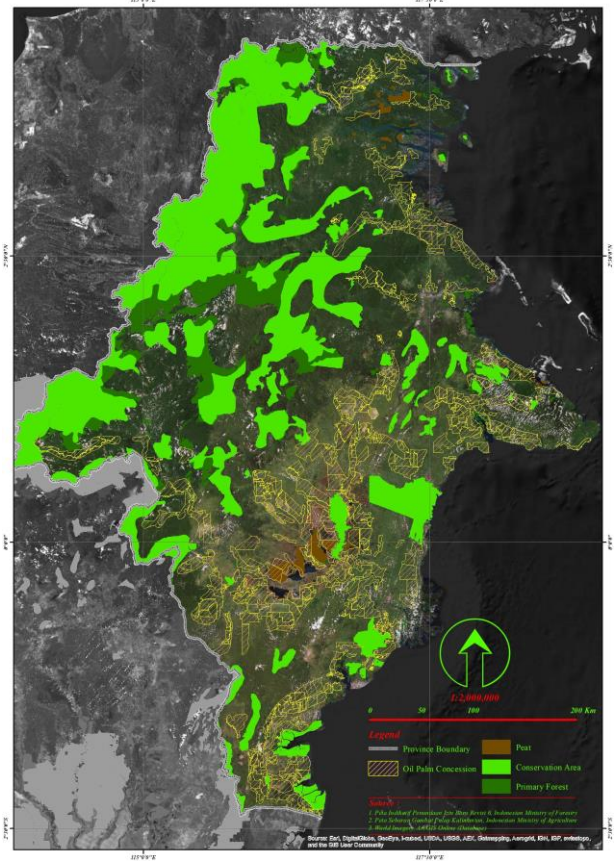
  +
- Palm oil Certification (RSPO)
- Zero-deforestation commitments



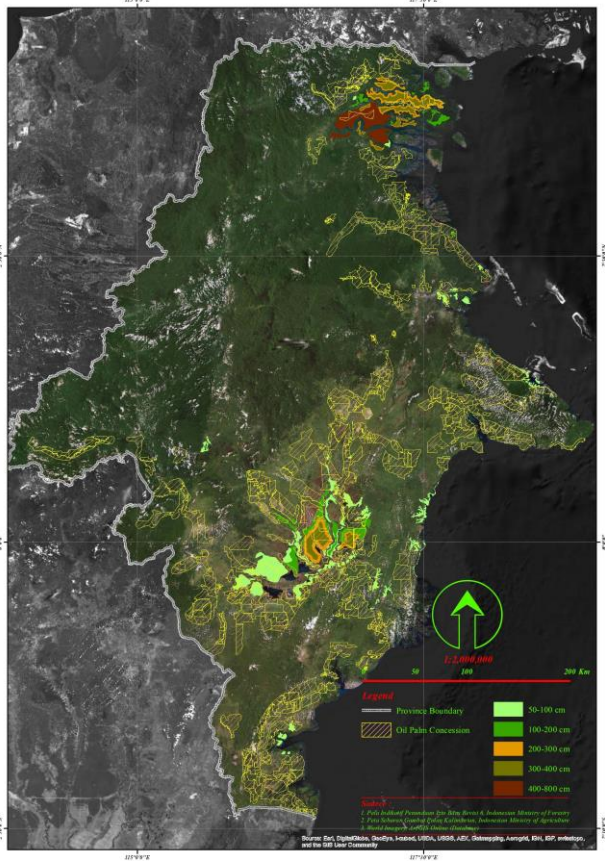
Moratorium – an example of green development policy



