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Tania Murray Li

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AFTER THE LAND GRAB: INFRASTRUCTURAL VIOLENCE AND THE "MAFIA SYSTEM" IN INDONESIA'S OIL PALM PLANTATION ZONE

TANIA MURRAY LI, UNIVERSITY OF TORONTO, FINAL VERSION PRE-PUBLICATION 30 OCTOBER 2017

ABSTRACT

Plantations are back. Colonial-style large scale corporate monoculture of industrial crops on concession land is again expanding in the global south. The biggest expansion is in Indonesia, where oil palm already cover 11 million hectares, and 10 to 20 million more hectares are planned, most of it in plantation style. The land dimensions of renewed plantation expansion were thrust into public debate in 2008-9, when there was a spike in transnational land acquisitions widely described as a global land-grab. The polemical term "grab" usefully drew attention to what was being taken away: customary land rights, diverse farming systems, and ecological balance. Drawing on ethnographic research in the oil palm zone of West Kalimantan, Indonesia, this article examines what happens after the grab, highlighting the violence embedded in the material, social and political infrastructure that plantations install. Promises to reform plantations through regulation and certification ring hollow as law, government, and livelihoods are subordinated to plantation logics; a trajectory that worsens over time as plantation zones expand and become saturated, and everyone is locked in. Indonesia's plantations cannot be redeemed, hence they should not be expanded.

TEXT

Since 2008, critical research on the so-called global land-grab has drawn attention to an important social fact: as in colonial times, tropical plantations growing industrial crops such as rubber, sugar, and oil palm are expanding to meet increased global demand. Questioning industry promises of jobs and prosperity, researchers have highlighted what large scale corporate agriculture takes away: customary land, resilient ecologies and diverse rural livelihoods.¹ Thus far, researchers have paid less attention to what happens after the land grab, and more specifically, to the social and political relations that are installed in and around


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plantations, together with the neat rows of crops. Planners imagine that plantations bring with them a regulated, modern form of life governed by rational-legal principles, but what is the actual form of life that emerges in a plantation zone? This question has become urgent in Indonesia, where the government plans to extend the current 11 million hectares of oil palm to 20 or 30 million hectares, most of it in plantation form. Expansion over vast swathes of the national territory means that millions more Indonesians will live lives dominated by the presence of corporate plantations. What kind of life will it be?

In 2010-2015, an opportunity for intensive research on one state and one private plantation in the Indonesian province of West Kalimantan enabled a team led by myself and co-researcher Pujo Semedi, of Gadjah Mada University, to look beneath the plantations' orderly, material grid of roads, palms, mills, and housing blocks; and behind their technical diagrams, account books, contracts, and job descriptions. What we found was a thoroughly entrenched, somewhat hidden, overwhelmingly predatory system for channelling and capturing plantation wealth. Pervasive rent-seeking linked up with the coercion, manipulation and threat that characterize Indonesia's de facto system for acquiring and holding plantation land; and with the monopoly of livelihood resources (farmland, forests, living spaces, water sources, income opportunities) that extensive plantations entail. Taken together, the outcome was to entrench violence into the underlying material, social and political framework, the "infra" structure, of plantation life.

It is this built-in, infrastructural violence that my essay explores.

Indonesia currently produces about 60% of global palm oil. Although smallholders can grow this crop successfully, 60% of the production takes place on large state plantations (7%) and commercial plantations (53%) of 5,000-50,000 hectares employing armies of wage workers. Indonesian and transnational investors are attracted by excellent returns. In Indonesia net present value (an aggregate measure of the returns from a plantation over its productive life) runs at US$10,000 per hectare (Cramb and McCarthy 2016:36). Long-run market confidence is

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2 See Cramb and McCarthy (2016) for an excellent overview of the oil palm industry in Indonesia and Malaysia, which together produce 85% of the global supply.
3 A full description of the site and research design, and a more extensive review of secondary sources, can be found in Li (2015, 2017).
4 I am using the dictionary's broad definition of infrastructure as "the basic, underlying framework or features of a system or organization."
http://www.dictionary.com/browse/infrastructure
5 On the concept of infrastructural violence see Larkin (2013); Mitchell (2002); Rodgers and O'Neill (2012); Scott (1998)
6 Of the commercial plantation area, about 2.6 million ha (44% ) is owned by the "top twenty" companies, mostly publically listed in Indonesia, Malaysia and Singapore; the balance (56%) is in the hands of a great many private companies, often Indonesian-owned (Hawkins, Chen, and Wigglesworth 2016:13).
confirmed by the actions major transnational corporations took during the 2011 downturn in the global price, namely, to buy up struggling plantations and increase their holdings. The Indonesian government is similarly enthusiastic about plantation expansion, due to the US$2 billion it derives annually from taxes at the national level alone (Byerlee 2016:4), and further taxes and fees collected at provincial and district levels. In addition, government officials, brokers and many other parties profit from plantations by extracting money through a host of illicit means, beginning with the bribes corporations pay to obtain site location permits, which are liberally issued around election times as politicians seek to finance expensive campaigns.

