

# Borneo case study

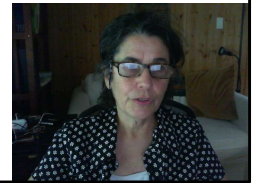
**2021 World Conservation Congress**

*TRANSFORMING NATURE AND PEOPLE CAMPUS SESSION*

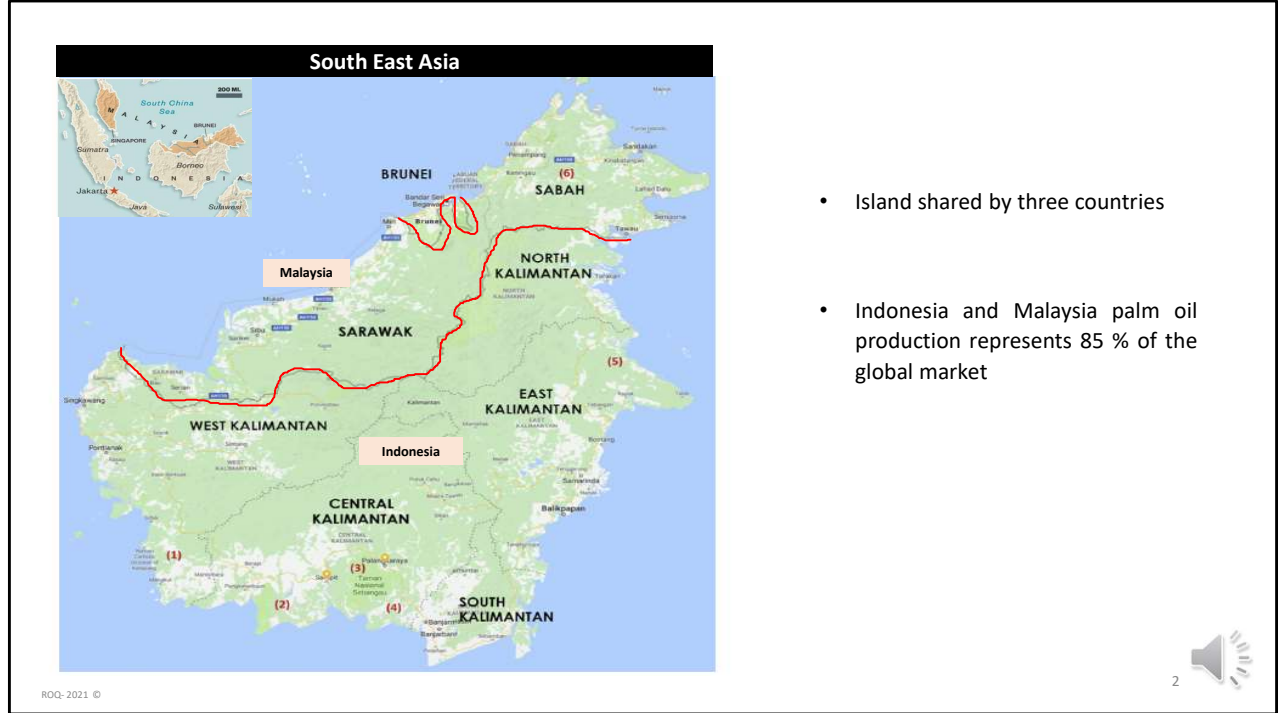
IUCN Commission on Ecosystem Management - Resilience Thematic Group

Prepared by : Rosa Ortiz Quijano – consultant

September 6, 2021



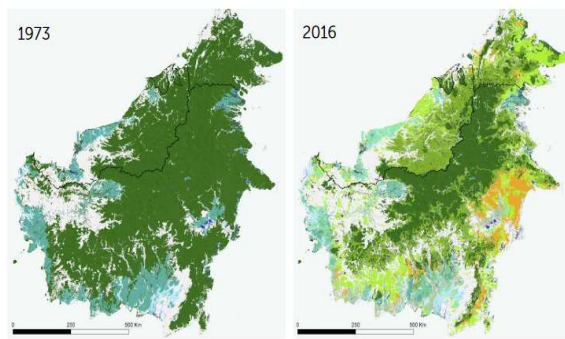
Good morning to you all. I am Rosa Ortiz Quijano and will present some aspects of Borneo's palm oil production and deforestation as an input for one of the breakout groups discussions.



