

TRANSFORMING BORNEO

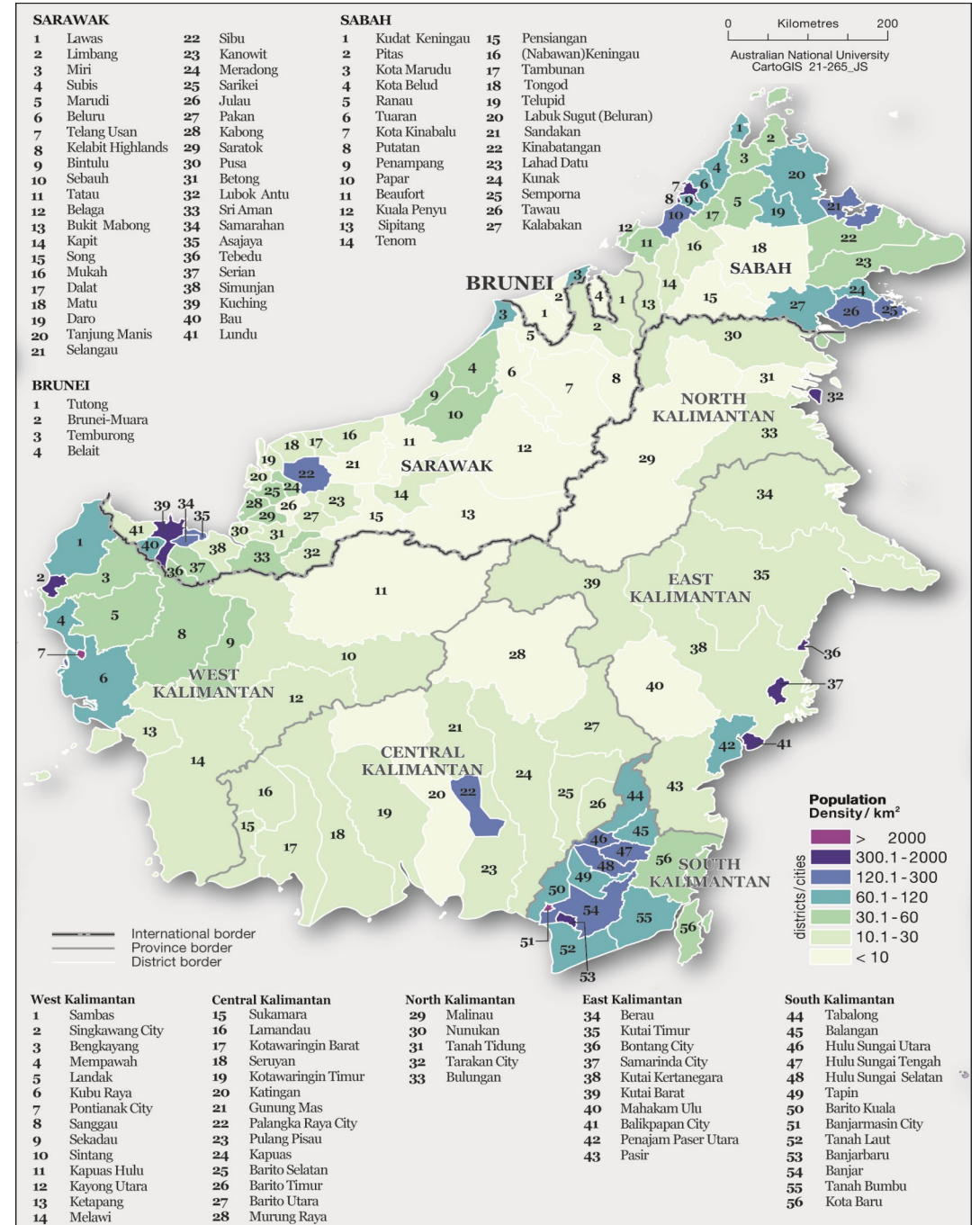
From Land Exploitation
to Sustainable Development



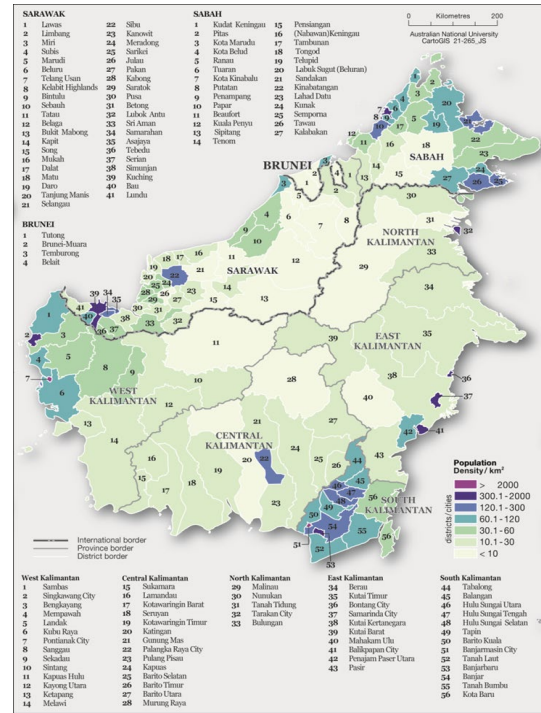
CHUN SHENG GOH • LESLEY POTTER

INTRODUCTION

- Borneo, the world's third largest island, is politically divided between **Indonesia (73%)** (*North, East, South, Central and West Kalimantan*); **Malaysia (26%)** (*Sarawak and Sabah*) and **Brunei (1%)**.
- The Malaysian states have more autonomy over land use, including forestry, than their Indonesian counterparts, although following Decentralization in 2000, districts have secured some level of freedom from Jakarta, especially those with far-sighted governors.
- Current population (2020) is about 23 million, 16.6 m in Kalimantan, 3.9m in Sabah and 2.9m in Sarawak. Both West Kalimantan (5.4 m) and South Kalimantan (4.1 m) are more populous than either Sabah or Sarawak. Least populous is the new province of North Kalimantan, created in 2012, with 0.7m.
- The map summarizes the population density per district across the island. The main cities lie on the coast (with the exception of Palangka Raya in Central Kalimantan, founded only in 1957).
- Which is largest? Kuching (Sarawak), Samarinda (East Kalimantan) and Banjarmasin-Banjar Baru (South Kalimantan) all have 800,000 to 900,000 inhabitants.
- The relocation of the capital, called Nusantara (near Balikpapan) will increase the urban population in East Kalimantan. The plan is to make Balikpapan-Nusantara-Samarinda one city, which would soon be Borneo's biggest.
- Apart from the major urban areas, districts with a density above 120 persons per square kilometer tend to support intensive farming or animal raising (such as the three districts of the Hulu Sungai in South Kalimantan), or are ports like Sandakan or Tawau.