Oil Palm Concessions



Lands under the Moratorium



Peat land

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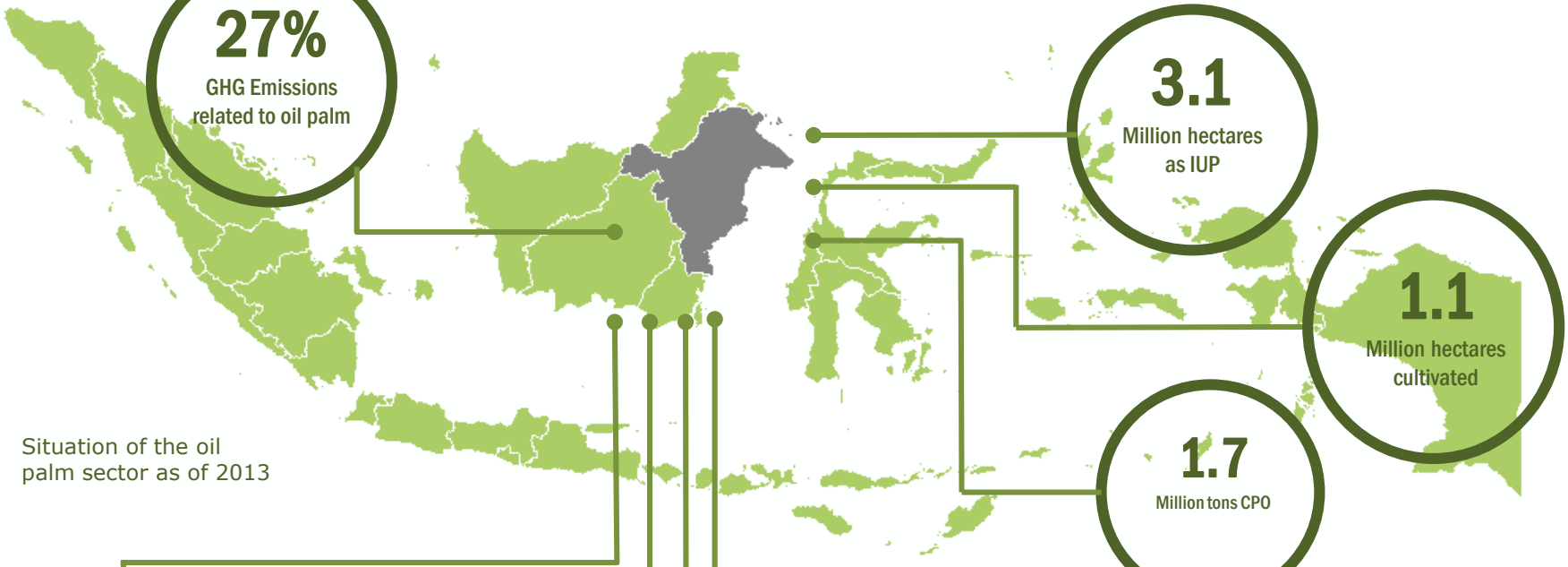
Questions

- What is the gap between green development policies and oil palm expansion and how to narrow it?
- What is the optimum scenario for oil palm development compatible with green development policies?

