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Deconstructing the Palm Oil Industry Narrative in Indonesia: Evidence from Riau Province

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Indonesia is the leading global producer of crude palm oil. Mass production of palm oil requires large-scale land conversion, resulting in Indonesia having the world's highest rate of annual primary forest loss. Given the contentious nature and scale of palm oil production, this article considers Indonesia as a variant of the developmental patrimonialism model often applied to African countries. Developmental patrimonialism in the Indonesian context suggests that state power—expressed through various discourse and policy coalitions—favours palm oil companies and seeks legitimation through claims about national economic benefits. This development model may lead to absolute poverty reduction, employment and tax revenue, but can also produce inequality, resource dependencies and environmental degradation. From the authors' observations in Riau province, there is a mismatch between the national narrative of palm oil as a force for good and the conspicuous underinvestment in public services and infrastructure, which undermines the legitimacy of some palm oil industry claims. The complexity of village Riau casts further doubt on generalized claims about rural development. Local variance in Riau's palm oil belt is attributed to, among other things, the complex nature

of political patronage, uneven access to land, volatile pricing trends, problematic financing and loan schemes, and the role played by village cooperatives.

Keywords: palm oil production, Indonesia, rural development, poverty, environmental sustainability.

Indonesia is the leading global producer of crude palm oil. Mass production of palm oil requires large-scale land conversion, resulting in Indonesia having the world's highest rate of annual primary forest loss.[1] In 2017, palm oil production required approximately 12 million hectares of land (an area the size of North Korea) to produce 38 million tons of palm oil. In 2016, Indonesia exported 22.8 million tons of palm oil valued at US$14.4 billion.[2] Given the contentious nature and scale of palm oil production, this article examines the ways in which discourse coalitions seek to legitimate the agronomy of rural development in Indonesia. The authors consider whether Indonesia represents a variant of the developmental patrimonialism model that is often used in reference to African countries. Developmental patrimonialism in the context of Indonesia suggests that state power—expressed through various discourse and policy coalitions—tends to favour palm oil companies, enriching clients and cronies while seeking legitimation through broad claims about national economic benefits.[3] Specifically, this developmental model is legitimized by claims of absolute poverty reduction, employment and tax revenue. However, these gains are often offset by the reproduction of inequality, resource dependencies and environmental degradation. Evidence from Riau province suggests a mismatch between the national narrative of palm oil as a force for good and the persistence of local underdevelopment, notably underinvestment in public services and infrastructure, which undermines the legitimacy of some palm oil industry claims.

It is generally understood that agriculture can be a positive developmental force when sound policies and managerial approaches are pursued. In the case of Indonesia, Rob Cramb and John McCarthy find that specific combinations of inexpensive land, cheap labour and accessible capital explain patterns of palm oil production since the late 1970s.[4] With the exception of 2015, growth rates have been robust since 1998, the year Indonesia transitioned to democracy and announced IMF-mandated decentralization policies. It is logical to assume that communities that convert more land for palm oil will experience greater poverty reduction.[5] The positive effect on local livelihoods and national fiscal revenues is the most compelling argument that can be made in favour of palm oil cultivation. But the argument can only hold

up to scrutiny if the complexity of local experiences are taken into account, along with the negative externalities, risks and environmental uncertainties caused by increased production. Our evidence and observations from Riau—the centre of palm oil production in Indonesia—suggests that references to the success of rural development is a misnomer, or at least misleadingly simplistic, in a province that has mixed experiences with, and ambivalent attitudes towards, the ongoing spread of cash crops.

There is no public survey data about attitudes towards palm oil in Indonesia. A 2014 Pew Global Attitudes survey concerning the "greatest threat to the world" showed that only 13 per cent of Indonesians believed this threat to be "pollution and environment" (ranked bottom of a list of five threats), compared to 26 per cent who chose religious and ethnic hatred.[6] According to a 2016 Ipsos Global Trends Survey, 56 per cent of Indonesian respondents agreed that "even scientists don't really know what they are talking about on environmental issues".[7] In this trust and data vacuum there exists an opportunity for palm oil companies and their support coalitions to claim the moral high ground by asserting that the industry serves the national interest. The Indonesian government's prioritization of rapid economic growth, and ambition to rank among the world's top 10 economies by 2025, favours the expansion of agribusiness, while casting doubt on international pledges to cut emissions and reduce deforestation.[8] Companies lobby elected leaders in places such as Riau province to issue plantation permits and licenses because local leaders see this as an opportunity to generate income and employment in their constituencies.[9] Our case studies reveal a complex picture of uneven rural development in Riau, with a variety of experiences of, and encounters with, palm oil expansion at the village level. The authors draw on data from Riau gathered during scoping exercises and fieldwork in August 2015, May 2018 and July 2018.