Map 1



Map 2



Map 3

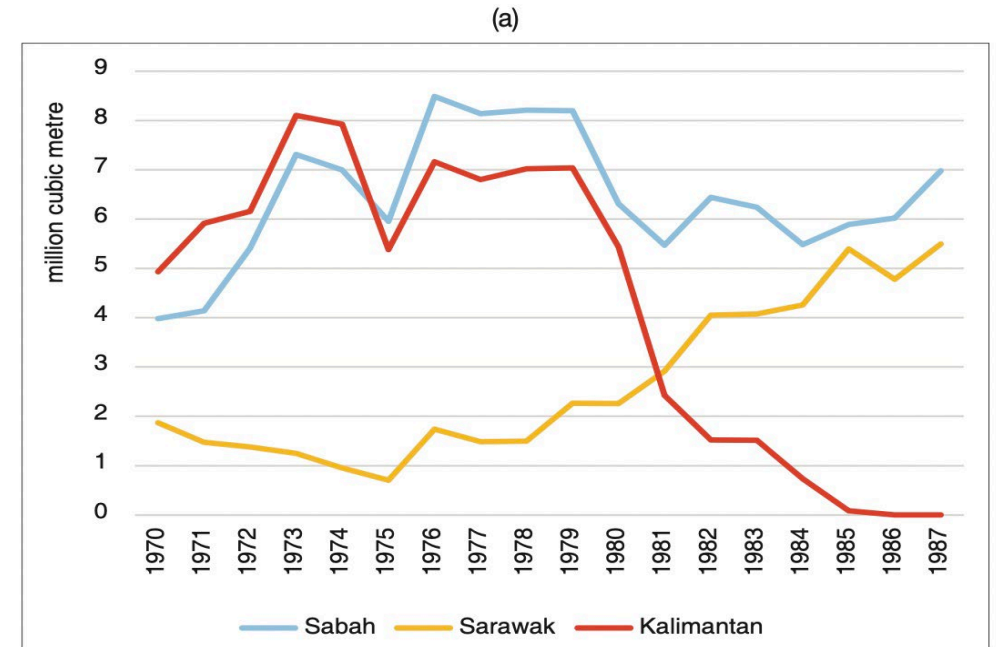


- A comparison between the elevation (Map 2) and the population density (Map 1) indicates the general limitations posed by the uplands on settlement in Borneo, with large areas having fewer than 10 persons per square km.
- A high proportion of this upland is included in the 'Heart of Borneo', much of it already protected and containing a large part of the remaining forest and amazing diverse natural environments on the island (Map 3).
- As roads are beginning to push into this area, the resources of which will become more valuable as climate change impacts the lowlands, care must be taken to continue to protect these environments.

FIVE DECADES OF LAND BASED DEVELOPMENT ACROSS BORNEO

1) MASSIVE TIMBER EXTRACTION 1970-2000

- Rapid timber extraction for export, either as raw logs or after conversion to plywood, has resulted in severe deforestation, while many of the remaining forests have been highly degraded, with a dense network of logging roads in Sarawak and Sabah.
- Sarawak experienced one of the most rapid log clearances in Southeast Asia, led by six local 'timber tycoons'.
- Brunei, relying on its oil income, has preserved its forests.
- *Graph (a) shows the imports of Hardwood Logs to Japan from the three source areas over the period 1970-1987, Japan being the early recipient of much of the timber from Borneo (Nectoux and Kuroda 1989). Imports of logs from Kalimantan declined rapidly after 1980 as Indonesia transitioned to plywood. Sabah and Sarawak quickly filled the gap, while Indonesia for a few years became the world's leading exporter of tropical plywood.*
- Natural timbers had, however, been heavily depleted by the 1990s, with attention shifting in Kalimantan to planted forests, largely of *Acacia mangium* as raw material for pulp and paper plants. However, these plants were established in Sumatra rather than Kalimantan, except for one in Berau (East Kal).
- Meanwhile, **illegal logging was widespread**, especially after decentralization in 2000. Logs were also smuggled across the borders to Sabah and Sarawak, an important source of local revenue until that trade was stopped in 2004.
- The photo (Potter 2002) shows illegal logging of *Ramin* (*Gonystylus bancanus*) an important and versatile softwood, not far from the main road to Sarawak in Kapuas Hulu, West Kalimantan.



2) MEGA LAND-BASED DEVELOPMENTS FROM THE 1990S

Hydropower dams in Sarawak

- Began with Batang Ai (small), followed by the Bakun Dam, 2,400 MW, the largest dam in SE Asia, with destruction of 70,000 ha of forests and re-location of 10,000 people. Although started in 1996, the dam was only finished in 2011. This was followed by the Murum dam (2015) and others are planned. **Hydropower has been seen as the growth engine of the Sarawak Corridor of Renewable Energy (SCORE), to provide power to a wider region, but with serious environmental and human costs.** (Photo: Snowy Mountains Engineering Corporation, 2023).



Large-scale coal mining in East and South Kalimantan.

- The largest mines were opened in the 1990s (PT Kaltim Prima Coal: Sangatta, East Kal. 1990 and PT Adaro: Tanjung, South Kal. 1991), but there was a big rise in coal production and export from 2000 to 2019. **Huge numbers of water-filled abandoned pits litter the mining landscapes, with many child drownings. The coal industry continues to have powerful political connections.** (Photo: Children play in abandoned mine, East Kalimantan, [Courtesy JATAM] in Woodbury and Arbainsyah 'Being realistic about coal mine rehabilitation in Indonesia, an ecological perspective' Mongabay 2020)



Construction of the Million-Hectare "Rice Estate" (MRP) in Central Kalimantan.

