Impacts of “Sustainable” Palm Oil on Forest Resources, Wildlife Habitats, & Communities

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Who is concerned with Palm Oil

Outline
• What is Palm Oil?
  – Global Production
  – Impacts
    • Biodiversity
    • Socioeconomic
• Sustainable
• What is next?
Global Production

- Indonesia: 51%
- Malaysia: 36%
- Thailand: 3%
- Columbia: 2%
- Nigeria: 1%
- Other: 7%

Yield per hectare - three year average (2004-2006)

- Oil Palm: $2,500 USD
- Soybeans: $1400 USD

Value per hectare per year

Source: [Yield per hectare three year average (2004-2006)](http://dx.doi.org/10.1016/j.rser.2007.10.001)
Employment of Oil Palm Operation (Estimate)

1 Manager (college graduate)
3 Assistant managers
1 worker per 10-15 ha

http://www.biglandsbrazil.com/palm-oil/
Biodiversity and Environmental Impact

• “Orangutan on the verge of extinction” (Nellemann et al. 2007)
• “Large and Persistent Fire” (Glastra et al. 2007)
  - Deforestation
  - Loss of Rainforest
• “Peatland destruction” (Hooijer et al. 2006)
• “Decline in species richness” (Fitzherbert et al. 2008)

Roundtable on Sustainable Palm Oil (RSPO)

RSPO voting members

- Processors and Traders: 43%
- Consumer Goods Manufacturers: 25%
- Growers: 22%
- Retailers: 6%
- NGOs: 6%
8 PRINCIPLES
for growers to be RSPO certified

1. Commitment to transparency
2. Compliance with applicable laws and regulations
3. Commitment to long-term economic and financial viability
4. Use of appropriate and practices to growers and workers
5. Environmental responsibility and conservation of natural resources and biodiversity
6. Support for sustainable livelihoods of farmers, and their communities, and biodiversity affected by growers and mills
7. Responsibility development of new plantings
8. Committed to continuous improvement in plantations sustainability

Proportion of palm oil globally certified by the RSPO

Plantation area certified by the RSPO

FUTURE

Certifying Sustainable

Nestle

Cargill

WWF

GREEN PEACE
Two Views
(Green et al. 2005)

• Agriculture “Wildlife friendly” (Koh et al. 2009)

• Agriculture Intensification = Greater Area for Conservation (Edwards et al. 2010)

Biodiversity and Environmental Impact

• Impacts of pesticide use in Oil Palm (Martinez et al. 2013)

• Bird assessment in Palm Oil Plantations (Achondo et al. 2011)

• Soil evaluation in Oil Palm plantation (Karam et al. 2013)

• Tracking Mammalian Communities (Wearn et al. 2012)

Literature Cited


• Koh et al., 2009 “Wildlife friendly”

• Edwards et al., 2010 “Agriculture Intensification = Greater Area for Conservation”

• Martinez et al., 2013 “Impacts of pesticide use in Oil Palm”

• Achondo et al., 2011 “Bird assessment in Palm Oil Plantations”

• Karam et al., 2013 “Soil evaluation in Oil Palm plantation”

• Wearn et al., 2012 “Tracking Mammalian Communities”


• J. Lucey, Tawatao N., Senior M., Chey V., Benedick S., Hamer K., Woodcock P., Newton R., Bomrell S., Hill J., 2014 “Tropical forest fragments contribute to species richness in adjacent oil palm plantations.”


• M. Rosenzweig, How the Earth’s Species Can Survive in the Midst of Human Enterprise (Oxford Univ. Press, Oxford, 2003)

QUESTIONS