Palm Oil and the Corporate-State Nexus

Palm oil plantations gradually replaced rubber ones during President Suharto's New Order (1966-98), a centralized, bureaucratic authoritarian regime that claimed legitimacy based on economic, educational and public welfare achievements.[10] The Asian Development Bank (ADB), the World Bank and other donors promoted a growth model that engaged smallholders in production, for instance through a nucleus estate scheme that contractually obligated farmers to sell their palm oil harvests (at low or fixed prices) to plantation estate mills.[11] Most palm oil estates in the 1970s were owned or supervised by the government, giving rise to powerful state-owned plantation companies managed by the Ministry of Finance and advised by the Ministry of Agriculture.[12] In crafting a bifurcated developmental model, President Suharto placed

strategic emphasis on the agricultural sector, believing that a focus on rural livelihoods would appease the politically restless countryside and stifle demands for land reform.[13] The result of such "high-modernist" developmental schemes was the proliferation of large-scale plantations and transmigration villages, which fundamentally realigned "relations between people and space", the consequences of which are clearly observable in provinces such as Riau, Sumatra.[14]

In the 1980s, a nucleus estate-transmigration programme called Perkebunan Inti Rakyat-Transmigrasi (PIR-Trans) shifted palm oil production from public to private estates and smallholder production, which resulted in the rise of large-scale conglomerates controlled by Suharto's political, military and corporate allies.[15] In the words of Nathan Porath, transmigration was used to encourage discourses of national development that included the compulsion to "wake the nation from a pre-modern state of cultural slumber".[16] PIR-Trans reproduced cultural myths of Javanese superiority, contrasting between the agricultural ecologies of the inner and outer islands of Indonesia in order to rationalize and sustain the power of central government.[17] The spread of palm oil was driven by strong demand, relatively fast yields and high prices, which led to land sales in Indonesian villages that excluded many indigenous groups by transferring the "ownership of agricultural assets" to successful transmigrants, local elites and those who had access to the "requisite capital and technology".[18]

After the fall of the New Order, the question of palm oil production as a driver of rural development became further complicated by the nature of multi-scalar governance in Indonesia's decentralized, fragmented democratic system.[19] The policy of decentralization created complex power interplays and fiscal incentives for local governments to allow for the expansion of palm oil plantations.[20] The national tax system is largely responsible for unsustainable expansionist land use practices, as local governments are interested in collecting more land and raising taxes and thus have an incentive to issue licenses for palm oil.[21] The industry enjoys relatively low levels of tax, however, and there are low levels of redistribution of revenues to local governments, rendering Indonesia a problematic example of developmental patrimonialism. Local state agencies control access to land and concession licences, and districts (*kabupaten*) compete to attract agribusiness investment. It is found that local state-based actors' decisions to issue licences and permits are influenced by informal transactions, where these actors personally receive "shares or land in agribusiness developments within their districts".[22]

Some local communities in coastal Riau accuse members of the government, military and police of being complicit in land-grabbing activities and speculative investments that occur throughout the province.[23] Activists in Pekanbaru add that the owners of capital responsible for

the expansion of plantations include a variety of financiers and "bosses" (*cukong*) from the military, police and bureaucracy.[24] Reflecting on these challenges, a deputy working for the President's Executive Office acknowledged that palm oil is "probably the country's most controversial commodity", and while the government is committed to the principle of sustainability, it lacks a comprehensive strategy for managing the palm oil industry in a sustainable way.[25]

The problems of revenue sharing, tax compliance, environmental impact and corruption in palm oil provinces such as Riau are well documented.[26] In response, public-private discourse coalitions involving Indonesian ministries (foreign, trade, agriculture), agribusinesses and trade associations have used information campaigns, public diplomacy and commodity branding activities to portray the industry as an exemplar of national economic progress. The key proponents of palm oil production include the Indonesian Palm Oil Association (Gabungan Pengusaha Kelapa Sawit Indonesia, GAPKI) and the Council of Palm Oil Producing Countries (CPOPC) which was established in 2015 and is led by Indonesia and Malaysia.

GAPKI was established in 1981 by H. Abdul Manap Nasution, a Batak businessman from North Sumatra who co-founded the rubber and palm oil company PT Paya Pinang in 1962. Manap Nasution got his start in agribusiness just prior to the purge of the Indonesian Communist Party (Partai Komunis Indonesia, PKI) in 1965-66, and his plantations were located in and around the areas of Deli Serdang and Sei Rampah that have recently drawn attention from investigators looking into the connection between plantation estates and the purge of PKI members and their associates.[27] GAPKI is now chaired by Joko Supriyono, who hails from East Java and currently serves as the Vice President Director of the plantation company PT Astra Agro Lestari. The association's main objective is to advance the interests of the palm oil sector in Indonesia. GAPKI partakes in commodity branding efforts aimed primarily at domestic audiences, but there are also international dimensions to GAPKI's strategic efforts. For instance, GAPKI joined—ironically—the Sinar Mas Group as sponsors of Indonesia's pavilion at the 2015 Paris Climate Conference, where new global deforestation and emission reduction targets were established.[28]

This article suggests that the discursive strategies of GAPKI and others resemble a hagiographic device, where rational actors motivated by profit or life-enhancing outcomes are expected, and put under pressure, to support the national palm oil industry. Indonesian support for palm oil may stem from the fact that the industry can quickly generate money, although the long-term consequences of the choices made by policymakers, plantation companies and smallholders warrant further reflection and a balanced, evidence-based narrative. The next

section analyses four interrelated government and corporate claims about palm oil production, namely: the economic contribution of crude palm oil to the state; livelihood gains and poverty alleviation; exaggerated environmental impacts; and "western" protectionist policies that deliberately attempt to undermine Indonesian industry.