- Launched in 1995, a project of former President Suharto to boost Indonesia's rice output, covering 1.4m ha of peat forest, with planned transmigrant labour. No engineering studies or effective environmental assessment. Its launch coincided with a long drought; the peat dried out and severe fires raged, releasing large amounts of carbon to the atmosphere. The project was cancelled in 1999. **Peat fires have continued following oil palm planting, with many estates located illegally on deep peat.** (MRP main canal. Photo, Potter 2010)



3) RAPID OIL PALM EXPANSION 2000-2020

- Oil palm production began first in Sabah in the 1970s, in Sarawak and West Kalimantan a decade later and in the rest of Kalimantan during the 1990s. Much of the recent production (from 2000 to 2018) is on peat soils, especially in Sarawak and Central Kalimantan. This is clearly shown in CIFOR's map (2020). About 120,000 ha of peat in the MRP is also planted to oil palm. **Clearing by burning resulted in the huge peatland fires of 2015 and 2019.**
- The spread of oil palm has also generated many social issues, as plantations have occupied lands of local people. Apart from West Kalimantan, where historically smallholders were assisted by estates, oil palm smallholders are relatively few in Kalimantan compared to Sumatra. *(Smallholders await collection of their fruit, Sanggau, West Kalimantan. Photo, Potter 2011).*
- New schemes for independent smallholders, assisted by local credit unions and NGOs, have been developing quite rapidly. *(Independent smallholders in 'field school', Sintang, West Kalimantan. Photo Potter 2018).*
- The graph below summarizes the production by state and province in 2019. Note the prominence of Central Kalimantan, with few smallholders.

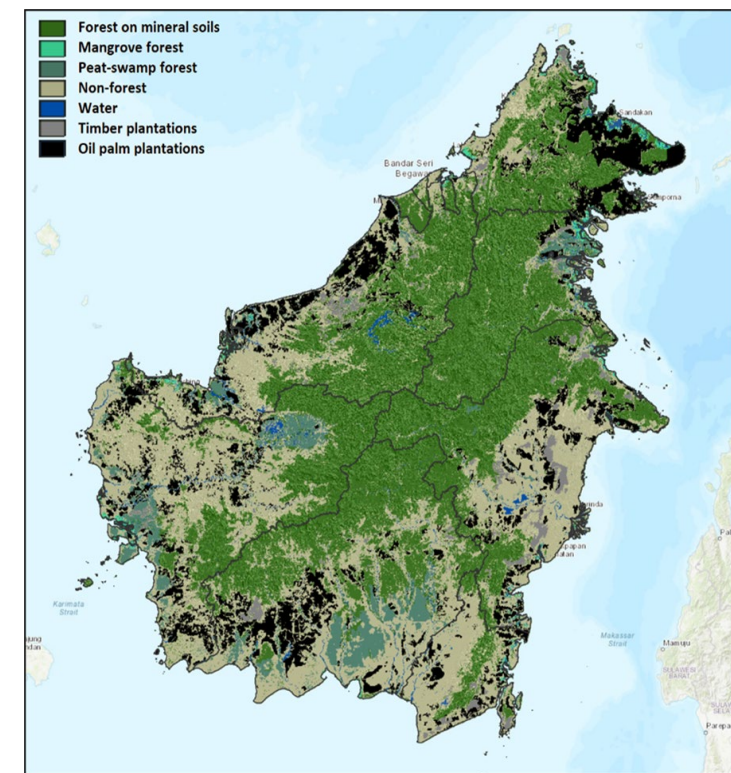
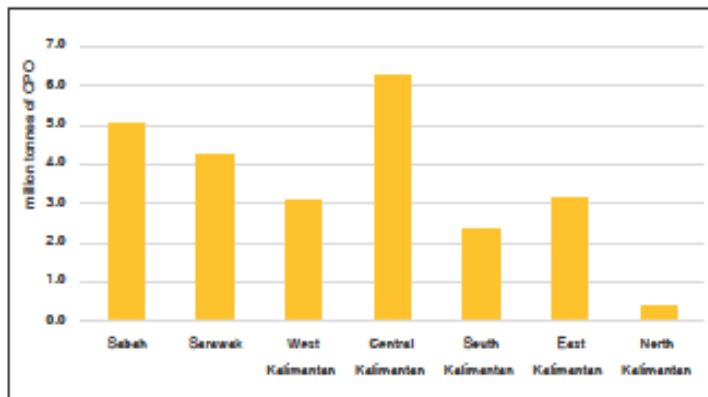


FIGURE 2.9
CPO Production in Borneo in 2019

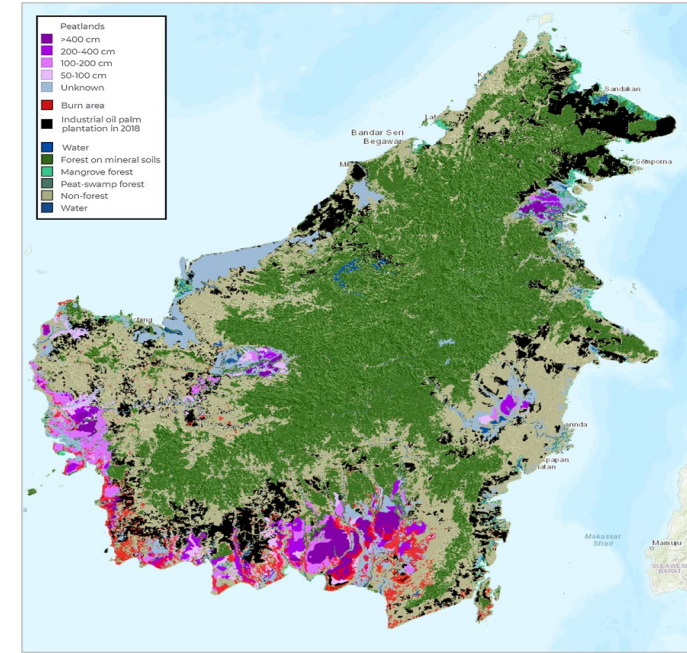


Source: DG Estate Crop Indonesia (2019); MPOB (2021).