In view of the immense wealth that large rural enterprises such as plantations and mines generate, it is not surprising that people living in or around these enterprises seek to capture rent, which I define as unearned wealth gained by the exercise of power. The classic example of rent capture is the installation of a chain across a river which adds no value to passing boats, but enables the master of the chain to extract a toll. Yet rent-seeking is too mild a term for the modes of predation we encountered in the plantations we studied, dubbed a "mafia system" by local observers. Like the similar (and linked) "mafia systems" that operate in Indonesia's judiciary, public works departments, schools, parliamentary committees, and other branches of government, the mafia system of a plantation is a system without a mafia, as there is no controlling family, and there is no boundary separating members from non-members.

Use of the term "mafia" in Indonesia does not refer to rural brokers and enforcers working for absentee landlords, as it did in the Sicilian original, nor to a criminal network or gang, vigilante group, or armed and uniformed militia - forms that are well established in Indonesian cities, but run under different names. Nor, finally, does mafia refer to corrupt individuals who can be isolated and punished, or rogue companies that fail to obey the law. A "mafia system" denotes, rather, an extended, densely networked, predatory system in which everyone in a plantation zone must participate in order get somewhere, or simply to survive. Predation means plunder; it also means consuming weaker animals. Hence anyone who does not become mafia - become both defensive and predatory - is simply prey. In this vein, plantation managers and supervisors plunder the wages due to their subordinates; workers, government officials, and many others also attempt to plunder plantation wealth.

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7 See Hawkins, Chen, and Wigglesworth (2016)
8 For a full account of the link between plantation licenses and election financing see https://thegreckoproject.org/the-making-of-a-palm-oil-fiefdom-7e1014e8c342. See also Lund (2017); Sirait (2009); Savitri (2015) and more generally Barbier (2012).
9 For accounts of everyday Indonesian state functioning and the "off budget" economy see Aspinall and van Klinken (2011); van Klinken and Barker (2009); Baker (2015).
10 See Watts (2016).
Researchers have long recognized problems of rent-seeking in and around rural mines and plantations. My study adds to these observations in two ways. First, building upon the insights of local observers, I will show that the predatory rent-seeking we encountered in the plantations we studied is not an aberrant version of Indonesia's plantation system: it is a routine component of that system, entrenched just as firmly as plantation roads. This is a bold claim that I cannot back up with numbers nor with comparative ethnographic work. It is based, in part, on my close-up study of how the predatory system works within and around the material infrastructure of roads and mills, and through the paper infrastructure of lists, accounts, laws, and regulations, which present standard (routine, built-in) choke points for the capture of rent. It is also based on the unexceptional character of the plantations we studied: they had not drawn attention in the media or among activists for corruption or abuse; more significantly, participants in "the system" treated it as normal, as just the way things are, no worse in these plantations than in others they knew from previous experience. "The system" was also very familiar to my co-researcher Semedi, who grew up on a century-old tea plantation in highland Java and has carried out both historical and ethnographic research there.

Second, I will show how predatory tendencies are intensified as plantations multiply and expand, turning plantation saturated districts into distinct kinds of space, which I call "plantation zones." In these zones, it is not just crucial livelihood resources that are monopolized by plantations, law and government are also colonized by, and folded into, the plantation system. Again, the point is not new. In colonial Sumatra where plantations expanded between 1870 and 1942 to cover a million hectares of almost-continuous space, colonial land, labour and criminal law, policing, and government were officially subordinated to, and/or effectively subverted by, plantation logics.12 Similarly, slave plantations in the Americas were buttressed by modes of racial rule that pervaded all social and political institutions. As Edgar Thompson observed, a plantation does not stand alone; it "survives only by generating and controlling a system of institutions around itself" (1959:26). This point is important because today, as Indonesia sets out to expand its plantation area exponentially, proponents of good governance, certification, standards, and corporate social responsibility imagine plantations as distinct and bounded spaces that can, in fact, stand alone. According to this vision, plantations are integrated in the surrounding economic system, but politically and legally they are distinct. Hence model plantations can be law-abiding, rule bound, and immune from incursion by the predatory political environment that surrounds them. Conversely, in this imagined world, law and governance stand firmly outside plantations to manage and monitor them, and correct them should they err.13 Together, righteous corporations, governments and

13 Only 10% of Indonesia's palm oil is certified, and the legitimacy of certification is challenged by critics who have shown that certified plantations run by major multinationals fall short on
other stakeholders can replace "bad" palm oil with "good."\textsuperscript{14} I cannot generalize for all plantation contexts but in relation to Indonesia, these imaginings are based on a flawed understanding of how plantations work.

