

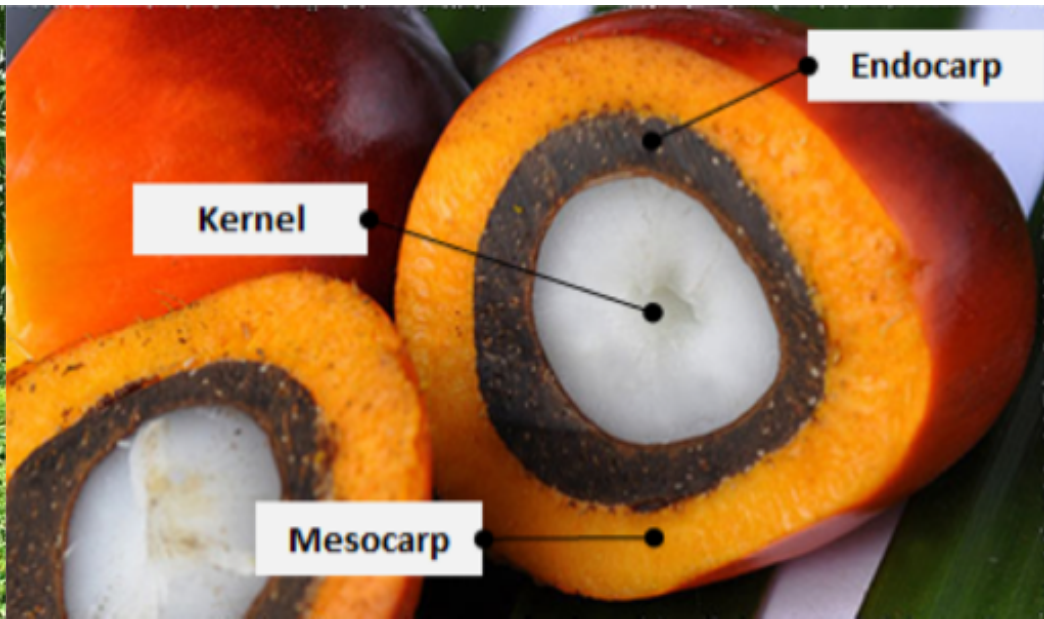
Ghana's Palm Oil Industry Smallholders and Sustainability

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Oliphant

+ What is palm oil?

- Plant= *Elaeis guineensis* or *Elaeis oleifera*
- Palm oil comes from the mesocarp
- One hectare yields 4-5 tonnes of crude palm oil per year.
- *Elaeis Guineensis* grows in tropical environments within 10° of the equator - *native to West Africa*





Why is palm oil consumed?



Palm Oil In Ghana

Palm oil production since British colonialism



Economic & Environmental Impacts



Positive

- Provides infrastructure
- Creates employment
- Promotes advancement & productivity in smallholder communities
- Year-round income & stability

Negative

- Labor exploitation
- Other crops at risk
- Threatens local land rights
- Destroys wildlife habitat
- Deforestation



+ Who's Driving the Palm Oil Industry Worldwide?



Private Enterprises	Smallholders	State-owned Plantations
<ul style="list-style-type: none">- 20-40k ha in size- 82% growth in last decade- 88.3% deforestation- 91% CPO CO2 emissions	<ul style="list-style-type: none">- Roughly 2ha in size- 190% growth in last decade- 10.7% deforestation- 9% CPO CO2 emissions	<ul style="list-style-type: none">- Intermediate Size*- 7% growth In last decade- 0.9% deforestation- 0.5% CPO CO2 emissions

+ Who are smallholders?

- People in rural communities
- Farmers who used to grow other crops
 - Palm oil can increase smallholder income by 60-150%
- Either independent or part of the plasma scheme:
 - Plasma Scheme - work with large plantations
 - Independent - sell to the local market or to middle men
- Don't have public pressure to conform to sustainability standards





Roundtable for Sustainable Palm Oil



- Private regulatory scheme started in 2004
- Global scale
- Members must comply with requirements to ensure production is:
 - Economically viable
 - Environmentally sound
 - Beneficial to society
- 40% global palm oil production is from RSPO members, 20% global palm oil is RSPO-certified