Official Developmental Narratives

Palm oil is a high-yielding multipurpose vegetable oil, and there are demands by industry associations such as GAPKI for the Indonesian government to classify palm oil as a strategic commodity.[29] Indonesia's comparative advantages are favourable climatic and soil conditions for agricultural growth, as well as surpluses of cheap labour and land that drive expansionist policies.[30] Without denying these advantages, one can juxtapose the expansionist, pro-growth developmental discourses related to palm oil production with established legal principles such as the public trust doctrine. According to Mary Wood, the public trust doctrine requires governments to act as natural resource trustees, guarding and managing crucial natural assets in ways that best serve the public interest and ensure society's longevity, which includes breathable air, potable water and biodiversity.[31] Large-scale palm oil production can be highly profitable, but also creates costs from emissions, water pollution, mill effluent, habitat loss and social displacement in heavily cultivated areas.

Indonesia's top export commodities include crude palm oil and textiles. Statements about the economic contributions of palm oil from key Indonesian ministries and trade associations often rest on broad assertions about tax revenue, income and employment. The palm oil industry claims to serve the best interests of all Indonesians and uses a range of positive propaganda devices to convince the public that palm oil is a force for good. We find a pattern of obscurantism and the use of vague figures that are inconsistent and difficult to independently verify. For example, GAPKI organizes an annual palm oil conference that attracts industry specialists and features exhibitions and a price outlook forum. On the eve of the 2016 GAPKI Palm Oil Conference in Bali, Mona Surya, the conference chair, sought to rally public support for the industry by claiming that the livelihoods of more than 24 million Indonesians depended on the palm oil plantation sector.[32] Mona Surya has been an active member of GAPKI since 2006, and is now President Director of the Minanga Group, a palm oil plantation company based in South Sumatra that has holdings in Sumatra and Kalimantan. Her reference to 24 million dependent Indonesians is a tantalizing headline grabber, but it is unclear where the livelihood figures come from and what it means to "depend" on palm oil. The reality is that employment figure estimates vary considerably, with the World Bank calculating that between

two and three million Indonesians are "involved" in some way in the palm oil plantation sector.[33]

Mahendra Siregar, the Executive Director of the Council of Palm Oil Producing Countries (CPOPC), claims that more than ten million people in Indonesia have been lifted out of poverty thanks to palm oil expansion. Mahendra Siregar has decades of experience in government and in the private sector. Since 2015 he has served as an independent commissioner at Unilever Indonesia, and since 2017 as a special advisor to Retno Marsudi, the Minister of Foreign Affairs. The claim about ten million Indonesians being lifted out of poverty is an arbitrary figure announced in May 2018, just after a highly symbolic conference on sustainable development held with Vatican officials.[34] The headline "Vatican stands behind palm oil" was certainly a powerful one, and may have played well with domestic and international audiences, although the story lacked nuance and contained little concrete or verifiable evidence about poverty. The CPOPC measures sustainability of palm oil by the general ability of producers to make significant contributions to economic and social development by generating export earnings, creating millions of job opportunities, and alleviating poverty, especially in rural areas.[35]

The livelihoods and prosperity claim is politically powerful, and many cabinet ministers and parliamentarians in the current administration of President Joko Widodo aggressively defend Indonesian agribusiness and accuse palm oil critics and environmentalists of double standards. Luhut Binsar Panjaitan, a retired general who now serves as Coordinating Minister for Maritime Affairs, is a militant defender of the palm oil industry. Luhut personifies the corporate-state nexus, a cabinet member who also serves as Chairman of PT Toba Sejahtra, a company with interests in energy and palm oil plantations.[36] In April 2015, presumably with reference to the Ministry of Environment and Forestry, Luhut insisted that "if there is a ministry that hinders the development of the palm oil industry, we will just bulldoze it".[37] In May 2018 Luhut claimed that as many as 20 million Indonesians were involved in palm oil production, including small-scale farmers, labourers and those indirectly employed by the sector.[38] As with the sweeping claims made by Mona Surya (GAPKI) and Mahendra Siregar (CPOPC), the nominal figure of 20 million needs to be disaggregated and scrutinized if a legitimate case is to be made regarding the economic benefits of palm oil.

Finance Minister Sri Mulyani Indrawati has raised concerns about the levels of tax and non-tax contributions from palm oil plantations, suggesting that productivity reporting and asset figures are routinely undervalued.[39] The authors confirmed that the Indonesian Corruption Eradication Commission (Komisi Pemberantasan Korupsi, KPK) is actively investigating tax

and financial irregularities in the palm oil sector, with a special taskforce set up to investigate agribusiness in Riau.[40] To rise above this negativity and complexity, the palm oil sector and their supporters seek to simplify their messaging and offer broad, sometimes emotional appeals to national audiences. For instance, in June 2014 GAPKI sponsored a workshop for Indonesian journalists and students with the stated aim of correcting (*meluruskan*) negative perceptions of the palm oil industry. The workshop was held at the Best Western Hotel in Malang, East Java, and was organized by *Radar Malang*, a newspaper belonging to Dahlan Iskan's *Jawapos* group. One of the key speakers was Tungkot Sipayung, Head of Advocacy for GAPKI and Executive Director of the Palm Oil Agribusiness Strategic Policy Institute (PASPI). Other prominent speakers included Asmar Arsjad, Secretary General of the Indonesian Palm Oil Growers Association (Asosiasi Petani Kelapa Sawit Indonesia, APKASINDO), and Damat, an academic from Muhammadiyah University Malang. From our observations, the main argument was that the palm oil sector makes a positive contribution to economic development and poverty relief, especially in rural areas. Regarding environmental stresses, palm oil is more environmentally friendly than alternative vegetable oils such as sunflower, rapeseed or soybean, a point frequently made by members of the Roundtable on Sustainable Palm Oil (RSPO).[41] The speakers also argued that palm oil is unjustly criticized, and is now the most heavily regulated crop in the vegetable oil trade because the European Union (EU) and the United States are protecting their own vegetable oil industries.