My argument is that Indonesia’s plantations are not just in need of a governance upgrade; nor are they problematic only when guilty of the egregious rights abuses that critics rightly highlight.\textsuperscript{15} Indonesia’s plantations are \textit{routinely} violent because of the forms of life they destroy, the resources they monopolize, the futures they preclude, and the set of material, social and political relations they enable and fix in place. Since the violence is built-in, and intensifies as plantations multiply and expand, it is well-nigh impossible to reverse engineer or retrofit plantations. Hence I fear for the wellbeing of millions of Indonesians condemned to live in plantation zones now and in future.

To support the arguments I have just outlined, my analysis proceeds as follows. First I describe plantations as imagined in plantation plans; then I explore how the "mafia system" operates in practice, building on the insights of local observers. Next I show how law, government, livelihoods and the scope for protest action are progressively subordinated to plantation logics as zones become saturated and everyone is locked in. My conclusion returns to the challenge of regulation, and restates my core argument: violence is built in to Indonesia's plantation zones. They cannot be redeemed, and should not be expanded.

\textit{Plantation Plans}

Plantations in Indonesia are intended to do much more than generate profit. They are presented by investors and government officials as a means to bring about the total material, social and political transformation of rural life. More specifically, they are intended to transform so-called underutilized land, held by millions of villagers under customary forms of tenure, into spaces of productivity in which existing land uses (e.g. subsistence food production, standards related to land, labor and environment. See Milieudefensie, Lembaga Gemawan, and KONTAK Rakyat Borneo (2007); Colchester, Jiwan, and Kleden (2014). The challenges of regulation-through-certification in the context of Indonesia’s authoritarian political climate and fragmented legal regime are discussed in McCarthy and Zen (2010); McCarthy (2011, 2012); Pye (2016).

\textsuperscript{14} See the website of the Roundtable on Sustainable Palm Oil, and its good/bad palmoil campaign: http://www.rspo.org/about/goodbadpalmoil

\textsuperscript{15} Negative social and ecological impacts of Indonesia’s oil palm plantations, problematic land acquisition, labour and human rights violations and the ineffectiveness of legal remedies are reported in Sirait (2009); Wakker (2005); Li (2017a); Marti (2008); Obidzinski et al. (2012); Colchester and Chao (2013); Siagian et al. (2011); Dove (2011); https://thegeckoproject.org/the-making-of-a-palm-oil-fiefdom-7e1014e8c342.
low density rubber) and villagers' fluid, adaptive ways of living will be replaced by improved, modern versions.\textsuperscript{16}

On the material plain, plantations begin with the production of a \textit{tabula rasa}. Bulldozers (and sometimes fire) remove all tree cover, carve terraces into hillsides, and obliterate signs of former land use. The landscape transformation is deep, massive, and permanent. It is impossible for plantation space to revert to the \textit{status quo ante}, and to my knowledge, no one has tried to convert an established plantation into something else. After twenty years, palms are injected with the herbicide Roundup to kill them, so a new generation of palms can be planted underneath. The dying palms, 20 meters tall, look like giant bats, with blackened fronds drooping down like wings. Well fertilized palms are made to produce intensively, as disciplined components of an industrial machine. Pesticides take care of infestations and in Indonesia and Malaysia, where the crop has been cultivated intensively for almost a century, surrounding villages suffer from the pollution of their water sources by mill effluent and many other kinds of ecological damage, but there is no indication that the plantations themselves are at imminent risk of ecological collapse.

Material transformation extends to human settlements, as plantation concessions are seldom empty of prior habitation. A few selected villages that fall within the boundaries may be "enclaved" (left intact with a minimal area of farmland), but smaller hamlets, rice fields, rubber and mango trees, and grave sites are destroyed. The new built forms are overwhelmingly linear: plantation roads are laid out in straight lines, carving plantations into regular blocks. The roads have no signposts, and no names, merely numbers written in code. Social relations are deliberately thinned out. Blocks of worker housing are isolated from each other, tucked away in the middle of the sea of palms. They too are numbered, not named, and they are difficult for a visitor to find. Overall, oil palm plantations are eerily empty of people: they employ only one worker per 6-8 hectares (Byerlee et al. 2016:5), so a person needing to ask for directions is unlikely to find anyone about.