- Island shared by three countries
- Indonesia and Malaysia palm oil production represents 85 % of the global market

- Borneo located in **South Est Asia** is an island shared by three countries: Indonesia, Malaysia and Brunei
- Indonesia and Malaysia palm oil production represents 85 % of the global market

## Forests , land cover and land use at Borneo



Visual legend:



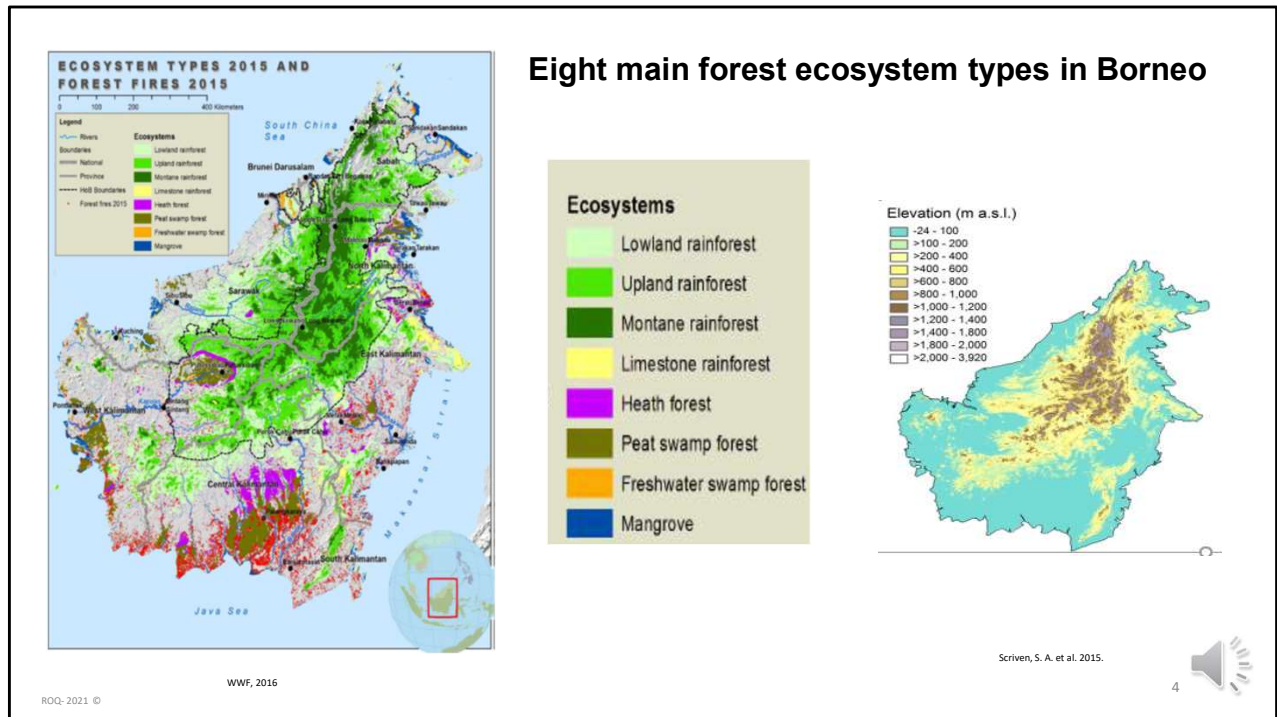
ROQ-2021 ©

Gaveau,D.L.A. 2017

3

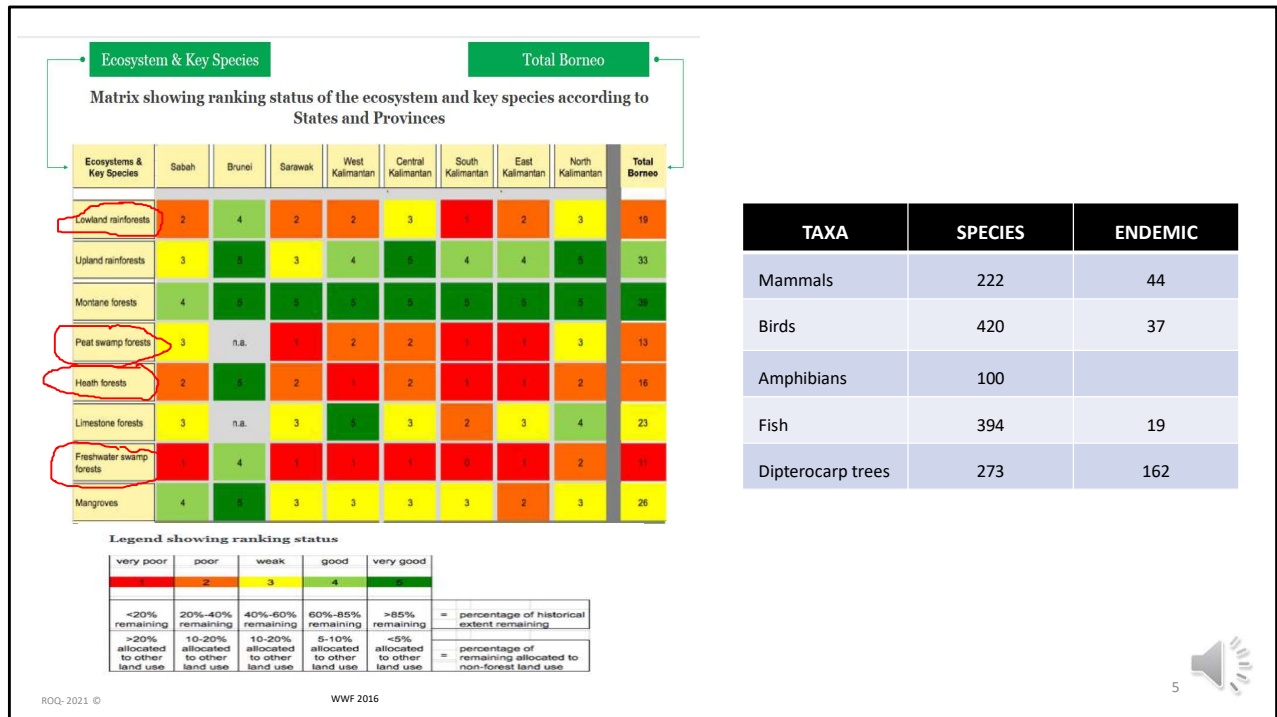


- Today only half of Borneo original tropical rainforests remains. In the last 30 years the main direct drivers of large-scale deforestation has been
  - ✓ The logging industry
  - ✓ Industrial-scale oil palm plantations expansion
  - ✓ Industrial pulpwood plantationsThe main environmental and social impacts of these activities are:
  - ✓ biodiversity loss and decline of ecosystem functions and services
  - ✓ uncontrolled peatland and forests fires
  - ✓ Increase of greenhouse gas (GHG) emissions
  - ✓ Dispossession of land and poor working conditions on plantations
  - ✓ Increase of the risks of infectious diseases, either zoonotic or vector borne.