In April 2017, the EU passed a parliamentary resolution calling for a single unified certification scheme for sustainable palm oil entering the European market, as well as the phasing out of vegetable oils such as palm oil as a component of biofuels by 2020.[42] MEPs cite the confusing nature of existing voluntary certification schemes and highlight the linkages between palm oil production and tropical deforestation, as well as concerns about human rights, social standards, child labour and indigenous land claims. Joko Supriyono, the chairman of GAPKI, suggested that the EU resolution was part of an international anti-palm oil campaign, and called for national unity in response.[43] According to the GAPKI chairman, the public should join with their government to rally behind the palm oil industry and support plantations as one of the mainstays of the national economy.[44] The Indonesian Ministry of Foreign Affairs responded by suggesting that the EU disregards the rights of farmers to make a living, claiming that 16 million people in Indonesia directly and indirectly depend on the palm oil sector.[45] Enggartiasto Lukita, the Minister of Trade, has focused on palm oil profits and growth potential, and has accused outsiders such as the EU of double standards. For instance, Lukita questioned the EU's reluctance to acknowledge the benefits of palm oil cultivation for

Indonesia's millions of harvesters and small industries, and asked why the EU highlights Indonesian deforestation while ignoring the environmental impact of European vegetable oils such as rapeseed.[46] Similarly, the Minister of Agriculture, Amran Sulaiman, has accused European countries of actively campaigning against Indonesian palm oil, which he feels is hypocritical given the high rates of deforestation in EU member states at different points in history.[47]

Siti Nurbaya, the Minister of Forestry and the Environment, took an oppositional position when she criticized the five largest palm oil companies in Indonesia for requesting new permits and engaging in land banking without accepting full responsibility for the prevention of forest and peatland fires.[48] The context for Siti Nurbaya's criticism was the periodic fire and haze crises that took place in Indonesia between 2013 and 2015, causing school and airport closures in Riau, and high levels of suspended particulate matter that increase the risk of lung damage and respiratory disease. High resolution satellite imagery proves that Indonesia's fire and haze crises are linked to agricultural expansion and land clearing for palm oil and acacia plantations. Sutopo Nugroho, the head of data and information for Indonesia's National Disaster Relief Agency, confirmed in September 2015 that nearly all fires in Riau province were deliberate, the result of human activities, and that the only way to respond was with improved law enforcement.[49] In Riau, an activist from the Eyes on the Forest coalition named Afdhal Mahyuddin argued that there is a deep scepticism in the province regarding the government's commitment and capacity to uphold the laws and regulations concerning plantations and forest fires.[50] Environmental lawyers are advocating the use of strict liability in cases against agribusinesses, not because they are anti-growth or disloyal, but rather because of the "dangerous or abnormal" business practices identified in the field.[51] At a seminar in Jakarta in August 2018, Finance Minister Sri Mulyani Indrawati made reference to the lasting legacy of the fire and haze crisis, arguing that despite being the leading producer of crude palm oil, Indonesia remains a highly defensive "internal actor" unable to influence global regulation or formulate global policy.[52]

To counter the negative press, GAPKI published an infographic on their website in March 2018 entitled *Your Life is Supported by Palm Oil: 24 Hours with Palm Oil*. Palm oil as a life support system is a message with resonance and appeal in countries such as Indonesia, where provisioning (meeting basic needs) is a challenge for many households. The infographic is produced in conjunction with the Bogor Agricultural University, and demonstrates all of the practical ways palm oil is used in daily life, from toiletries to biodiesel to sustenance. By contrast, an interactive infographic produced by *The Guardian* in 2014 showed all of the same

daily uses of palm oil, but linked household products to the rainforests from which palm oil is extracted to tell a more comprehensive story.[53] In response to pressure from environmentalists, corporations and their professional affiliates such as GAPKI have created legitimizing discourses for palm oil, presenting this unique "flex crop" as a high value commodity and a driver of sustainable development.[54] GAPKI and members of the CPOPC are challenging environmental norms of "sustainable palm oil" by placing emphasis instead on the "sustainability of palm oil", which refers to the capacity to produce sufficient quantities of crude palm oil to meet global demand, generating income and creating opportunities for economic growth in developing countries.[55] Palm oil is presented as a lifeline for vulnerable communities and a reliable pathway to rural development. This GAPKI position stretches the analogy and ignores the other side of the story, where the Indonesian life support system is put at risk by deforestation, emissions and land conversion activities directly linked to palm oil production. In the following section we contrast the claims made by palm oil proponents with grounded evidence from Riau, as well as general evidence-based studies about poverty, rural development and sustainable agriculture in Indonesia.