Resident plantation workers are usually migrants from other Indonesian islands. Managers prefer migrants, as they lack kin ties or ethnic affiliations with the surrounding population, making them ideal subjects for plantation discipline. On some plantations workers line up in rows for morning roll call. Relations among workers are governed by the hierarchy of their job descriptions not only during their hours of work, but also at social events and in everyday interactions. Plantations have jurisdiction over workers' conduct, and small misdemeanors are handled "in house." Workers are nominally under the authority of the headman of the village on whose territory the plantation is located, but many workers have never met the headman.

\textsuperscript{16} For expressions of this vision by industry promoters see World Growth (2011) and Indonesia Palm Oil Advocacy Team (2010). For critiques see Scott (1998); Dove (2011).
nor do they participate in village affairs. The head of their plantation block carries out many of the headman's official functions. Managers present this practice as a matter of convenience since on a large plantation, the nearest village office may be tens of kilometers away; it also intensifies the isolation of workers from the normal apparatus of rural citizenship.

Many oil palm plantations extend beyond the core plantation area, with its paid workforce, to include out-grower schemes in which individual households are contracted to manage plots that have been planted by the company. The out-grower areas are also laid out in monocropped blocks on a linear grid; administratively, the blocks are divided into production units of 500 ha, subdivided into 50 ha blocks, and further divided into the 2 ha plots to which individual households are assigned. Out-grower scheme members are tied to a schedule governed by the plantation management: members of each 50 ha block (called a farmers’ group), must harvest their assigned plot on a fixed day every two weeks, and carry their fruit to the roadside ready for pick up by company trucks, headed for the company mill. Payment for fruit, and the deduction of costs for transportation, road maintenance, fertilizers and credit are handled by out-grower "co-operatives" that are set up by the plantations to serve this intermediary function.

Out-growers do not own their plots, nor are they permitted to sell fruit outside the co-operatives, until they have repaid the credit for land development. This can take more than a decade, depending on the price. If there is a housing settlement attached to an out-grower scheme, the houses are identical, and lined up in rows. Residents may be transmigrants imported from more crowded islands to participate in oil palm schemes, or locals who have given up some of their land as the price of entry. Houses are allocated by lottery, so residents cannot choose to live with kin and former neighbours, or among people of the same ethnic and religious group. As with the use of migrant plantation workers, social dislocation is part of the plan: moving people disables old forms of life and cuts off "unnecessary" attachments in order to replace them with new ones that favour standardization and compliance. The tyranny of infrastructure is palpable in this regard: if there are old settlements in the area, plantation roads typically by-pass them, leaving them orphaned on the plantation periphery. Even the new, planned settlements may not be linked together: all roads lead to the mill.

For plantation promoters, the straight lines of plantation houses and roads, and neatly terraced contours are aesthetically pleasing. They index technical mastery, a civilizing mission effectively imposed on people and space. They are declarations of a kind of modernity governed by order, productivity, and profit, sometimes tinged with ideas of nation building and patriotic pride. Inside a plantation zone, however, the order is quite different from the one that planners imagine.

*The "Mafia System*
A farmer who had joined a state-backed oil palm out-grower scheme run by a private company in our research site in West Kalimantan explained the "mafia system" to me as follows:

I will take you from bottom to top, starting with the farm [oil palm out-grower plot]. The fruit stem should be 2 cm, but the farmer keeps it long, to increase the weight. The farmer is already mafia. Then he adds in fruit that is dried up, or rotten. That is mafia. Now let's go to the farmer group. The group has a head, a secretary, a treasurer. The scales they use are wrong [when they weigh the fruit at the roadside], and some fruit goes missing on the way to the mill. That is mafia. Moving now to the co-operative. The co-op leaders collect fees from members to fix up the roads, but they never let members check the accounts. They say they paid the bulldozer for seven hours but it only worked for four hours, so they kept the money. Next, to the mill. I experimented with this. Even if everything is correct, they say one palm fruit in ten is below quality, so they won't pay for the bad ones. I say - then give me back the bad ones but they refuse. That is mafia. Then when the price dropped in 1998, the company refused to buy our fruit, they said they had no money. We came from far [to join the out-grower scheme] so if we have a problem with the company, the government should step in to help resolve it. Some people manipulated the price and made a lot of money, but who suffered? It was the people. Finally the governor understood the problem and fined the company, but who got the money? It wasn't the farmers. It was the officials. Then we get to the government mafia. They misuse the funds they get for organizing independence day events, so when they have to close the gap, they get money from the company, and the company charges us for it by paying less for our fruit ...