4) TOWARDS SUSTAINABILITY?

- From about 2010, moves toward sustainability of land-based production were beginning.
- Criticism of forest destruction and specifically oil palm was increasing, especially in Europe and North America, where the endangered orangutan was often used as a symbol for necessary change. (*Orangutans in Tanjung Puting NP, Central Kalimantan, Potter, 2007*).
- Borneo's emissions, especially from deforestation and peat fires, have been recognized as very high, while the health and economic impacts of trans-boundary haze have placed the spotlight on operators involved in agricultural expansion.
- Indonesia finally ratified the ASEAN Transboundary Haze Agreement in 2014, 12 years after it was signed.
- However, serious peat fires still occurred in 2015 and 2019.
- A modified CIFOR map, showing the distribution of peat depth and burnt areas in 2019, was published for West, South and Central Kalimantan. No information on peat depth was available for the large area under peat in Sarawak.
- One study by Greenpeace (2020) listed the top ten oil palm companies in Indonesia according to the total burned area mapped in their concessions from 2015 to 2019.
- Third on Greenpeace's list was Malaysian PT Globalindo Agung Lestari (PT GAL), which had occupied transmigrants' land in the MRP, provoking many complaints. It subsequently expanded its holdings by burning scrub, setting fire to the underlying peat.
- A moratorium on primary forests and peatlands, suspending the issue of new logging licences, was issued by the Indonesian Government in 2011, then extended indefinitely from 2019, with a further moratorium on new oil palm concessions for three years from 2018.
- Malaysia also pledged to keep 50% of its land 'forested', but this could include plantations.
- Many individual companies promised: "No deforestation, no peat, no exploitation".
- However, it was pointed out that such pledges are not legally binding, while occurrences of 'cheating' are not rare.



BIO-ECONOMY AND ECO-ECONOMY STRATEGIES FOR BORNEO

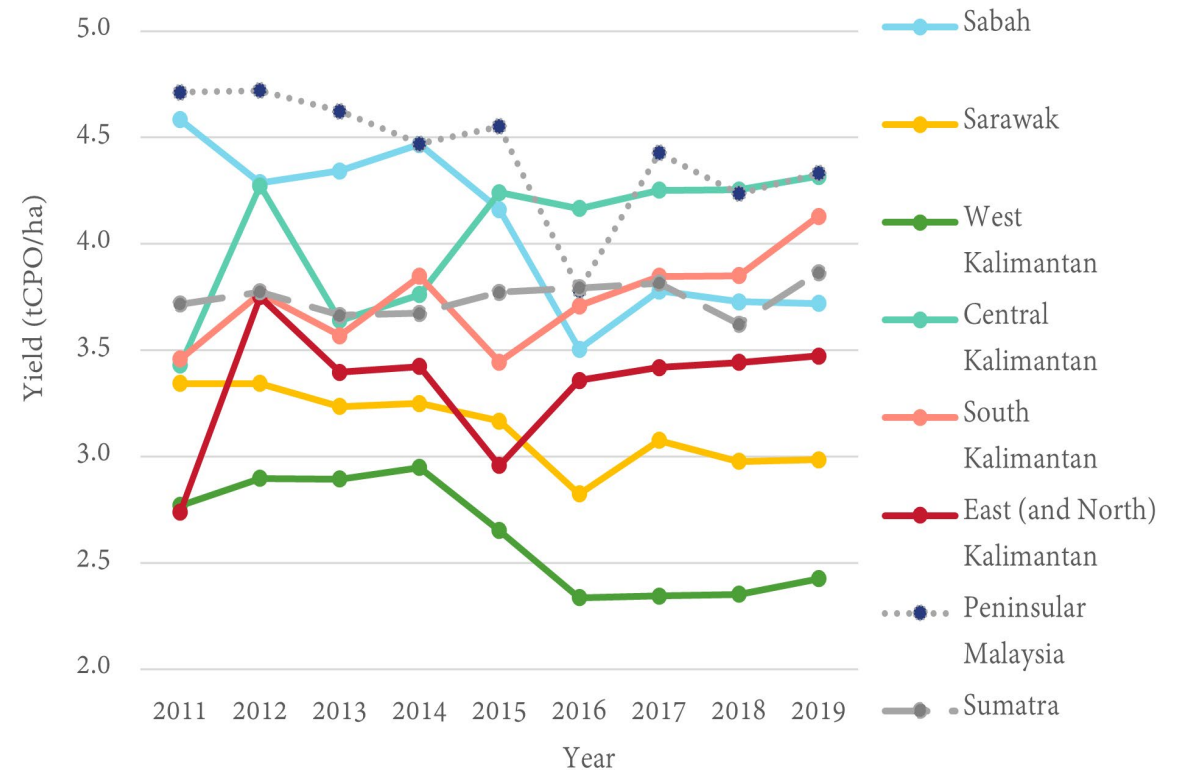
- **Bio-economy** Seeks to offer a strategic means to reconcile socio-economic progress with environmental sustainability.
- Increasing economic output while reducing resource consumption, through improving system efficiency from upstream (intensifying primary production) to downstream (creating new products and markets).
- **Eco-economy** A conservation oriented economic strategy. Maintaining a harmonious relationship with nature is prioritized over economic productivity.
- The concept portrays a self-sufficient landscape with small scale farming systems and alternative income generating mechanisms, such as ecosystem restoration and 'green' businesses like eco-tourism.
- In the book we employ a number of examples to test the applicability of both these strategies in promoting sustainability in Borneo.
- The two photos indicate different strategies among oil palm growers: the top one shows a corporation's monocrop plantation in Lamandau, Central Kalimantan (*Photo, Potter 2010*). Below is a mixed smallholder plot in Sanggau, West Kalimantan, where the oil palm shares the land with rice and traditional mixed forest (*tembawang : a source of fruits and vegetables*) (*Photo, Potter 2007*).
- No doubt the plantation owner could increase his output and reduce the land occupied if he used the very best cultivars, inputs and techniques.
- No doubt the smallholder could do the same if she turned her farm into an oil palm monocrop. But cultural factors, like the wish to grow rice, may deter her from doing so. There are also sanctions in the village against destroying *tembawang*.