East Kalimantan province



27%
GHG Emissions related to oil palm

3.1
Million hectares as IUP

1.1
Million hectares cultivated

1.7
Million tons CPO

Situation of the oil palm sector as of 2013

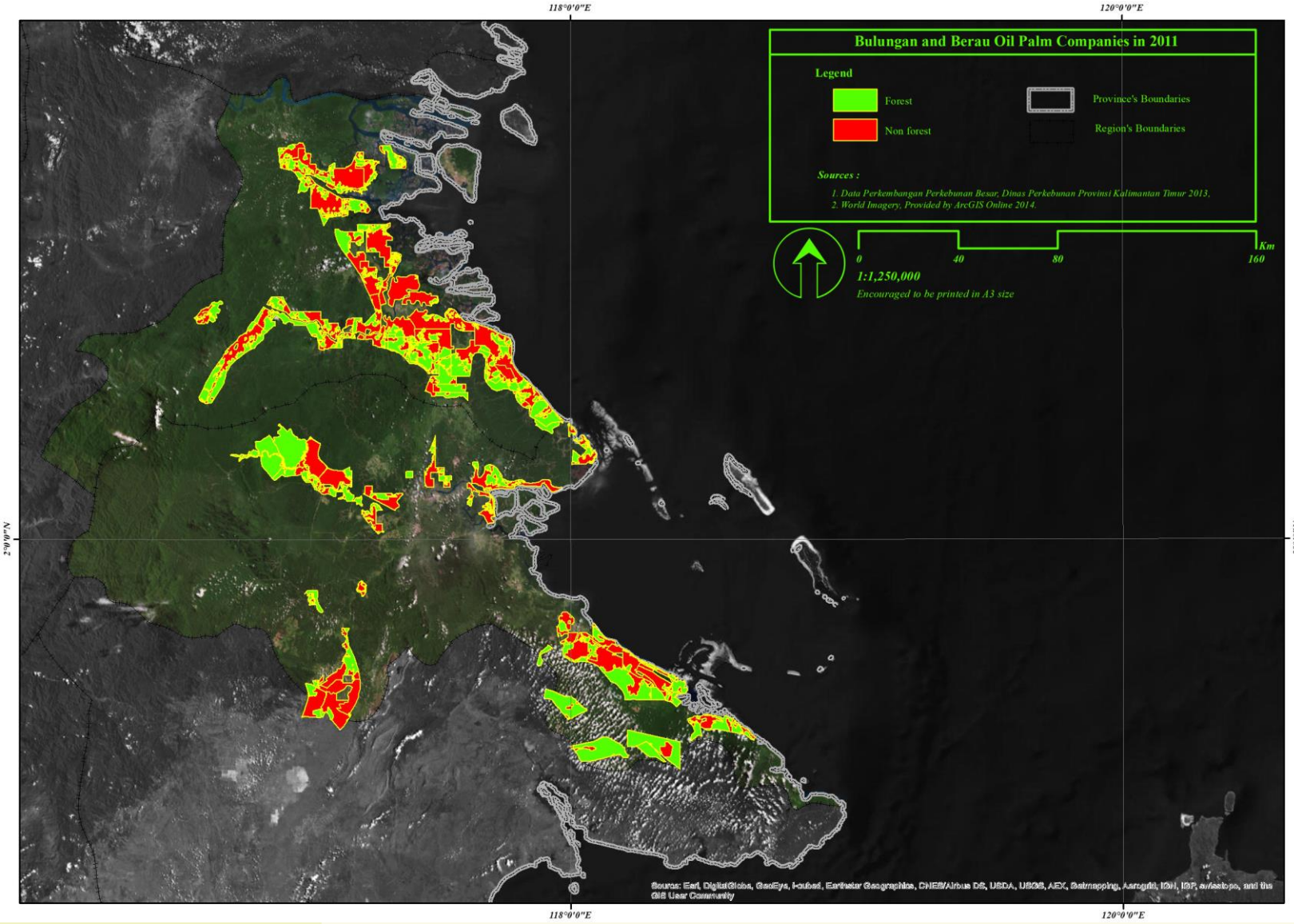
Export value
280
Million of USD (CPO)