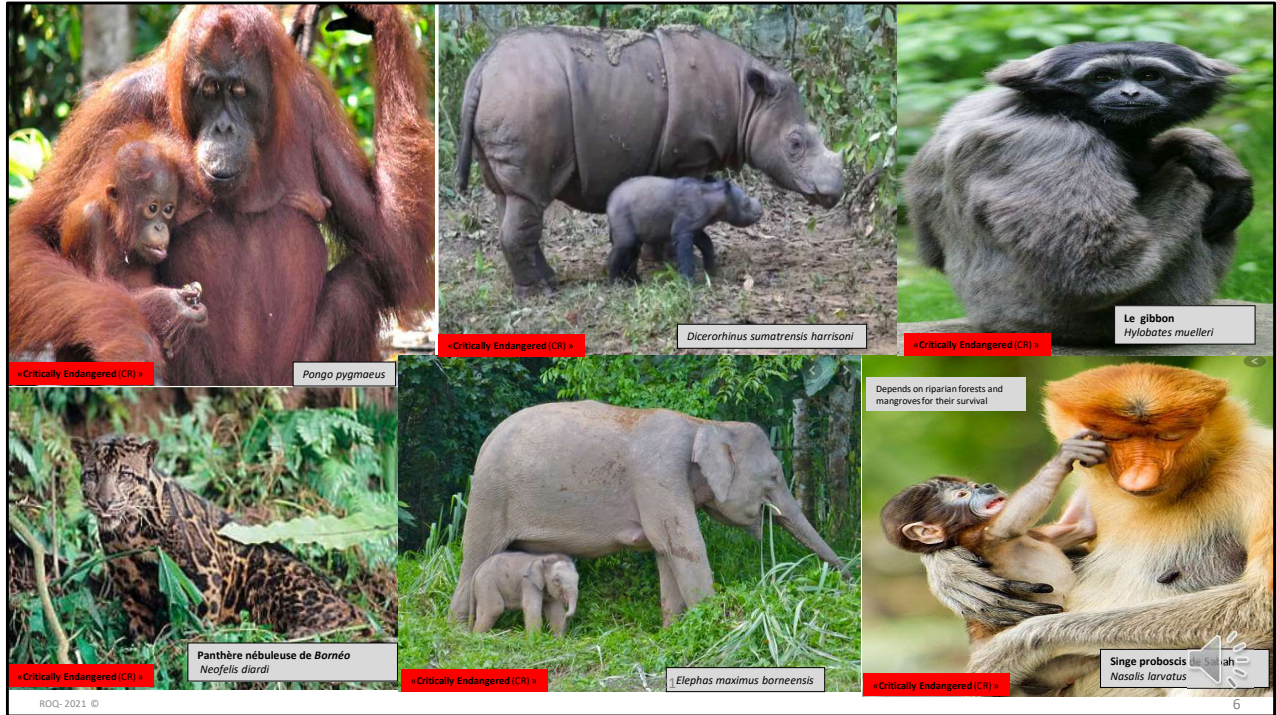


Borneo is an evolutionary hotspot of biodiversity. depending on the elevation above seal level, the geology, or the type of soils among others, 8 types of forests ecosystems can be found

The lowland rainforest in most of the areas is a Dipterocarp Forest.

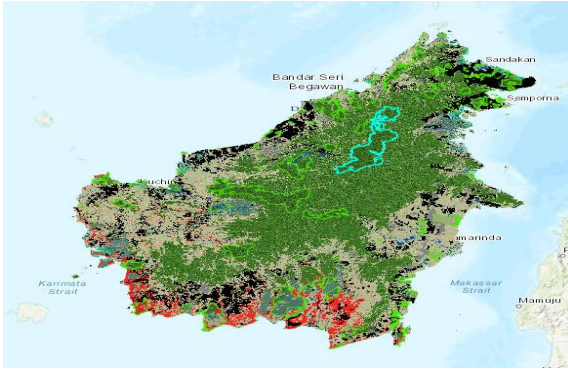


This colored matrix shows the status of the different types of Borneo ecosystems. At the left column highlighted in red circles are the ecosystems with less historical extent remaining and the ones with more highest percentage allocated to other land uses. The table at the right illustrates what this means in terms of biodiversity loss. 70% of species of the dipterocarp trees are threatened with extinction.

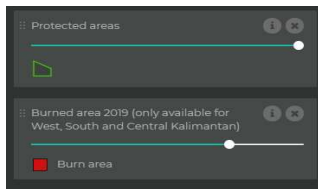


Some examples of critically endangered mammal species according to the IUCN Red list.

## Protected areas



- Kalimantan = 14,7 %
- Sarawak = 8 %
- Sabah = 16 %
- Connectivity among PA is lacking.