Deconstructing Official Palm Oil Narratives: The Case of Riau Province

Smallholders and rural communities living in proximity to palm oil plantations stand to gain from production, employment and trade opportunities, although they face a range of negative externalities including environmental, health and land tenure risks. The right to development is often used by GAPKI to justify large-scale land use conversion that reduces poverty but also creates significant public risk, and arguably falls below the standard of the public trust doctrine as defined by Wood.[56] Palm oil production can be branded and promoted as a key feature of Indonesians' right to development, defined by the United Nations in 1986 as a universal right for individuals based on "their active, free and meaningful participation in development and in the fair distribution of benefits resulting therefrom".[57] The trouble with palm oil production, however, is its inefficiency (measured by yields and forest loss) that creates considerable ecological stress and does not always allow for voluntary public participation or proportional benefit sharing.

The average agricultural productivity of all major palm oil producing countries, measured by yields from fruit bunches and extraction rates, has recently stagnated at approximately three tons of crude palm oil (CPO) per hectare per year.[58] According to current country-level data, Malaysia's average CPO yield is 4.2 and Indonesia's is 3.8, so both countries are above world averages but are still far from achieving maximum potential yields.[59] Michael Euler et al. find

that Indonesia's average national yields per hectare "have stagnated at around 17 tons fresh fruit bunches (FFB)", while maximum potential FFB yields can be as high as 33.2 tons.[60] The discrepancy is caused by environmental variability such as uncontrolled weather patterns, and managerial variability that can be attributed to decisions and policies made by investors and regulators. Efficiency depends largely on intensification and innovation through research and development (R&D) that aims to achieve higher yields, which in turn increase profits while slowing deforestation. The ability of countries to fulfil these aims depends on risk management, returns on investment, irrigation methods, the testing and use of new fertilizers, the level of field mechanization and extraction efficiency, as well as advances in spatial planning and mill prioritization processes.[61] What is missing from this list, however, is an account of palm oil as a political commodity, heavily lobbied and persuasively marketed as a positive contributor to national economic growth and rural livelihoods, without taking into account the wide range of negative externalities that result from palm oil production.

A study of the science/policy interface identifies the challenges faced by scientists in their roles as objective knowledge providers.[62] For instance, the use of remote sensing (high resolution images) to analyse forest cover needs to be linked to grounded truths that emerge from the work of ethnographers and anthropologists. A team of conservation biologists systematically mapped the peer-reviewed literature on forestry and found that no global datasets on community forestry exist, and that national inventories are rare.[63] The bold rural development claims made by palm oil companies and their affiliates are based on productivity and livelihood indicators related to smallholders and farmers, despite the absence of a national database or a comprehensive set of verifiable figures. One way to cope with knowledge and data gaps is to assemble and compare selections of case studies in order to problematize and deconstruct some of the industry representations of palm oil. The authors use qualitative data from a sample of villages in Riau to challenge industry claims about the economic benefits of palm oil production that include rural development, poverty alleviation and environmentally sustainable economic growth.

Palm oil production can be highly profitable, but the developmental dividend is uncertain because the economic participation of smallholders and plantation labourers is variable, and the benefits of palm oil production are unevenly distributed. The palm oil market is volatile, subject to unpredictable price fluctuations, supply shortages and other unanticipated shocks. Ryan Edwards has systematically analysed administrative panel data and household survey data from districts across Indonesia.[64] His 2015 study found that "on average Indonesian districts using more of their land for oil palm have experienced greater reductions in the rate

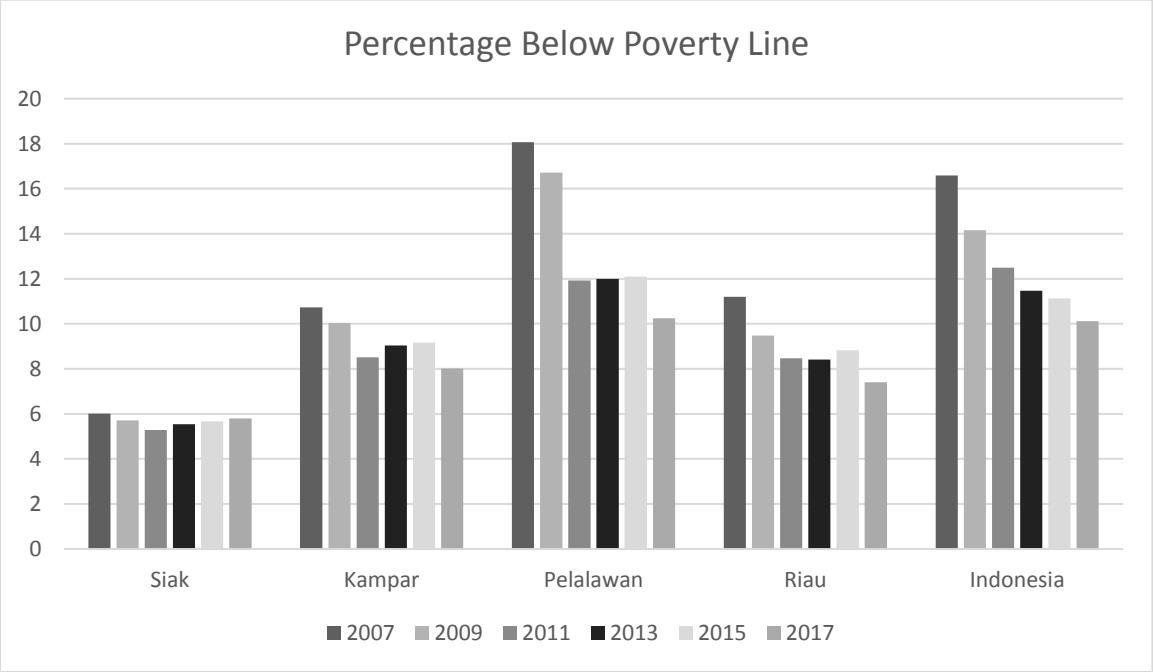
and depth of poverty", though there are significant environmental costs associated with palm oil expansion.[65] In a comparative study from 2012, Suseno Budidarsono et al. interviewed 456 households, including migrants and locals, across eight provinces in Indonesia living within a 20-kilometre radius of palm oil plantations, and found that 45 per cent of households engaged in palm oil cultivation for more than ten years increased their income significantly.[66] Villages with palm oil as a major source of income show lower prevalence of malnutrition, but similar mortality rates and higher in-migration rates than their comparators.[67] Some important factors seem to be missing from this study, however, such as the rate of smallholder indebtedness in their bonded work to plantation companies, peatland drainage impacts, the pollution of local rivers and patterns of corrupt patron-client relations that are consonant with developmental patrimonialism.[68]