Smallholders
26%
Of total cultivated area

Labor
0.35
Million people

55
Palm oil mills

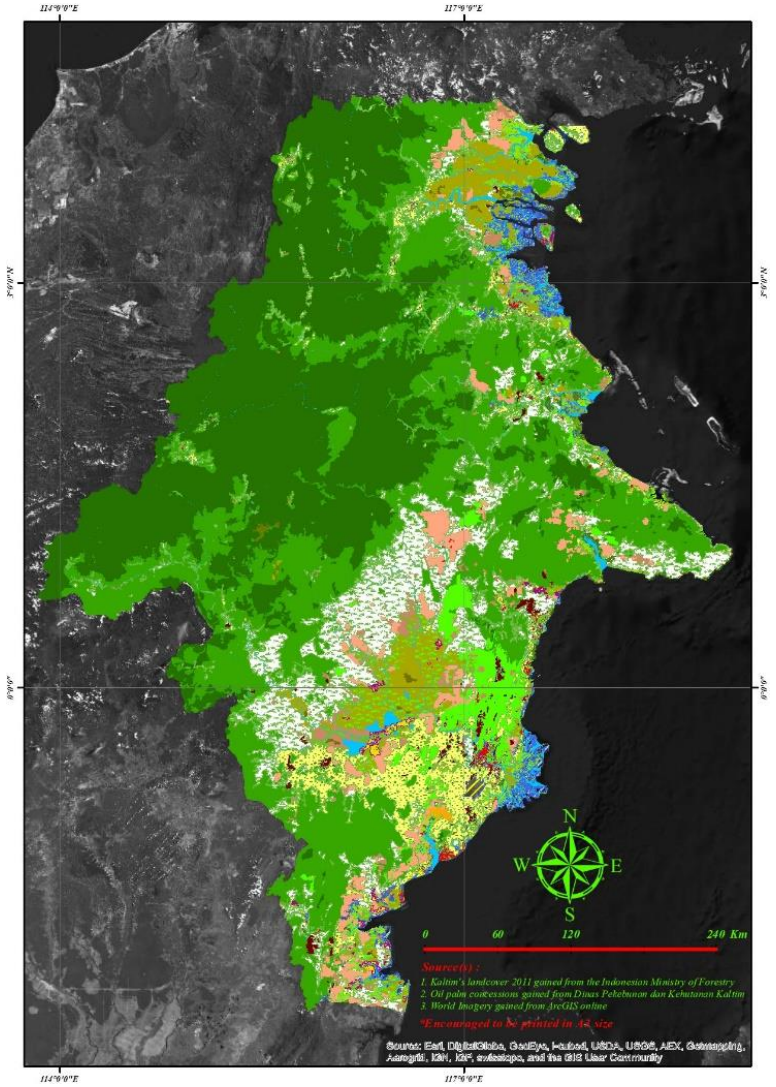
Looking at oil palm concessions



Scenarios for oil palm compliant with green development

Scenario 1 **(BAU)**	No conservation, all concessions lands planted with oil palm
Scenario 2 **(HCV)**	Adoption of High Conservation Value (HCV) as prescribed by RSPO standards, saving 10-15% of the forest cover in current oil palm concessions
Scenario 3 **(0 deforestation)**	Adoption of High Carbon Stock (HCS) by which oil palm is only developed on areas equivalent to a level of 35 tons CO_{2eq} or less

Land cover in East Kalimantan in 2011



Legend

- Primary Dry Forest
- Secondary Dry Forest
- Primary Mangrove Forest
- Secondary Mangrove Forest
- Primary Swamp Forest
- Secondary Swamp Forest
- Timber Plantation
- Plantation
- Settlement
- Mining
- Dry Cultivation Land
- Dry Cultivation mixed Scrub
- Swamp
- Paddy Field
- Scrubland
- Swamp Scrubland
- Embankment
- Bare Land
- Transmigration
- Water Body

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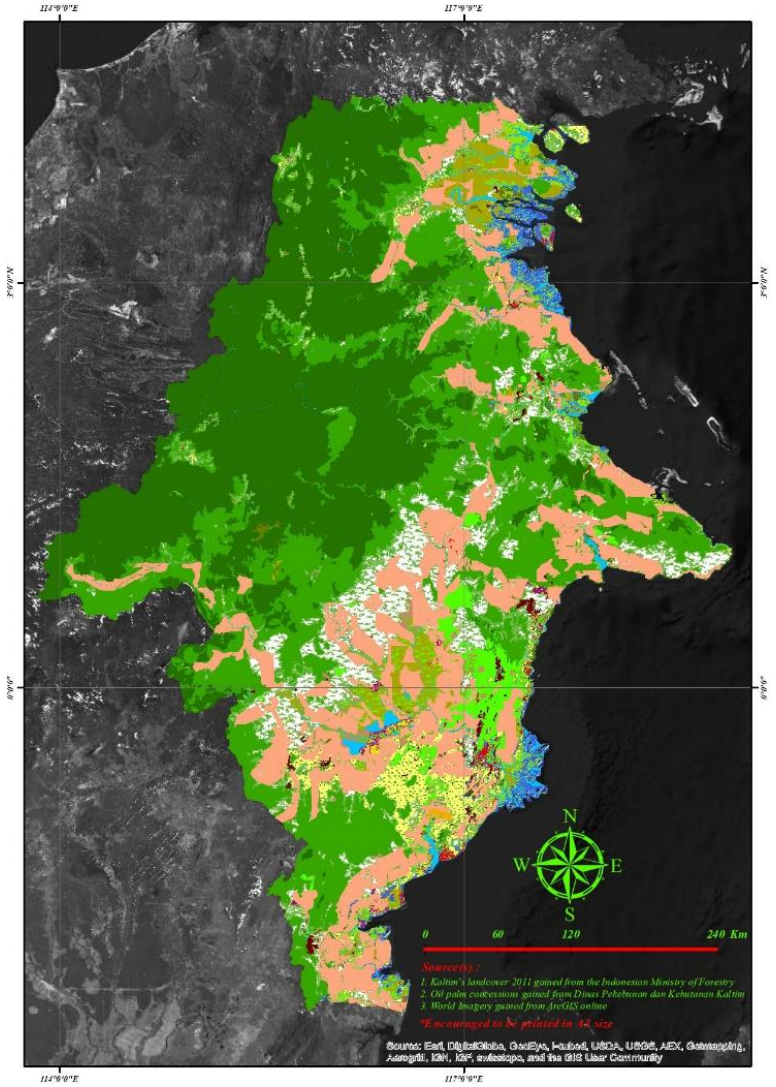