ROQ, 2021 ©

CIFOR, 2019



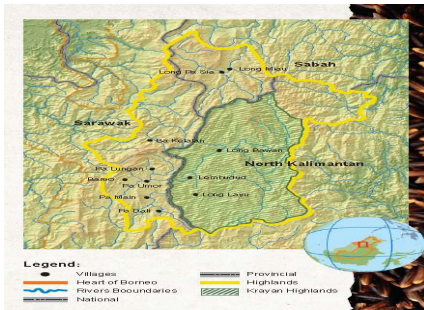
7

You can see the protected areas identified as the green areas in the map and percentages of protected land. In the context of climate change a large proportion of PAs will be confronted to different temperatures from those in the present. Half of all PAs on Borneo are too isolated for poor dispersers to reach cooler PAs.

## Heart of Borneo and the Krayan Highlands, north of Kalimantan



Heart of Borneo boundary map  
© WWF



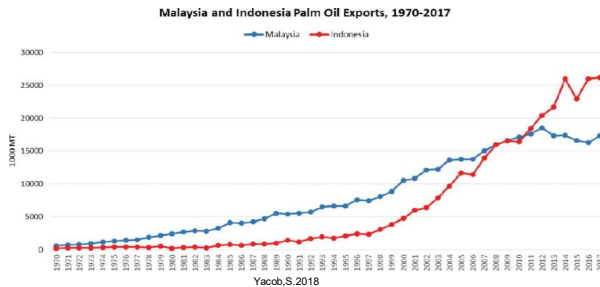
Source : (FORMAT, s. d.)

- The Krayan Highlands, north of Kalimantan at the Heart of Borneo is an ancestral homeland of several Indigenous Peoples who had practice for centuries a highly diverse agricultural system of wet rice agriculture based on local knowledge and traditional organic practices .

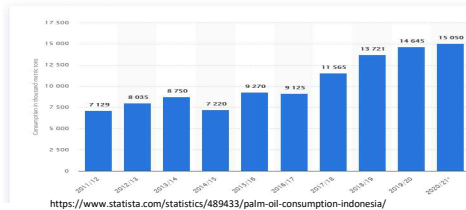




## Economic growth , palm oil production and consumption



Palm oil consumption in Indonesia from 2011 to 2021  
(in 1,000 metric tons)



ROQ: 2021 ©



9

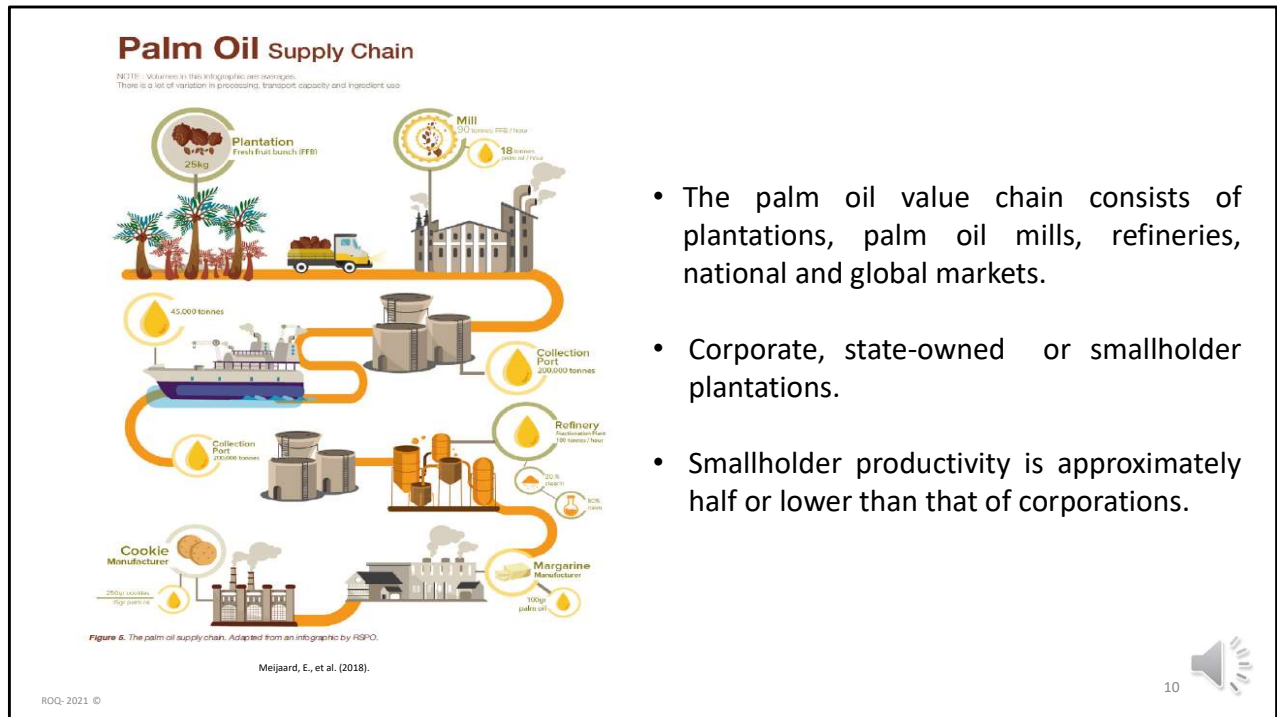
- ✓ The expansion of oil palm exports aims to support Indonesia's and Malaysia economic growth targets.
- ✓ National level policies
- ✓ International level policies
- ✓ Domestic and international palm oil consumption is set to increase