How to become a member of the RSPO



- Pay membership fees
- Register online & complete online application
- Upload a GIS map of their farm
- Submit an environmental impact assessment of their land
- Adhere to certification rules
 - Pass assessments & audits conducted by the RSPO Certification Body
- Major issue with RSPO is domination of membership by industry actors
 - High barriers and costs of entry
 - Lack of extension services

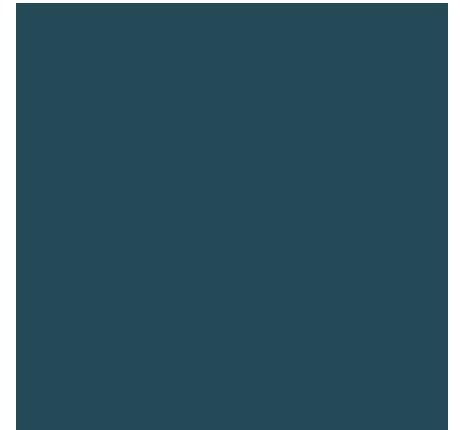
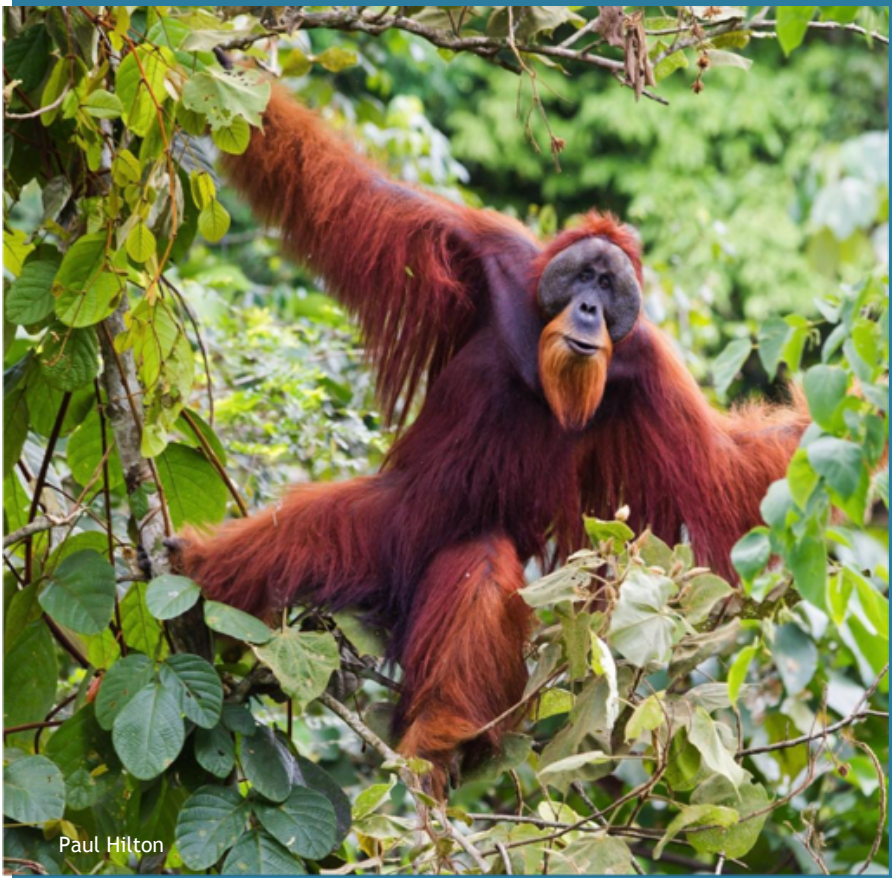




Recap



- Palm oil production is growing in Ghana
- Palm oil agriculture has significant detrimental effects on the environment.
- Private enterprises with large plantation make up most of the environmental impact, but smallholders are rising quickly
- RSPO is a sustainable palm oil certification process
- It can be difficult to get smallholders RSPO certified
 - *Especially independent smallholders*



Activity



Land Use Game



- Get into a groups of 3
 - Choose characters: Smallholder, Company Rep, or Conservationist
- Play land use game!!

Objectives:

The Smallholder with the most money at the end wins!

The Company Rep with the most money at the end wins!