A 2016 survey of 245 contracted and non-contracted palm oil smallholder households show positive income effects but persistent vulnerabilities to poverty resulting from over-dependence on palm oil, loss of other assets, as well as price and production shocks.[69] In the latest research from 2017, a sample of 683 palm oil producing households in Jambi showed improvements in household living and nutritional standards, although these were based on increased production through land expansion rather than improved yields through intensification, and there were indications of rising inequality.[70] There is evidence of intergenerational and gendered injustices in case studies from East Kalimantan, where proceeds from palm oil production are unevenly shared, and long-term land tenure insecurity is likely to create conflicts related to inheritance, and disputes between indigenous groups and transmigrants.[71] Rebecca Elmhirst et al. find that palm oil is currently being presented to local communities in East Kalimantan as a great source of income that requires minimal effort, with one informant claiming that people could just sit around and wait for the money to roll in.[72] In the same study, a wealth-ranking exercise found indicators of local improvement such as automobile ownership, new markets for local goods, and higher levels of educational attainment that would allow youngsters to "imagine a future beyond the forest".[73]

Riau, the most heavily cultivated province in Indonesia, is approximately the size of the Republic of Ireland, with a population of some 6.3 million people that includes nearly 1.9 million transmigrants.[74] Contrary to the claims about palm oil made by various Indonesian politicians, firms and trade associations, Suryadi makes the general observation that indigenous Riau Malays have become discontented spectators of the modern economic developments taking place within their own lands, and he found several local figureheads who were critical of the Malay culture of defeatism (*mengalah*).[75] The authors heard a similar critique of Malays

and other local ethnic groups by the head of an indigenous organization based in Pekanbaru, who suggested that the palm oil harvest cycle contributes to unhealthy lifestyles and habits.[76] The inequalities and habitat effects of palm oil production on smallholder communities and their landscapes problematizes the representation of palm oil as a persistent source of livelihood benefits and socio-economic uplift. The poverty data in Figure 1 shows the districts the authors visited in Riau to be in a generally favourable position relative to national averages, but it does not capture village-level dynamics, inequalities or negative externalities. Indonesia's Institute for Development of Economics and Finance finds the official poverty figures to be problematic because of the focus on expenditure rather than household income or assets, and the tendency for surveys to be conducted during harvests, when farmers appear better off.[77]

Figure 1



Source: Data from the Central Bureau of Statistics (Biro Pusat Statistik, BPS), Indonesia.[78]

The authors conducted research in Riau in 2015 and 2018, and discovered a highly complex situation. Some districts and villages claim to benefit from palm oil, whereas others struggle to adapt to changes to the local landscape and economy. We found significant variance in the palm oil experience, with degrees of success reported in villages such as Air Buluh, on the border of West Sumatra, where communities balance palm oil expansion with environmental conservation. The mixed transmigration villages of Dosan, Indrapura, Pejajaran and Sibuak are dependent on palm oil but show signs of improvement in terms of village income, nutrition and

other select measures of wellbeing since the palm oil boom reached their districts. Life before palm oil was in many cases harder, although the exuberant embrace of this crop is creating complex new challenges and risks. By contrast, there is evidence of controversies and conflicts in villages such as Girisako, Penyengat, Pulau Padang, Sotol, Sungai Tohor and Teluk Meranti.

Villagers in Girisako live on the southwest border of Tesso Nilo National Park, a contentious conservation zone that is often exploited by state and non-state actors. People are planting and harvesting palm oil, but often without licences or legal permission. Pulau Padang, Sungai Tohor and Teluk Meranti are peatland areas in western Riau and thus at the top of conservation and moratorium agendas, making palm oil cultivation problematic. Sotol village in Pelalawan district is embroiled in a land grabbing conflict between villagers and the plantation company PT Mitra Unggul Pusaka. The authors found significant variance in villages across four districts in Riau, where the palm oil experience is shaped by the location and profile of the village, for instance the proximity to mills and the diversity of population (indigenous groups mixing with Javanese settlers from transmigration schemes). Many factors cause local variance in Riau's palm oil belt, from the nature of political patronage, to access to productive lands, to pricing trends, financing and the internal workings of village cooperatives. In the final subsections, our analysis of Dosan and Penyengat reveals the problematic nature of industry claims about livelihoods and the environment. Rural models of developmental patrimonialism may persist if resource rents are managed by state actors for personal gain, and for the benefit of their distributional coalitions, which will likely leave local communities behind.[79]