Indonesia's and Malaysia economic growth targets are intrinsically attached to the palm oil exports.

- ✓ Though at the national level some environmental and social policies can be highlighted:
  - Indonesian permanent moratorium for corporations on plantation expansion
  - Peatland protection
  - Providing through agrarian reform 9 M ha of land for smallholder practices including oil palm
  - Prevention against land and forest fires
  - Indonesia's and Malaysia's Paris Agreement pledges to reduce their carbon emissions conditioned by the reception of foreign aid from the developed countries
- ✓ At the International level :

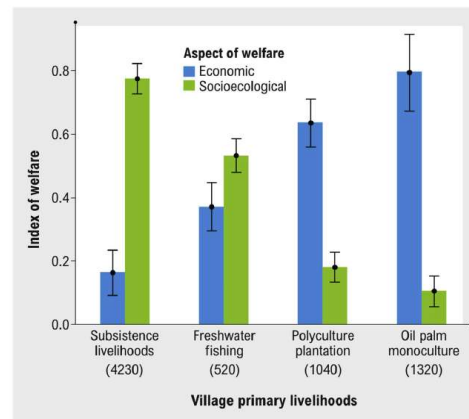
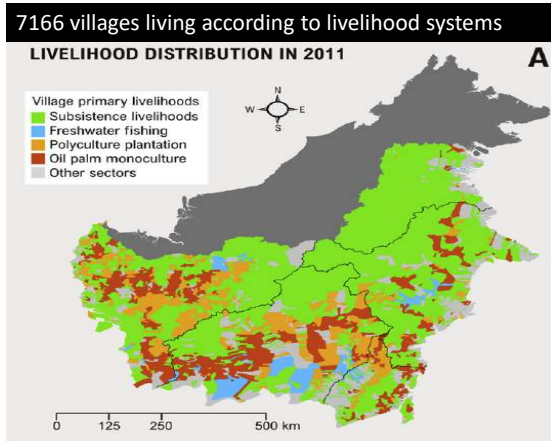
In 2017 the European Parliament decided to phase out palm oil-based biofuel by 2030.

It is foreseen that domestic and international palm oil consumption is set to increase.



- The palm oil value chain consists of plantations, palm oil mills, refineries, national and global markets.
- Growers produce fresh fruit bunches processed by mills into crude and kernel palm oil which are transformed by refineries into cooking oil, oleo-chemicals, and biodiesel.
- The palm oil supply chain is fed by corporate, state-owned or smallholder plantations.
- Palm oil produces more oil per unit area than other major oil crops, but smallholders' productivity is approximately half or lower than that of corporations.