BIO-ECONOMY EXAMPLES

1. Boosting Upstream Productivity of Cash Crops

- This graph compares the yields of Crude Palm Oil in tonnes per hectare from 2011 to 2019 in the five districts of Kalimantan, together with Sabah, Sarawak, Sumatra and Peninsular Malaysia over the period from 2011 to 2019
- There are obviously great differences in the performances of the different jurisdictions over that period, with West Kalimantan experiencing generally the lowest yields, Peninsular Malaysia the highest (apart from a steep decline following the El Nino drought of 2015). Elsewhere yields in some jurisdictions (such as Sabah and Sarawak) have trended down, while others have increased their yields.
- Many factors are involved here, ranging from upgrading crop breeding and genomics and improving plantation management, through to climate and soil conditions and the involvement of smallholders.
- The latter group have had a range of experiences when attempting to grow oil palm, depending on whether they were 'organised', 'plasma' smallholders or independent.
- There was more effort to place them in organized schemes in Sarawak and Sabah (only marginally successful).
- 'Plasma' schemes evolved gradually in Indonesia, eventually becoming more stringent, while independent smallholders were less common in Kalimantan than Sumatra.
- Smallholder numbers were roughly 21% of planted areas of oil palm in Malaysian Borneo and 18% in Kalimantan (more in West Kalimantan). Their yields tended to be consistently lower than those of the estates.



BIO-ECONOMY EXAMPLES

2. Activating under-utilized low carbon land.

- Under-utilized low carbon land (**ULC** land) may not necessarily be degraded former gold mining land (*West Kalimantan, first picture*) or land still under a cover of alang-alang grassland (*North Kalimantan, second picture*).
- While primary forest is usually given High Conservation Value (**HCV**), degraded or secondary forest may be excluded from ULC land, its carbon status determined by its ability to be eventually restored. Such patches may be classified as potentially High Carbon Stock (**HCS**) forest.
- The North Kalimantan picture obviously includes many patches of forest, probably of both HCV and HCS status, and is in fact located within a conservation area, the Kayan Mentarang National Park (*Apau Ping Village, Kec Bahau*). Even within the former goldfields, patches of HCS forest may occur, though the marshy, sandy landscape makes this appear unlikely.
- If land is being considered for classification as ULC land suitable for transition to oil palm, identification of HCS forest becomes important but difficult, though rough measures have been proposed by palm oil companies (such as Golden Agri Resources [GAR]) in addition to scientific studies over wider areas.
- In terms of potential usage, ULC land may be found in a sparsely populated district, ignored by local people. It may be perceived to be infertile or lacking market access, or perhaps there was no compelling reason to change its status. Goh carried out studies in the Gunung Mas district of Central Kalimantan (*Goh et al 2017, 2018*) and found the last case often applied. To change its use into that of oil palm was hardly considered, as mining was often a preferred occupation.
- Among the sites selected as 'under-utilized' for the Government's 'food estate' programme was one village in Gunung Mas, not identified for rice-growing, but a failure nonetheless, in which even cassava crops were unsuccessful due to the unsuitable soils (*Jong, 2023*).

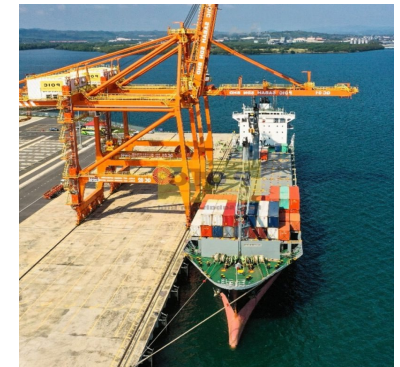
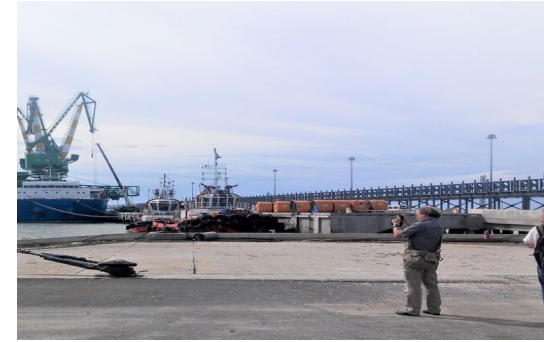


BIO-ECONOMY EXAMPLES

3. Upgrading and Diversifying Downstream Industries

Borneo is gradually losing its advantage of large tracts of cheap land for oil palm expansion. Shifting the local industries up the commodity chain requires advancement in manufacturing technologies, especially oleochemical industries and advanced biorefineries. However, such bio-based manufacturing requires strategic investments in infrastructure.