Fieldwork was conducted in an attempt to decipher local perceptions and practices of palm oil production in Riau. There is significant variance in agricultural practices and outcomes across Riau, and recent research confirms that very little is known about the diversity of palm oil growers in the province.[80] One way to begin to fill this gap is through first-hand fieldwork using qualitative methods. Village sampling was determined in consultation with leading provincial NGOs such as Jikalahari and Yayasan Hutan Riau, as well as journalists from *Riau Pos*, who shared their knowledge of key local developments in the palm oil sector. The challenge is to negotiate village access and manage logistics, as Riau's transport infrastructure is inefficient and restrictive. Interviews were conducted with consenting households, farmers, former village heads, and members of cooperatives in multiple villages, and we contrasted the experiences in Dosan and Penyengat.

Palm Oil Expansion in Dosan, Siak District

In the 1970s, Dosan was an underdeveloped village with limited public services and transport links. The people of Dosan were dependent on rubber and rattan, and used a system of swidden agriculture with little access to fertilizers and pesticides. When major changes followed the IMF financial bailout and the democratic transition in 1998, significant numbers of local ethnic Malays in Siak district were still found to reside in "impoverished enclaves squeezed between oil palm and timber plantations".[81] These unsustainable conditions were improved somewhat in the 2000s when a new wave of local transmigration brought new patterns of settled cultivation. Palm oil plantations started to expand in Dosan around 2003, at the behest of a (now well-known) village leader named Dahlan, who claimed that palm oil had improved economic conditions in nearby Kerinci, Lubuk Dalam.[82]

The district government provided start-up loans for villagers to enable the rapid spread of palm oil. Siak is a relatively wealthy district because of a national fiscal policy that reallocates a significant proportion of oil revenues to the district, and so the local government has the capacity to subsidize smallholders. In the early 2000s smallholder loans came from PT Permodalan Siak, while technical support for land and plantation management (including seed selection) was provided by state-owned enterprise PT Perkebunan Nusantara V.[83] The government also paid consultancy fees to PT Siak Prima Nusantara with the expectation that villagers would improve yields by using the correct fertilizers and optimal tree spacing techniques, but reports suggest that some villagers did not receive any training.[84] Despite the persistence of inequality and inefficiency, Dosan villagers with three hectares of land can harvest an average of four tons of palm oil (fresh fruit bunches) per month, earning each household a sufficiency income of around Rp. 3 million (US$200) per month. A portion of this income is now spent on locally sourced agricultural produce, as there is little village land remaining for fruits and vegetables.

An NGO called Perkumpulan Elang began advising smallholders in Dosan in 2005, focusing on plantation techniques and palm oil tree maintenance. Around 290 farmers then joined Bungo Tanjung, a smallholder cooperative that sells fresh fruit bunches to companies offering the highest price. Bungo Tanjung claims to have no contract with a single company.[85] The market is volatile, and the lowest FFB price experienced by farmers was Rp. 500 (around US$0.03) per kilogram, but Dosan's general economic situation has improved since the early 2000s. Palm oil reduces unemployment with minimal risk of fire outbreak, and there are still some natural forest reserves in Siak, although people have noticed rising temperatures and are aware of the risks. There is no clear alternative to palm oil, and conversations about the local economy are usually restricted to the language of commodity substitution (rubber to palm oil, pineapple to

chilli peppers) within a dominant agricultural frame. Villagers are aware of local inequality. A minority of households have less than three hectares and struggle to meet basic needs, even if most have livestock (mainly chickens). Some households have problems related to loans, and others have troubles with gambling, and these challenges are certainly not unique to Dosan.[86]

The head of Bungo Tanjung warms of the dangers of complacency and the trappings of cash crops. It is alleged that during election periods the price of palm oil decreases, which is harmful to local constituents but beneficial for companies. This pricing distortion is indicative perhaps of the machinations of the corporate-state nexus, as local candidates strive to maintain good relations with companies through price manipulation and the issuing of licenses and permits. During one Ramadan holiday, the price of palm oil fell to Rp. 500 per kilogram, and there were reports of suicides in Dosan linked to the inability of farmers to repay their debts.[87] Palm oil trees are productive for approximately 25 years, after which replanting occurs, although this is costly and some farmers cannot afford it. Some refuse to save their money in the cooperative for future replanting, which creates a risk of overdependence on support from companies for replanting, which comes with conditions attached. The conclusion is that palm oil can be a force for good, although there are many complex risks that are only revealed through grounded research in specific locations such as Dosan and the comparative case of Penyengat below.

Ambivalence in Penyengat, Siak District

Penyengat is a coastal village with some 360 households that are advised on occasion by NGOs from Pekanbaru and Jakarta. Scale Up is one of the NGOs that actively promotes sustainable development in Penyengat, a village that has experienced a significant influx of investors and entrepreneurs from Java, North Sumatra (Medan) and Nias with an interest in land acquisition for palm oil. Many villagers view land as an exploitable asset and continue to harvest palm oil and other commodities for commercial gain, although some interviewees also commented on the aesthetic and decorative value of natural landscapes and resources, and cautioned against large-scale land conversion.[88] The 200-kilometre journey from Pekanbaru city to Penyengat village features a plantation monoscape, uninterrupted but for the occasional convenience shop or service station, as well as the Chevron oil pipeline that runs northeast to Dumai.