Land cover in East Kalimantan under Scenario 1 - BAU

Legend

- Primary Dry Forest
- Secondary Dry Forest
- Primary Mangrove Forest
- Secondary Mangrove Forest
- Primary Swamp Forest
- Secondary Swamp Forest
- Timber Plantation
- Plantation
- Settlement
- Mining
- Dry Cultivation Land
- Dry Cultivation mixed Scrub
- Swamp
- Paddy Field
- Scrubland
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- Embankment
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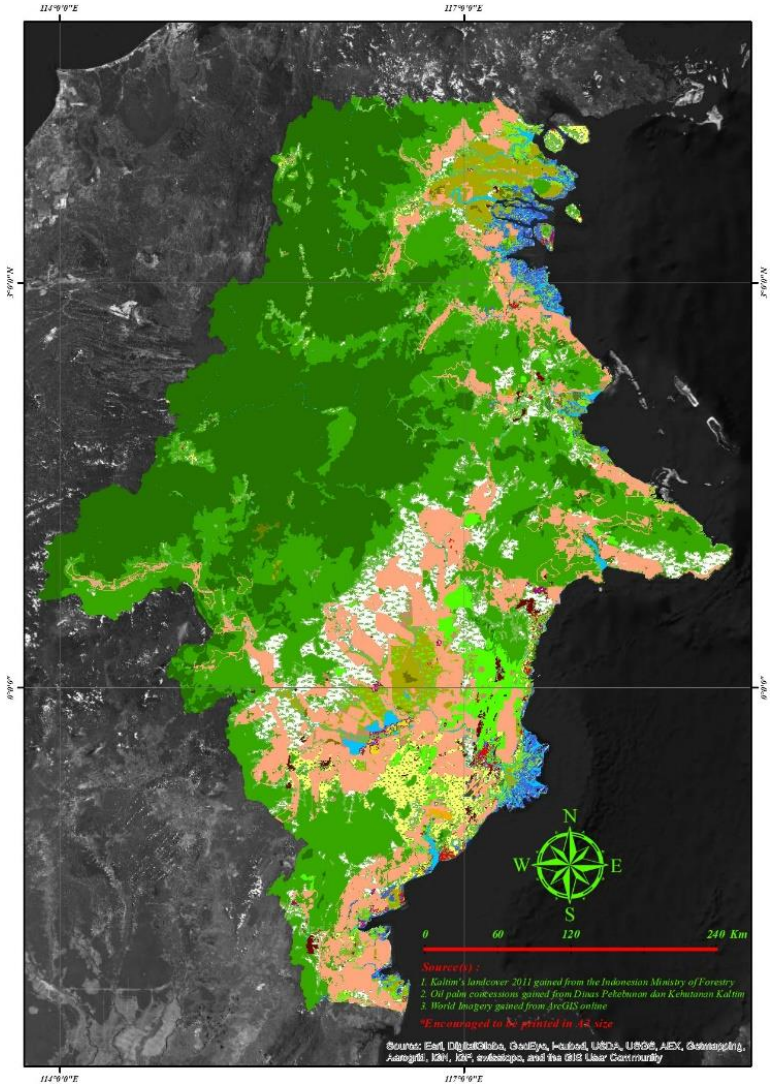
Land cover in East Kalimantan under Scenario 2 - HCV