- In Sarawak the **Bintulu-Samalaju ports** are a key node for advanced manufacturing, while in Sabah the **POIC (Palm Oil Industry Clusters)** in Lahad Datu and Sandakan have a similar function. (*Photo 1: Samalaju Port, Bintulu Goh 2016*); *Photo 2: POIC Port, Lahad Datu*).
- There is no equivalent yet in Kalimantan, although the ‘**Maloy-Batuta Trans Kalimantan Special Economy Area**’ in Kutai Timur is planned to become a centre of ‘oleo-chemical industry and energy’, with exports through the small port of Maloy, which is being extended.
- Borneo does not yet have an advanced oleochemical plant; however there is a biodiesel plant in Bintulu and a smaller one in South Kal. **The EU is phasing out palm oil-based biodiesel by 2030**, which particularly affects exports from Indonesia and Malaysia. While they have protested, both countries are boosting their local capacity to absorb more biodiesel.
- By 2019, Sabah’s refining capacity exceeded its annual CPO production; Sarawak’s capacity was 80% of its annual CPO production. By 2019, 74% of palm oil exported from Indonesia was refined compared to 44% in 2011.
- We located 26 palm oil refineries in Borneo: Sabah (11), Sarawak (6), Central and East Kalimantan (3 each), South Kalimantan (2) and West Kalimantan (1). (Only 9 out of an estimated 85 refineries in Indonesia are in Kalimantan).
- **Abundant agricultural and forestry residues are generated by the refining process, including empty fruit bunches (EFB) and palm kernel shells (PKS) (*Bungkil inti sawit*), known as ‘biomass’.** The shells are currently exported to many countries, such as solid fuel for power generation and animal feed (*Photos 3 & 4: PKS*).
- Indonesia is beginning to **co-fire biomass for power generation as part of an agreement to phase out coal**. The State Electricity Company (PLN) is looking for a cheap power source and has tried both PKS and wood pellets, but those sources are considered too expensive, with sawdust being suggested. At the same time, much of the biomass is used as fertiliser, where it fills an important need.
- **Sharing the excess hydropower of Sarawak, both with Sabah and its Indonesian neighbours**, is also being planned and should assist future industrial development, while large new hydropower projects e.g. on the Kayan river, are planned for North Kal.



BIO-ECONOMY EXAMPLES

4. Certifying Industrial Cash Crops for Sustainability

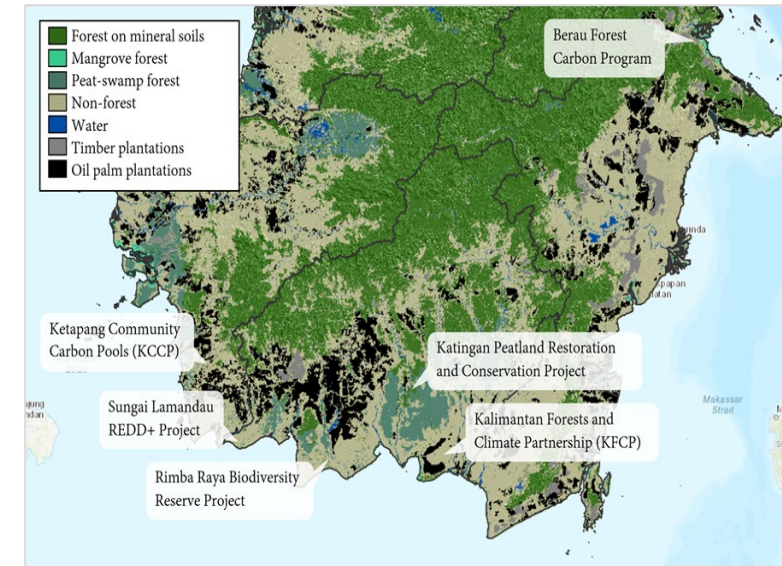
- Sustainable branding and certification of agricultural and forestry products may enhance market access and provide a price premium to the producer.
- The Roundtable on Sustainable Palm Oil (RSPO) was established in 2004 for consumers to separate 'sustainable' palm oil from an 'unsustainable' counterpart. Its environmental and social standards are strict, so that members who comply have no difficulty in accessing the lucrative market of the EU.
- However, certification is expensive, so favours large growers. So far the numbers of plantations in Indonesia and Malaysia that are RSPO certified are quite small (1.2 and 2.1 m ha respectively)
- The 'Principles and Criteria' of the standards are adjusted by country and revised centrally every few years, most recently in 2018. That revision stipulated that growers must apply 'Free, prior and informed consent' (FPIC) when taking over land, gaining the consent of the owners before clearing or planting.
- An alternative for growers is to enrol in the Indonesian Sustainable Palm Oil system, (ISPO) which is compulsory, but less stringent and does not require FPIC. However, this system is not accepted by the EU. A similar alternative in Malaysia, the MSPO, has similar acceptance problems.
- In Central Kalimantan, many oil palm estates are illegal, taking over the second hectare of transmigrants if those lands are not developed quickly. The photos show such a situation in Desa Biru Maju, Kotawaringin Timur (*Photo Potter, 2010*). The villagers have identified areas and trees planted in their legal village area and have been struggling to get the land back (no FPIC here!). Fruit from this plantation would probably be sent to South Asia.
- Sabah decided in 2015 to move the entire state to full RSPO certification, smallholders included. This is called the 'Jurisdictional Approach' (JA). JA attempts to cover an entire administrative area to align all stakeholders to work together on conservation. In Sabah the JA is assisted by government and NGOs. Among its aims is to halt deforestation and secure sustainable livelihoods. However, it was forced to 'downsize' to include a smaller area.
- A similar pilot study was conducted in Seruyan, Central Kalimantan, supported by the Earth Innovation Research Institute (INOBU), to establish the first agricultural facility to assist smallholders with training, agricultural inputs and finances. JAs have now followed in Sintang (West Kalimantan) and Berau (East Kalimantan). However, capacity of district governments is limited, especially enforcing compliance on non RSPO members in areas such as FPIC.



ECO-ECONOMY EXAMPLES

1. Commodifying Ecosystem Services

- The concept of ‘Natural capital’ was created to explain the interactions between man-made economies and natural systems. Natural capital provides various ecosystem services (ES) to human society.
- A strategy that advocates incorporating ES into the contemporary market economy through monetizing “nature” with economic accounting practices has emerged as a means to address unsustainable land-based economies. This forms the basis for developing a conservation-oriented eco-economy.
- “Payment for ecosystem services” (PES) is used to describe such a strategy. Specifically for Borneo it proposes the creation of compensation schemes for landholders who choose conservation over intensive cash crop cultivation (especially palm oil) or logging.
- Borneo became a primary location for PES schemes in the 2000s due to the island’s serious environmental degradation.
- REDD+ has been the major programme tried in Kalimantan. Using international funds, it aimed to compensate land users who avoid degradation and deforestation for the opportunity costs of converting the land to agricultural production.
- The schemes have had serious problems with the distribution of benefits, the very mixed nature of village societies and often the absence of formal tenure. Many villagers still prioritised swidden over REDD+.
- There were four schemes in Central Kal., one in West Kal., one in East Kal. The Australian funded KFCP covered 120,000ha in the MRP.
- Its rather neglected noticeboard in Matangai village (*Potter 2011*) showed a lack of direct communication. It was criticized for undermining local values of equality and autonomy, while villagers called it ‘secretive’. It was terminated in 2013.
- The one scheme which was more successful was in Berau (East Kal), where a jurisdictional approach was tried. With good local leadership it showed that such PES schemes can work.