Every "mafia" practice the farmer observed was shaped and enabled by the plantation's material infrastructure and official rules, which may serve different parties as choke points when they are enforced and/or when they are broken. Concretely, out-growers know how long the fruit stem should be, and they know that if they leave it too long, the mill will reject it. So they attempt to get the length just right - a bit over regulation length, to increase their incomes without being rejected. They also have a backup system: they pay the mill workers who inspect and grade the fruit. Mill workers may assign a low grade to a batch of fruit because the out-grower did not pay them, or because they are under pressure from mill managers to acquire fruit that does not enter the official books. The oil from this off-the-books, un-counted, unpaid fruit adds to the total yield, which makes the mill seem more efficient, and generates a legitimate, on-the-books bonus for the managers.

Predation among tied oil-palm out-growers is shaped by two types of infrastructure. One is the choke point represented by the practice of weighing the fruit at the roadside - a site at which a miss-written number nets an easy profit. The second is the socio-spatial plan that creates
farmer groups by bureaucratic fiat, and expects strangers to work together. Group members may not speak the same language. Whether or not actual cheating is taking place, it is always suspected. Co-ops have the same problem: they are bureaucratically created groups, and they seldom work as planned. Co-ops have a long history in Indonesia, beginning in colonial times when Dutch officials, impressed by what they thought were co-operative features of village life, tried to institutionalize them, and the nationalist Mohammed Hatta built on this theme. But the sad fact is that co-ops in Indonesia are chronically vulnerable to corruption and elite capture, and have a great deal of problems holding members “voluntarily.” They persist only when they are monopolies, as is the case with oil palm: they are installed by the corporations, and out-growers are tied to them. Out-growers by-pass the co-ops when they can, but their debt ties them to the co-op and to the corporation, at least until they get their promised land titles. Co-op leaders exploit their position to extract rent, and they have an ideal location: since the co-op is the official conduit for the company to pay farmers for their fruit, they can simply inflate the fees they deduct from farmers before paying them the balance.17

Farmers tied to out-grower schemes who are afflicted by washed out and impassable plantation roads experience the neglect of this crucial, material infrastructure as an assault. Sometimes they cannot get their fruit to market for months on end and must leave it to rot on the ground, where it generates no income to feed the family, and no way to pay off debts for farm inputs or consumer goods. The stakes are high: bad roads can ruin out-growers, and the anger and desperation can be intense. Out-growers blame the co-op leaders, who deduct fees but do not carry out road maintenance work. They also blame the plantation company, which makes calculated decisions about which roads are worth maintaining and which roads - typically at the less productive, "tail end" of out-grower schemes - will be abandoned. From the out-growers' perspective, a plantation that has a monopoly on their fruit but fails to provide adequate roads, or refuses to buy their fruit when the price drops, is mafia for sure.18

So far, I have described mafia practices in company-sponsored out-grower schemes. Workers on core plantation areas that are directly managed by the company are also part of the "mafia system," as victims (when superiors steal their pay), as beneficiaries (when they find ways to secure illicit shares of plantation wealth), and often as both at the same time. At the bottom of the hierarchy are casual women workers, usually landless women from villages nearby. They spread fertilizers on the palms, an extremely heavy task that requires them to carry seven 50kg containers of fertilizer from the roadside to the block where they are assigned, and then load it

17 On the history of co-ops see Henley (2012); problems with company-sponsored oil palm co-ops are ubiquitous and figure prominently in the critical literature cited earlier. See also the farmer forum SPKS (2016).
18 Similar "tail-ender" problems were reported in a coconut out-grower scheme in Java (White 1997).
into 18kg baskets to spread on nine palms. They have to walk back and forth, and up and down on hilly terrain. If there is wind, the fertilizer blows into their eyes. Their pay is very low, far lower than they think is reasonable for the heavy work they do. Hence they feel entitled to divert some of the plantation's wealth, by hiding fertilizer in a ditch, then collecting it later to sell to out-growers. The same practice also enables them to steal back, or recover, their control over time, since hiding some of their daily quota is quicker and less onerous than spreading it on the palms. The power that enables them to take these actions derives from the spatial expanse and configuration of the plantation which makes total surveillance impossible (guards cannot be everywhere all the time), and the collusive relations in which they participate. The women may collude among themselves, by serving as look-outs; or they may collude with their supervisors and guards who look the other way in return for a share. Supervisors also take advantage of the women's desperate need for work to claim 10% of their monthly pay, which they deduct directly from the pay packets they are entrusted to distribute. The women consider this the "normal" rate of predation, not because they think it is just, but because it is not idiosyncratic: in their evaluation, one supervisor’s practice of deducting 40% stood out for its greed and cruelty. Like the farmer who analysed the "mafia system" among oil palm out-growers, plantation workers can readily place the fee extracted by their supervisors in a series with the fees collected by other supervisors, and by other company workers, each with their own job description.