Legend

- Primary Dry Forest
- Secondary Dry Forest
- Primary Mangrove Forest
- Secondary Mangrove Forest
- Primary Swamp Forest
- Secondary Swamp Forest
- Timber Plantation
- Plantation
- Settlement
- Mining
- Dry Cultivation Land
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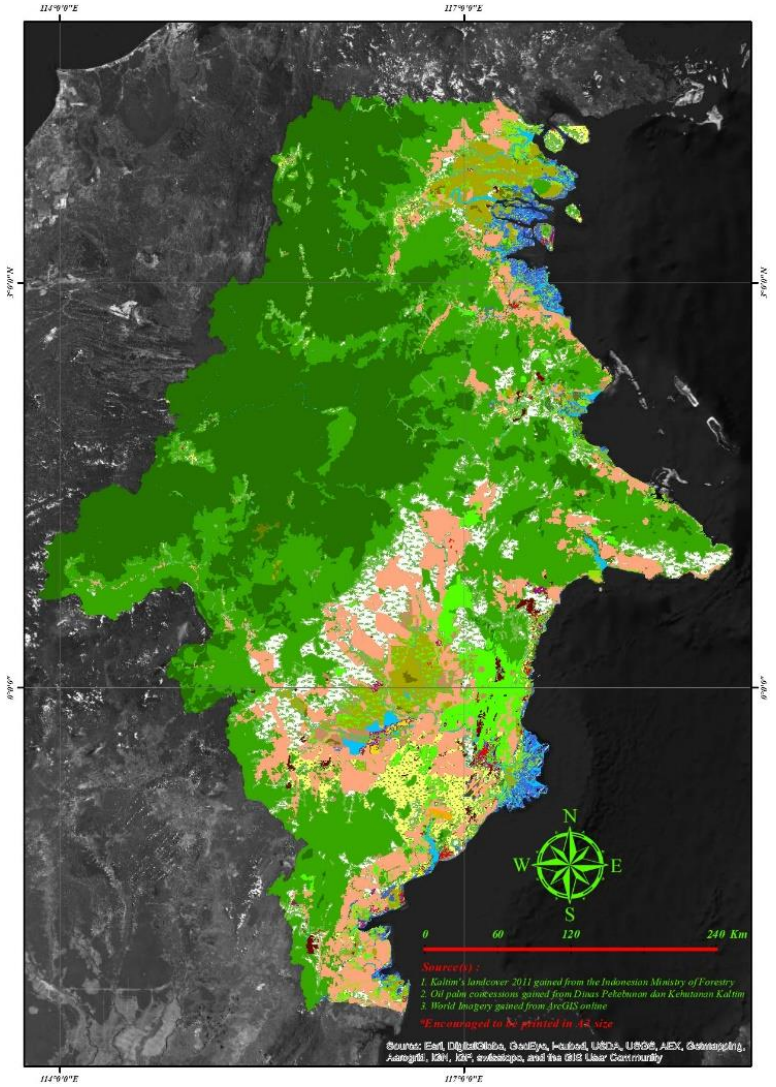

Land cover in East Kalimantan under Scenario 3 – 0 def.

Legend

- Primary Dry Forest
- Secondary Dry Forest
- Primary Mangrove Forest
- Secondary Mangrove Forest
- Primary Swamp Forest
- Secondary Swamp Forest
- Timber Plantation
- Plantation
- Settlement
- Mining
- Dry Cultivation Land
- Dry Cultivation mixed Scrub
- Swamp
- Paddy Field
- Scrubland
- Swamp Scrubland
- Embankment
- Bare Land
- Transmigration
- Water Body

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Trade-offs

ENV

	Below Ground Carbon			Above Ground Carbon			Total carbon stock
	Saved	Emitted	Gained	Saved	Emitted	Gained	
Scenario 1	1,438,015,365	152,307,183	0	0	240,198,636	221,033,821	**1,659,049,187**
Scenario 2	1,474,335,902	115,966,646	0	87,107,274	153,091,362	240,243,665	**1,801,686,842**
Scenario 3	1,590,322,549	0	0	222,237,721	17,960,915	80,896,163	**1,893,456,434**

ECON

Scenarios		Oil palm planted area (ha)	CPO Production (tons)	Total value (USD Billion)	Employment (No. people)	No. of HH
Scenario 1	BAU	3,140,815	11,306,933	7.5	1,256,326	314,081
Scenario 2	HCV (15%)	2,669,693	9,610,893	6.4	1,067,877	266,969
Scenario 3	0-deforestation (50% less land than BAU)	1,570,407	5,653,467	3.7	628,163	157,041

Scenario 1 (BAU)

- Unlikely
- High public scrutiny (civil society and consumer pressure)
- Highest economic value
- Highest employment potential (poverty alleviation potential)
- No exclusion threat to independent smallholders
- Highest GHG emissions (nearly 200M t of CO_{2eq})

Scenario 2 (HCV)