The Conservationist with the lowest emissions at the end wins!



Land Use Game



- Game clock: Game ends at the end of the 5th year
 - Each year is 4 minutes - turn starts with Smallholder
 - Can finalize 1 development each turn - or do nothing
 - When it's your turn, convince fellow stakeholders to approve your proposed development
 - After development is finalized, next players turn
 - **Maximum of 5 developments per year**
- Only collect earnings at the **end of the year**
 - Current cash is used to fund new developments/special actions



Peat Forest

Can't Be Built

One-Time Effects | Annual Effects

+90,000 kgCO₂e
when converted.

+0 kgCO₂e



Forest

Can't Be Built

One-Time Effects | Annual Effects

+45,000 kgCO₂e
when converted.

+0 kgCO₂e



Farm

One-Time Effects | Annual Effects

+15,000 kgCO₂e
when converted.

+2,000 kgCO₂e

Smallholder -\$10

Smallholder +\$10



Company Plantation

One-Time Effects | Annual Effects

See Land Tile

+6,000 kgCO₂e

Smallholder +\$60

Smallholder +\$0

Company -\$3000
if on Forest.

Company +\$1000

Company -\$2000 if
on Peat.



Plasma Plantation

Plantation

One-Time Effects | Annual Effects

See Land Tile

+6,000 kgCO₂e

Smallholder -\$20

Smallholder +\$30

Company -\$1000
if on Forest.

Company +\$500

Company -\$500 if
on Peat.



Protected Forest

Annual Effects Don't Kick in
Until You Have 3 Adjacent
Protected Forest Pieces

One-Time Effects | Annual Effects

See Land Tile

+0 kgCO₂e

Smallholder +\$20

Smallholder +\$20

Conservation -\$200

Conservation +\$200













- Each year ~4 minutes (w/ 1 minute warning). Collect annual effects.
- Smallholders own all land. Maximum of 5 plots of land can be developed each year.
- Once a plot is developed, it CAN'T be changed.



Land Use Game





Smallholder moves	Company moves	Conservationist moves
Develop farmland for independent use or sell land to company 	Buy land from smallholder to build a plantation 	Partner with smallholder to create protected forest 
Enter a plasma scheme with company 	Enter a plasma scheme with smallholder 	Run a conservation campaign to hurt company profits & raise environmental awareness 
Partner with conservationist to create protected forest 	Become RSPO certified, Become immune to Conservationist campaigns 	Try to convince smallholders/company to lower emissions 
When company becomes RSPO certified, plasma scheme land must become certified – or not 		

Smallholder Profit

of  on board * 10 = ____

of  on board * 20 = ____

of 
 on board * 20 = ____

of ODD bonus rolls * 80 = ____

TOTAL = \$ ____

Company Profit

of  on board * 500 = ____

of  on board * 1000 = ____

TOTAL = \$ ____

Conservationist Profit

of 
 on board * 400 = ____

TOTAL = \$ ____

Emissions

of RSPO certified  on board * 2000 = ____

of RSPO certified  &  on board * 3000 = ____

of uncertified  &  on board * 6000 = ____

TOTAL = ____ kgCO₂e

- Calculate earnings and CO₂ emissions when we announce the end of the year.
- Add to running total on scorecard.



Dice Events:

Conservationist Campaign (Initiated by Conservationist)

- Can be run ONCE per year
- When a campaign is launched, the Conservationist rolls the dice
 - EVEN = Successful campaign
 - Conservationist + \$400
 - Company - \$3000
 - ODD = Failed campaign
 - Conservationist -\$200

RSPO Certification (Initiated by Company)

- When a company becomes RSPO certified, it becomes immune to Conservationist Campaigns.
- The cost of certification is \$1500 upfront paid by the Company
- In addition there is a \$100 fee per Plantation plot:
 - The Company must pay the fee for Company Plantation plots.
 - The Smallholders must pay for the Plasma Plantation plots. They have three options:
 - Cover the cost in full.
 - Negotiate with the Company and the Conservationist for financial support to cover the cost.
 - Lie about getting certified. To lie, the Smallholder rolls the dice.
 - EVEN = Successful Lie
 - Get certified status for free.
 - ODD = Get Caught
 - Smallholder -\$200. Get certified status.



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