Moving up the worker hierarchy, field supervisors who oversee groups of harvesters or maintenance workers collude with office staff to cheat the company by claiming there are ten people in a work group, when the actual number is five. Field supervisors, office workers, drivers, and other workers on fixed monthly salaries (i.e. not on piece rate) steal time by returning home early, and many engage in absenteeism and moonlighting. Truck drivers pick up stolen fruit at night, in league with security guards and their superiors, and sell it back to the mill through the medium of the out-grower co-operatives. Plantation managers are "mafia" on a much grander scale, manipulating contracts and amassing huge fortunes. They channel some of the funds up, down and sideways to protect their position and keep the funds flowing. Hence all workers use their official positions in the plantation structure, and the powers their positions afford them, to capture illicit shares of plantation wealth. The rewards, however, are wildly unequal.

Workers at the lower end of the hierarchy told us explicitly that they saw their own theft of time and material as “weapons of the weak” (Scott 1985): legitimate action to defend themselves from plunder (supervisors stealing their pay) and from on-the-books but in the workers' view, excessive exploitation by the company. As one seasoned woman worker put it, "if we're not smart about it, the company will tire us out." The worker was responding to an attempt by the manager to tighten rules and surveillance, a measure he had taken on
instruction from the owner who was trying to figure out why his plantation was running at a loss. Workers at all levels were subjected to increased surveillance but the worst-paid workers felt the brunt most severely, as they were more dependent on illicit means to make up for their very low pay: "The rules are tighter, wages are tighter. We cannot get ahead ..." Whatever its justification or its target (fellow workers or the company), the effect of worker theft was to further entrench predation as an integral part of plantation life.

To recap my argument thus far: it is not surprising that plantations that set out to be rational, rule-governed, "total institutions" are actively adapted by participants. As Erving Goffman discovered with his pioneering ethnographic work inside a mental hospital, institutions that set out to be total could not function without multiple "secondary adjustments," which he defined as "practices that do not directly challenge staff but allow inmates to obtain forbidden satisfactions or to obtain permitted ones by forbidden means" (1961:54). These could be called "unofficial" practices, though as Goffman points out, the definition is a slippery one, as some adjustments may become so well established that they have the character of "perquisites," combining the qualities of being neither openly demanded nor openly questioned" (1961:191). These "adjustments," which become more stable as they are collectively sustained, form what Goffman calls "the under life of the institution, being to a social establishment what an underworld is to a city" (1961:1999). But in Goffman's account, the "adjustments" are benign: they enable the hospital to run more smoothly than it would if everyone was to "work-to-rule;" all parties benefit. In a plantation, in contrast, the "adjustments" are predatory: they have the purpose of capturing rent, a share of plantation wealth above and beyond that which is legally due. Predation, I argue, is built in: it is hard to picture a plantation which either a) operates as a rational-legal system in which all rules are obeyed, without adjustment or b) the adjustments benefit everyone equally, and do not involve the use of power by one party to capture rent from another. The most precarious actors in this system - casual workers and "tail end" out-growers - gain the least. To defend themselves and improve their meagre returns, they too participate in and sustain the "mafia system" local observers described.

No Outside

My focus so far has been on the predatory dynamics internal to plantations, which are built into the infrastructure and form part of the underlying framework. Although I would expect the style of predation to be similar across different national contexts, since it is embedded in the standard material and administrative infrastructure of a plantation, the degree is no doubt

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19 I describe the situation of different groups of workers under changing surveillance regimes more fully in Li (2017b). Rates of pay below the official minimum wage, and well below the level needed for adequate subsistence, are widely reported in Indonesia's plantations. See Marti (2008), Sinaga (2013), and Siagian et al (2011).
shaped by the surrounding spatial, economic and institutional environment. Some environments may intensify predatory tendencies, while others curb or mitigate them. In Indonesia, the two dimensions of infrastructural violence I have examined thus far - the subordination of people, species and space to production goals, and pervasive predation - join up with two further dimensions: the monopoly of livelihood resources, as plantations expand to take up all the space; and the subordination of law and government to plantation logics. Taken together, the outcome is to leave people who experience the violence of this infrastructure with no "outside" to turn to for recourse. Indeed in Indonesia's saturated plantation zones, the very distinction between a plantation's inside and its outside becomes problematic.