ECO-ECONOMY EXAMPLES

2. Establishing Eco-based Tertiary Sectors

- The development of the **tourism industry** has been considered useful to achieve the dual goals of **poverty eradication and conservation**, especially for communities surrounding ecologically important areas.
- Sabah has been the leading tourist destination in Borneo, the attraction being Mt Kinabalu, the highest peak in SE Asia, while Sarawak has Gunung Mulu, both World Heritage sites.
- However, much of the tourism to these sites is **'mass tourism'** in large hotels rather than genuine ecotourism, which is more closely related to local villagers, who organise visits and provide services such as guides and homestays.
- Attracting international tourists to the small communities is not, however, easy. In three villages in Sabah near the Tabin Wildlife Reserve, the system worked well when funding was supplied by JICA and thousands of Japanese tourists arrived, so local people were able to re-orient their sources of income away from illegal hunting of the animals in the reserve.
- **But when that funding was no longer available, tourism began to decline and people had to revert to their old practices.**
- The Kenyah Oma Lung village of Setulang, near Malinau in North Kalimantan (*photo 1*) has been able to operate an interesting eco-tourism programme since **they were granted full management rights to their restricted forest (Tane' Olen)**, a unique pristine forest with exceptional diversity, in which tourists can stay overnight and experience a wide variety of bird and animal life as well as the vibrant local culture.
- A different kind of eco-tourism is operating in the Sebangau National Park, Central Kalimantan (*photo 2*). Sebangau only achieved park status in 2004, when it was considerably degraded. It has a **huge population of wild orangutan**, but they **may be visited only during the rainy season in small canals**. This core activity is necessarily expensive. Agri-tourism, including *jelutong* resin harvesting, is also promoted, with 5 of the 42 villages around the park becoming involved. Guesthouses and jungle tracks have been organised and an art and culture studio established.
- **Development is slow, but visitor numbers have grown.**
- **An important drawcard seems to be needed**, such as the wild orangutans or Setulang's pristine forest, for ecotourism to really succeed. However, although household income has increased, it remains unstable due to its seasonal nature. Jobs remain mainly part-time and informal. How economically stable is eco-tourism in Borneo?
- Eco-tourism is being tried in several Indonesian national parks, especially where these are not too remote, and in new locations in Sabah. It should be designed and used **strategically** as part of a bigger plan for transforming the land-based economies.



ECO ECONOMY EXAMPLES

3. Marketing Products from Smallholdings

- The smallholder-centric approach seeks to connect the buyers more directly with the efforts of small farmers to improve their livelihoods. Effective branding provides opportunities for up-grading the value chain but also improving the land-use practices of farmers.
- Local specialties can be marketed through Geographical Indications, (GI) that focus on the embodied place-related value.
- *Bario rice* (Photo 1) a famous brand of organic upland rice grown in the Kelabit Highlands of Sarawak, received a GI in 2008. Its competitor, *Adan rice*, grown across the Indonesian border in Krayan (Photo 2) received its GI in 2012, but had marketing problems, as there was no road connection with Malinau, the nearest town in North Kal. There was a road to the Kelabit village of Ba'Kelalan, so most rice was sent there. A new road from Malinau is under construction to Long Bawan, the main centre in Krayan, and is now almost complete.
- The Krayan Highlands also produce mountain salt, originating from salt springs. The salt contains iodine, which prevents goitre and disinfects small wounds, and used in preserving meat and fish. It is valued for its purity using traditional techniques, sold in small palm-leaf wrapped packages.
- While Sarawak is famous for its black pepper and received a GI in 2006, a less well known product is the Malonan Kutai Kertanegara white pepper with a sharp aroma, originally grown in the villages along the Balikpapan-Samarinda road by Bugis immigrants, which secured its GI in 2019 (Photo 3)
- Borneo has always been a centre of diversity in fruits. However, the small purple *Kasturi mango* (Photo 4) is listed as extinct in the wild and now found only cultivated in gardens.
- By contrast, the yellow-fleshed durian *Pekawai* (*Durio kutejensis*) (Photo 5) which grows freely in Kalimantan's forests (and in Sarawak) lacks any unpleasant smell, has a sweet taste, keeps well and could be more widely promoted.
- Among the foods listed by the 'Slow Food Foundation for Biodiversity', which aims to reduce the disappearance of local food cultures and traditions, is forest honey in West Kal., which contains enzymes and antioxidants. It is produced by the giant rock bee *Apis dorsata* on tall trees, which become partly submerged in the rainy season, so is harvested by boat. A song is chanted, asking the queen bee's permission to harvest the honey, in exchange for protecting the forest.