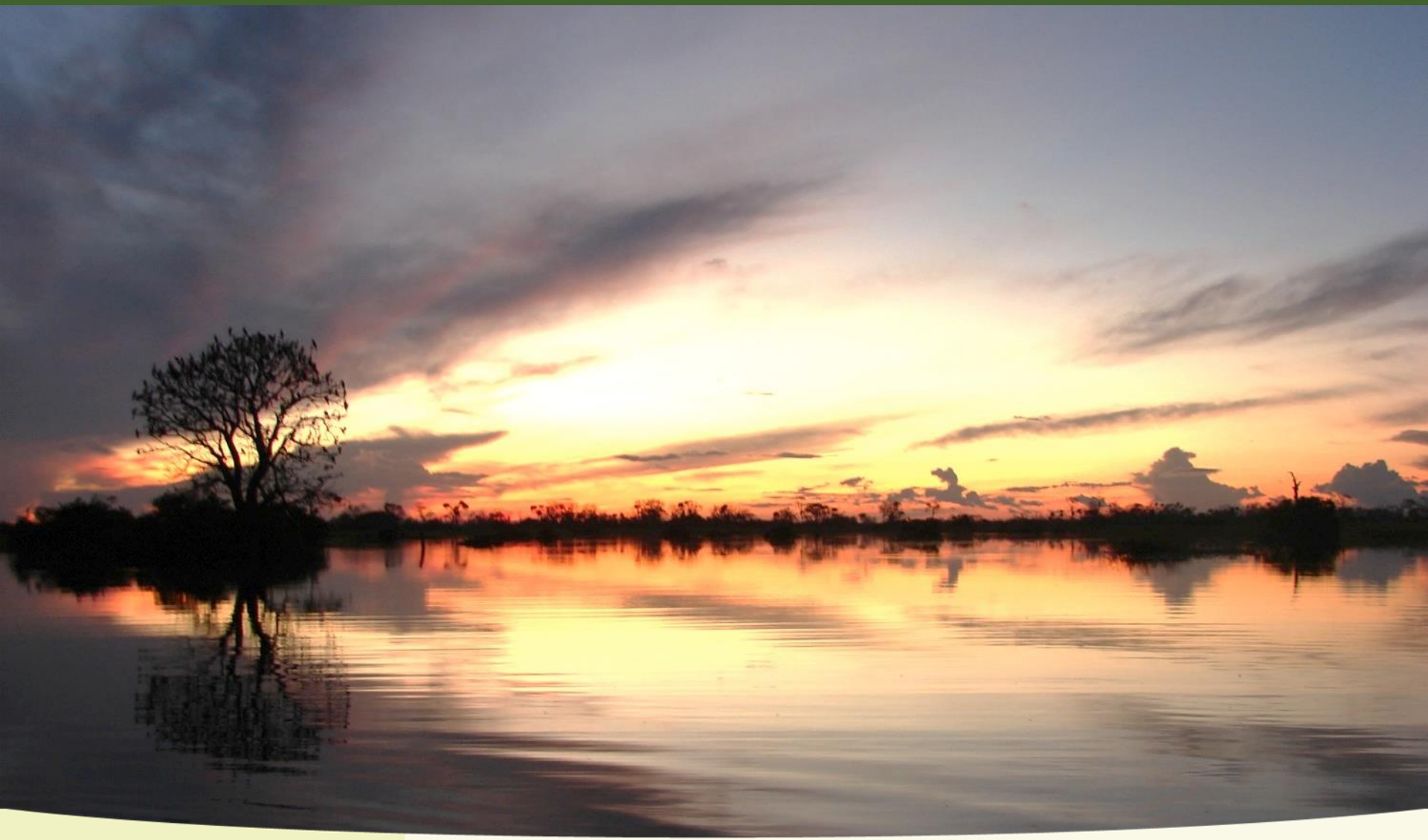
- Possible
- Loss of 15% of land from BAU
- That is till 2.6 M ha of land for oil palm
- High economic value
- High employment (poverty alleviation and livelihood improvement potential)
- No exclusion threat to independent smallholders
- Saved carbon emissions (about 80M t of CO_{2eq})

Scenario 3 (0-deforestation)

- Possible, but difficult
- Loss of 50% of land from BAU
- 1.6 M ha of land max upper limit
- 1 M ha of land already used
- Lower contribution to economic value
- Requires high inputs to maintain; intensification & mechanization to grow further
- Lower employment (but still important for poverty alleviation and rural livelihood improvement)
- Likely exclusion threat to smallholders
- Potential costs to meet 0-def. standard requirements
- GHG emissions additionally

Conclusions

- Oil palm a major driver of deforestation and GHG emissions
- Major gaps with green development objectives
- Scenarios do not provide a clear-cut winner
- Scenario 2 (HCV) and Scenario 3 (0-def.) move oil palm closer to green development ideals
- But both have strengths and weaknesses
- Scenario 2 – significant reduction of GHG and development potential for oil palm
- Scenario 3 – GHG additionally but oil palm development constrained
- What is practical and desired – up to government, private sector, civil society, and consumers to decide



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