Although Goffman described hospitals as "total institutions," he noted that a hospital is spatially delimited by its buildings and compound; it is not expected to meet all the economic needs of its patients or staff; and institutionally, its jurisdiction is limited. Law and citizenship are external to a hospital, and can be brought to bear to correct abuses within. Mine sites, company towns, and export processing zones are spatially more expansive than hospitals. Internally, they have distinct sets of rules, but typically they too are enclaves in a sea of "normal" towns and villages where other forms of economy thrive, and law and citizenship are not wholly compromised by corporate presence. Their boundaries tend to be porous: people move in and out of these zones daily, yet the "outside" remains distinct. Plantations have a different spatial, economic and political dynamic.

On the spatial front, a single oil palm plantation can be enormous: some extend for tens of thousands of hectares in a continuous block. For resident workers, as I noted earlier, the plantation may indeed be a distinct space, an enclave with firm boundaries, beyond which lie "ordinary villages" they seldom enter. But from the perspective of villagers in plantation-saturated zones, the spatial dynamics are reversed: there it is the residual nooks and crannies between plantations that become the enclaves, or old villages that were officially "enclaved" or excised from a plantation concession to form isolated islands adrift in a sea of palms. Residents of these enclaves are spatially encompassed by plantations but outside their legal jurisdiction. They are presumed to live "ordinary" village lives, yet every aspect of their lives is shaped by plantation presence.

Economically, the enclaves tucked within and between plantations are subordinated spaces in which former landholders and ex- or casual- workers eke out an impoverished existence. Residents lack land to farm, and the potential for developing a secondary economy based on proximity to a plantation is limited. Plantation workers whose housing blocks are far away buy their goods at a company store, or on monthly trips to the nearest town. As plantations switch

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20 On the porosity of boundaries and the ambiguous role of law in export processing zones see Cross (2010) and Campbell (2017).
increasingly to hiring migrant workers on a contract or casual basis, migrant workers leave their families in their home regions, so they spend little money locally and save as much as possible to remit. Specialized "services" such as gambling and prostitution bring some money into the local economy, but most of the profits accrue to village headmen and plantation managers who run these operations in cooperation with the police.

Plantations take no responsibility for the welfare of the residents of the enclaves. The vulnerability of casual women workers whose work spreading fertilizer I described earlier is a case in point. The plantations we studied did not hire the women's husbands in full-time plantation jobs, because managers preferred to hire migrants. So the men had to migrate out to find work in other districts. The women no longer had land to farm, but they stayed behind in the enclaves in the attempt to anchor their families, sustain valued social ties, and keep their children in school. Since the enclaves were full of women in the same situation, they had to compete for scarce plantation jobs, and suffer low pay and dangerous work conditions. Everything about the lives of their families was shaped by the presence of the surrounding plantations, their spatial arrangements and hiring practices; yet the plantations could exclude them at will, or simply overlook them. Put differently, they were outside the caring provisions of a plantation (i.e. without access to the jobs, housing, health care or pensions that plantations still provide for their privileged, permanent i.e. non-casual workers); yet they were caught firmly in the plantations' embrace.

Institutionally, government and the law should stand outside plantations, as sites from which plantations can be monitored, and grievances addressed. Instead, government and law are brought inside, shaped by and absorbed into the plantation complex. The farmer I quoted earlier included government officials in his analysis of the bottom-to-top "mafia system" for good reason. In many parts of Indonesia, the move to bring government "inside" plantations is explicitly laid out in district regulations: each administrative level (district, sub-district, and village) has an officially appointed "coordination team" tasked with smoothing the way for a plantation to do its work. The teams include the relevant civilian authority (e.g. sub-district head), the "customary chief" if there is one, and the heads of the police force and army at the corresponding level. The companies pay team members a monthly honorarium as a retainer, and make additional payments according to workload e.g. if team members are called upon to

21 On the increasing use of casual and subcontracted labour, which is legal in Indonesia, see Li (2017b) and references therein.

help resolve a dispute.\textsuperscript{23} With one foot firmly inside the plantation system, these officials cannot be neutral brokers, as workers and villagers know full well.

Alongside the formal relationship between the plantation and government officials, there is a parallel system of rent capture which is entwined around the formal system in quite brazen ways. Plantations pay a "holiday bonus" to a large number of officials during religious festivals. Requests arrive in the form of a written proposal on official letterhead, listing the names of staff members in the relevant unit (e.g. police, army, agriculture department, labour bureau, environment inspection office) with suggested bonus amounts. Companies also respond to continuous, \textit{ad hoc} demands for cash. One staff member in our research site described his job in the plantation office as "the envelope guy" (\textit{tukan amplop}): his task was to stuff cash into envelopes to hand to government officials, journalists, non-governmental organization (NGO) workers, and anyone else who visited the plantation, and asked for "money for gas." His normal envelope limit was one million rupiah (US$73), but he had occasionally been instructed to draw cash for larger pay-offs in sums equivalent to US$1-2,000. When he asked his superiors how he should enter these amounts on the company accounts, they told him to list them as "maintenance of infrastructure." This is a category of expenditure that is always plausible, because hundreds of kilometers of plantation roads need constant work, but it is hard to track whether the materials were up to standard, or the work was actually done.