When district land use permits and concessions are granted, plantation companies tend to acquire more land than they are able to cultivate. The surplus lands that are not immediately cultivated can be leased or donated on a temporary basis to local communities who undertake productive activities until such time as the companies are ready to fully exploit their concession area. In some cases these surplus lands are managed by local cooperatives. Under these rather

ad-hoc arrangements, one village activist claimed that while local people can still benefit from their temporary access to forests, they sometimes feel like thieves (*pencuri*) in their own homes.[89] The agribusiness boom in Riau is leaving villagers who are living among concession lands feeling anxious (*ketakutan*) about the status of their own residences and smallholdings.

Provisioning remains a genuine concern for the 360 households in Penyengat village. Average earnings of Rp. 2 million (US$133) per month are sufficient for basic needs but are not enough to meet the growing aspirations of a community who want advanced educational opportunities and technical training for their children. Most households have palm oil trees, and one third of Penyengat villagers claim to work for Riau Andalan Pulp and Paper (RAPP), a subsidiary of Asia Pacific Resources International Holdings Ltd (APRIL Group), in local pulp and paper mills and plantations. Some villagers claim to draw monthly salaries of around Rp. 2 million from RAPP, but the majority live rather precariously as unskilled day labourers or freelance labourers.

Local informants say that since 2009 there has been a proliferation of smallholders in and around Penyengat village, as locals and transmigrants clear lands and plant palm oil trees using seeds "borrowed" from nearby plantation estates run by companies such as PT Triomas. This expansion took place when palm oil prices were peaking at around Rp. 2,000 per kilogram, meaning most families had surplus earnings and could afford to buy satellite dishes, go on shopping excursions or open new savings accounts as part of their planning for the future. In August 2015 palm oil prices had dropped to a low of Rp. 600 (approximately US$0.04) per kilogram, causing anxiety in the village and prompting people to intensify their forest usage, gathering wood, sap, resin, and rattan, and planting corn and pineapple. Prices have since recovered, and local communities are generally able to meet their basic needs, but only in the context of a volatile commodities market subject to price fluctuations, production shocks, periodic land conflicts, and persistent ecological and public health risks. As in the case of Dosan, there are few alternatives to palm oil production, and discussions about local economic opportunities tend to be restricted to the agricultural sector, where land is seen as a value proposition based on potential yields, leaving little room for conservationism.

Conclusion

Powerful champions of agribusiness are constructing strategic discourses related to rainforest products through media engagement, public diplomacy and lobbying. Plantation companies combine aggressive growth strategies with social responsibility programmes and lobbying,[90] and base their growth models on expansion rather than intensification.[91] This business as usual

model is now being reappraised because of the Indonesian government's moratorium on new plantation concessions, peatland restoration efforts and corruption investigations. There is also pressure from major buyers such as Unilever, consumers and environmental NGOs that are squeezing palm oil producers and demanding sustainable sourcing. The EU's pledge to restrict uncertified rainforest products and phase out palm oil as a component of biofuels by 2020 has placed significant pressure on the palm oil industry and supply chain.

In response to these political and consumer pressures, pro-growth discourses targeting domestic audiences serve to remind the Indonesian public that palm oil production generates billions of dollars in annual revenues and lifts millions of rural smallholders out of poverty. Pro-growth trade associations and ministries claim that the livelihoods of anywhere from 10 to 24 million Indonesians depend on the palm oil sector. It is unclear where these figures come from, but given the discrepancy between industry employment figures and the 2-3 million figure cited by the World Bank, there is a concerted public-private effort to construct a developmental narrative that positions the Indonesian palm oil sector as an indispensable force for good.

To counter the palm oil industry's pro-growth narrative, peer-reviewed studies that use careful data analysis and evidence-based approaches highlight the variety and complexity of local experiences. Our case studies demonstrate that there is a complex typology of palm oil smallholders and growers whose local experiences vary considerably. People in Siak district, Riau, are generally able to meet their basic needs, but are exposed to risks and uncertainties that stem from market volatility, price fluctuations, ecological stresses and social inequalities. When the pernicious effects of palm oil production are highlighted by domestic NGOs and international actors, the industry responds with accusations of disloyalty and double standards. With NGOs behaving like trustees and companies behaving like patrons, the voices of people on the ground—in places such as Dosan and Penyengat—are marginalized and misrepresented.

Rural Riau is experiencing a general trend towards poverty relief, although after more than two decades of rapidly expanding palm oil plantations, critical infrastructure is still severely lacking, internet penetration is negligible and many key indicators of human development remain low. Smallholder communities, and palm oil harvesters in general, face profound dilemmas as more rural land is set aside for production, and as competition for land and markets increases. Adherence to the public trust doctrine is also in doubt, as food insecurity, soil infertility and water contamination, respiratory illness from emissions, school closures, species extinction, landscape and coastal degradation, overlapping land claims and routinized corruption point to a unique Indonesian variant of developmental patrimonialism. With the

seemingly unstoppable expansion of palm oil plantations in Southeast Asia as well as equatorial Africa and Latin America,[92] the need to scrutinize and deconstruct the palm oil industry narratives of economic growth and environmental sustainability seems more pressing than ever.

NOTES

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