ECO-ECONOMY EXAMPLES

4. Encouraging Traditional Land-Use Systems

- The concept of self-sufficiency prioritizes food-fibre-fuel security by creating a diversified agro-ecological and socio-economic landscape.
- It advocates for the traditional way of living through forging a healthy human-environment relationship.
- However, Borneo societies are now very complex, encompassing a range of ethnic groups. People of Dayak, Moslem and Chinese origin, with ancestors in place for several centuries, are mixed with newcomers from other parts of Indonesia, Malaysia, and beyond.
- 'Traditional lifestyles' inevitably vary, even within individual villages and families, while urbanization continues apace.
- In the future, technological advancement in food production and provisioning services may provide new means of development, allowing the deployment of small, decentralized, self sufficient settlements spread across the island.
- How to smartly combine sophisticated technologies with traditional lifestyles, especially being supported by localized education, would be an interesting way to cope with unsustainable land exploitation as in the past.
- Meanwhile, one may examine particular efforts to support local cultures, for example, the recent action of the Bupati of Sanggau district (West Kal.) in reconstructing eight longhouses as representative of the different Dayak groups in each area, to be used for rice harvest festivals and other cultural events. The pictures show the opening of the final longhouse in Teraju village, Kabupaten Toba, 5/6/23. It is named 'Pang Raem', after the first Dayak settler.
- This action was a symbolic replacement of some of the original longhouses destroyed during the Suharto period, but also a modern encouragement of traditional rice cultivation and pride in Dayak lifestyles. *(Photos courtesy Pak Adi Susanto, ex-Camat Kabupaten Toba)*



MOVING ON: STRATEGIES FOR BORNEO, DURING - AND POST- COVID

Sarawak

Is aiming to be a **'developed state'** by 2030, with a strong emphasis on digital technologies and the use of **bioeconomy** strategies. Plans to also rehabilitate some degraded forests and develop their food industries. (*Economic Planning Unit, 2021*).

Sabah

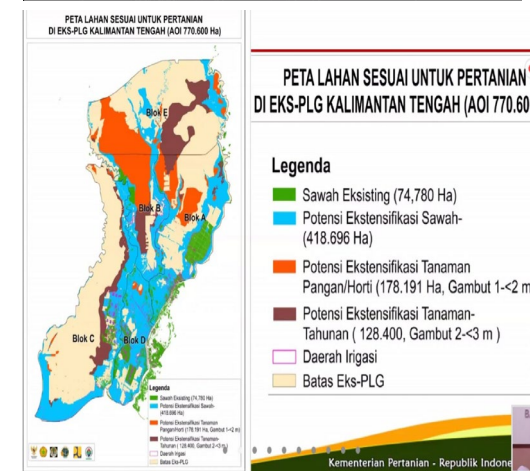
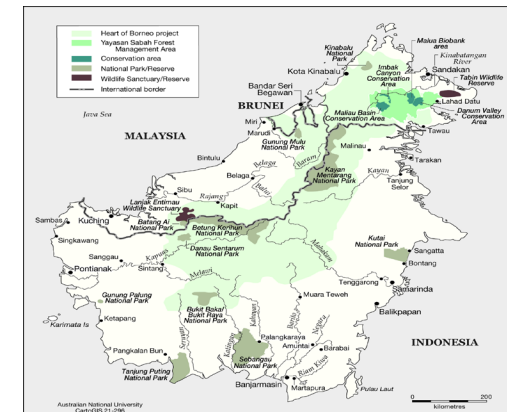
Had more economic problems during COVID and is trying to restore its tourism industry, with an emphasis on **ecotourism**. Sabah proudly describes itself as the **'Heart of Borneo'**, but also claims to be a global leader in sustainable palm oil (*WWF, 2021*).

Indonesia

Three policies have impacts on Kalimantan: a) creation of **'food estates'** during COVID to avert a possible food crisis; b) introducing an **'Omnibus Bill'** to make employment and investment easier; c) **re-locating the capital** to East Kalimantan from over-crowded and sinking Jakarta.

Food estates: These began in 2020 as rice estates on the peat lands of the ex-MRP. Many doubts were raised as to whether mistakes would be repeated; assurances of proper water management, a special rice variety and even drones and 'floating tractors', said to ensure success. (*Official map: 'suitable new rice areas': blue; 'existing rice lands': green; 'other food crops': orange; 'annual crops': [deep peat] brown*). The results have been poor, as studies in 2023 have shown, with researchers finding abandoned fields and rusting excavators, while rice production in Central Kalimantan has actually **fallen** (*Jong H.N. 11 April 2023 Mongabay*).

The 'Omnibus' Bill (RUU Cipta Kerja): The 'Omnibus Bill' on job creation was passed by the Indonesian parliament October 5, 2020. Designed to attract investment by reducing regulations and environmental laws, it also weakened legal protection for indigenous groups and reduced basic labour rights. Opposition mounted against the Bill as it was **rushed through, prioritising corporate sector interests**. Criticised for its **lack of transparency and public participation**, the Bill was examined by the Constitutional Court on November 25, 2021 and ruled **unconstitutional**. It was ordered to be revised in **two years** after a dialogue with different layers of society. The Government instead issued a **regulation**, the Jobs Law Perppu, passed in December 2022, arguing a compelling economic crisis. Workers have threatened to hold a **national strike** in July or August 2023. (*CNN Indonesia, March 28 2023*).



Re-location of Indonesia's capital Nusantara (Ibu Kota Negara, IKN)

The construction of the new capital in Sepaku, Penajam Paser Utara (PPU) (East Kal.) is proceeding, with an official opening of the first section planned for Indonesia's national day (August 17), 2024. The *official map* shows the 'central' area (pink) and the surrounding 'development area' (yellow), including the nearby coast, a total of 256,000 ha. It lies between the two cities of Balikpapan in the south and Samarinda in the north, also including part of the district of Kutai Kartanegara (KK). Despite doubts about its **funding** and **management**, President Widodo is confident that the project will succeed.

Current activities involve improving **access** to the site, building a new link to the existing toll road between Balikpapan and Samarinda. The 13 km '**IKN**' toll cuts through a protected forest and coastal mangroves. Although the city is supposed to be a 'green' development, the toll road construction **gives it a bad image**. (Images from B.Gokkon 2023, Mongabay). *'Indonesia's new capital won't sacrifice the environment: Q and A with Nusantara's Myrna Asnawati Safitri'*.

Myrna says that the capital development will in fact **rehabilitate the environment**, which has already been damaged. The planted forests will be gradually turned back into mixed tropical forests, while no new permits will be issued for coal mines. They will try to use solar power and electric cars.

The **indigenous people** (Paser and Balik) are however, worried about their **communal lands**; unlike the transmigrant group, also local settlers, they have no formal land papers and find themselves already **marginalized** (*Pinched Between the Bulldozer Wheels: the Impacts of the New City Development on People*. E.Saputri, H.Reinhart, R.Ghiffari et al, 2022).