# Kalimantan livelihoods and palm oil smallholders



Source : (Santika et al., 2019)



A study conducted on thousands of villages on livelihood systems in Kalimantan concluded that palm oil monoculture and polyculture smallholders' plantations brought significant economic benefits in villages that had prior knowledge of plantation management and past exposure to market economy.

## Industrial oil Palm Plantations and land rights in Indonesia



Human Rights Watch, 2019.

ROQ-2021 ©

- In Indonesia there is no clear estimate of the number of land disputes or households having been displaced.
- Women loss of food, income and exclusion



Loss of ancestral traditional forest and displacement has adversely affected Indigenous people's rights to livelihood, food, water, and culture due to oil palm plantation expansion into their villages. Women are particularly affected with the lost of access to customary forests which are used as source of food and revenue. Usually, they are excluded from the negotiations with companies regarding land sell and compensations.

## Voluntary certification systems and standards of palm oil production and other initiatives

### ➤ International multistakeholder certification scheme

1. Roundtable on Sustainable Palm Oil, RSPO latest RSPO Principles & Criteria (2018) and RSPO Independent Smallholder Standard (2019)

### ➤ National governmental certification schemes

2. Indonesian Sustainable Palm Oil, ISPO
3. Malaysian Sustainable Palm Oil, MSPO

Palm oil companies NDPE policies	
Sustainability commitments	
<b>NO</b> Deforestation	to prevent any new deforestation being carried out to clear space for crop growing. It protects High Conservation Value (HCV) areas and High Carbon Stock (HCS)
<b>NO</b> new development on peat	no new developments on peatland
<b>NO</b> Exploitation	not exploiting workers, local communities or small-scale growers, in the production of an agricultural commodity

Since 2012 company-driven deforestation has been decreasing however there is 'leakage' of unsustainable palm oil as the segment of the refining market does not apply NDPE sourcing criteria.

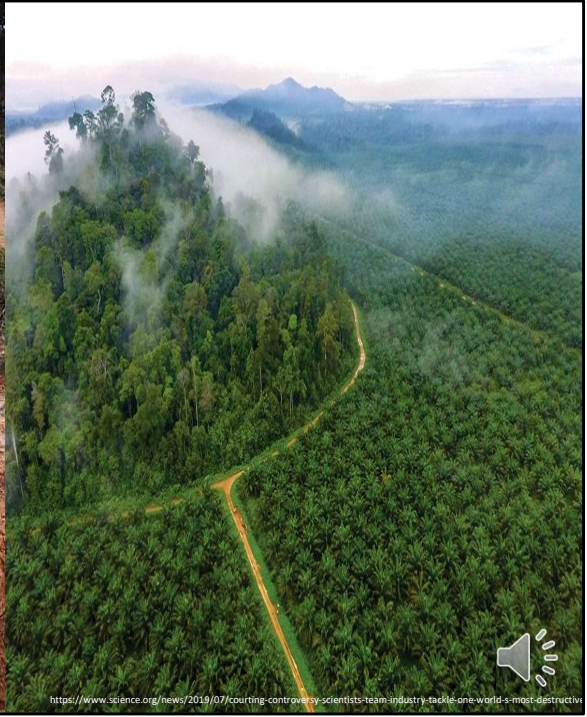
ROQ-2021 ©

13



Certification has been proposed to label sustainable palm oil production. Three certifications' schemes are applied to the palm oil production in Borneo .

- At the international level a multistakeholder scheme known as Roundtable on Sustainable Palm Oil (RSPO)
- At the National level there are two governmental **schemes**: Indonesian Sustainable Palm Oil, ISPO and Malaysian Sustainable Palm Oil, MSPO-
- The palm oil companies have also adopted policies known as NDPE meaning no deforestation, no new development on peat , and no exploitation of communities. Despite the positive effects of these policies unsustainable palm oil continues to be present in the supply chain.



## References

- Botanic Gardens Conservation International's (BGCI).2021. State of the World's Trees.
- Cassolla,G. and Velichevskaia, A. 2020 . Certified "sustainable" palm oil took the place of endangered Bornean and Sumatran large mammals' habitat and tropical forests in the last 30 years
- Center for International Forestry Research (CIFOR).2019. Borneo atlas.
- FORMADAT. (s. d.). The Krayan Highlands—In the heart of Borneo.
- Gaveau,D.L.A. 2017. What a difference 4 decades make: Deforestation in Borneo since 1973
- Human Rights Watch (2019) . "When We Lost the Forest, We Lost Everything". Oil Palm Plantations Cand Rights Violations in Indonesia
- Kusumaningtyas, R. 2018. « External Concern on the ISPO and RSPO certification Schemes »
- Meijaard, E., Garcia-Ulloa, J., Sheil, D., Wich, S.A., Carlson, K.M., Juffe-Bignoli, D., and Brooks, T.M. (eds.) (2018). Oil palm and biodiversity. A situation analysis by the IUCN Oil Palm Task Force. IUCN Oil Palm Task Force Gland, Switzerland: IUCN
- Meijaard,E. et al. (2017). An impact analysis of RSPO certification on Borneo forest cover and orangutan populations
- Lambin, E.F. et al. 2018. The role of supply-chain initiatives in reducing deforestation. Nature climate change.
- Morand, S. and Lajaunie C. 2021. Outbreaks of Vector-Borne and Zoonotic Diseases Are Associated With Changes in Forest Cover and Oil Palm Expansion at Global Scale
- Muzi, N. (2019). *Almost two-thirds of palm oil consumed in the EU is burned as energy—New data*. <https://www.transportenvironment.org/press/almost-two-thirds-palm-oil-consumed-eu-burned-energy-new-data>
- Pimbert, M., & Borrini-Feyerabend, G. (2019). *Nourishing Life—Territories of life & food sovereignty—Policy Brief of the ICCA Consortium—No. 6*.
- Proforest. 2020. Infonote.04. Understanding commitments to No Deforestation, No Peat and No Exploitation (NDPE) [https://www.proforest.net/fileadmin/uploads/proforest/Documents/Publications/infonote\\_04\\_introndpe.pdf](https://www.proforest.net/fileadmin/uploads/proforest/Documents/Publications/infonote_04_introndpe.pdf)
- Purnomo,H. et al. Reconciling oil palm economic development and environmental conservation in Indonesia: A value chain dynamic approach
- RSPO. 2018. Principles and Criteria for the Production of Sustainable Palm Oil
- Rochmyaningsih, D. 2019. Courting controversy, scientists' team with industry to tackle one of the world's most destructive crops.
- Santika, T., Wilson, K. A., Meijaard, E., Budiharta, S., Law, E. E., Sabri, M., Struebig, M., Ancrenaz, M., & Poh, T.-M. (2019). Changing landscapes, livelihoods and village welfare in the context of oil palm development. *Land Use Policy*.
- Scriven, S. A. et al. 2015. Protected areas in Borneo may fail to conserve tropical forest biodiversity under climate change
- Steinweg,T. et al. 2017 Unsustainable Palm Oil Faces Increasing Market Access Risks: NDPE Sourcing Policies Cover 74 Percent of Southeast Asia's Refining Capacity
- Yacob, S. 2018. Government, Business and Lobbyists: The Politics of Palm Oil in US–Malaysia Relations
- The Borneo Project. 2019. Sarawak's only UNESCO World Heritage Site threatened by oil palm plantations.
- World Bank. 2021. Climate risk country profile – Indonesia
- WWF. 2016. The Environmental Status of Borneo 2016 [https://wwfint.awsassets.panda.org/downloads/isi\\_full\\_report\\_hob\\_2016\\_rev\\_\\_12\\_higres\\_compressed.pdf](https://wwfint.awsassets.panda.org/downloads/isi_full_report_hob_2016_rev__12_higres_compressed.pdf)