Election campaigns are expensive for plantations as aspiring politicians request funds or ask for the loan of trucks, hotel bookings, or the delivery of voters to polling booths. A plantation company's investment in material infrastructure makes it vulnerable to this particular form of predation. Unlike a "global" sweatshop that can be set up overnight in a basement and moved at will, a plantation company has planted its capital firmly in the ground. To limit their exposure to predation on a large scale, major (top twenty) corporations buy protection by entrenching senior officials and politicians on corporate boards, eroding the distinction between inside and outside at the top of the pyramid.\textsuperscript{24} Everyday extortion, however, is simply part of "the system." Even a corporation that aspires to run a clean operation and abide by all the rules cannot leave, so it must pay.

As law is brought inside the plantation system, it comes to act as a toll booth. Rules are not simply broken, they are repurposed as instruments of the predatory system. A proliferation of regulations increases plantations' exposure to extortion; it also enables plantation managers to argue that the law is unworkable or contradictory, so if they break some rules this is not their fault. Managers in the plantations we studied claimed that government officials, people professing to work in the public interest (including NGOs), or journalists who arrived waving

\textsuperscript{23} This system is well described in Sirait (2009).
\textsuperscript{24} See Varkkey (2012) and Cramb (2016).
documents and quoting the law were simply creating trouble in order to seek a bribe - hence
the steady stream of "envelopes" they had to fill. Managers, in short, saw the plantation as
prey. Conversely, a well-meaning sub-district official complained that he was unable to make
any of the plantation companies formally under his jurisdiction obey the law. He was
confronted everyday by villagers reporting serious grievances that he could not resolve. "If I talk
to the companies about law, about regulations, they say they don't know about the law. They
think the land is theirs, they can do as they wish. The top managers never meet with me, they
just send their public relations officer... We never get any replies, no decisions, no
clarifications." The companies were, in short, behaving as predators - using their power to take
what they could. He could not seek assistance from his superior, the district head, or from the
chief of police, because they were firmly allied with (and paid by) the plantations. If he
attempted to stand with the people, with the law, and outside the plantation zone's extended
"mafia system," he would have few resources to share with superiors and subordinates who
rely upon these irregular payments to augment meager wages; he would be socially and
professionally isolated; and most likely, he would be replaced.25

Workers face similar challenges in making the law work for them. When I asked a group of
workers on a state plantation whether they had considered going to the district labour office to
make a complaint about the plantation's failure to pay them what it legally owed, they made
three observations: first, they did not know where the labour office was and they had no
network connecting them to it; second, they assumed that any government office - including
the labour office - would side with the plantation; and third, they felt they could not point the
finger at managers’ deficiencies when they too had broken rules, notably by cutting short the
work day to return home early. As for other participants in "the system," for these workers
there was no outside - no uncompromised position from which they could launch a robust
challenge.

For particular, violent reasons, independent unions capable of standing outside the "mafia
system" and helping workers to mobilize in horizontal alliances are all-but absent in Indonesia's
plantation zone.26 Indonesian plantation workers began to unionize in the 1930s, and by the
1950s, plantation unions were reported to have around a million paid-up members. President
Sukarno undermined them in 1957 when he granted the military a leading role in managing
nationalized foreign plantations. His goals were to buy military loyalty, and to protect a vital
stream of hard currency. But the military outmanoeuvred Sukarno, and took matters into its
own hands. In 1965, plantation and peasant union members were heavily targeted in the

25 These problems are pervasive in Indonesian government agencies. See Aspinall and van
26 Attempts to rebuild independent unions in Sumatra's plantation belt face severe challenges.
See Heupner (2016); Sinaga (2013); Siagian et al. (2011).
military-led massacre of around half a million people. On the Indonesian island of Sumatra, this massacre still haunts the landscape, producing the ongoing culture of impunity strikingly captured in Joshua Oppenheimer's 2014 film, The Look of Silence.²⁷

Fifty years after the 1965 violence, plantations workers in Kalimantan with whom I discussed the pros and cons of forming unions were not intimidated by the memory of what happened in Sumatra, they simply knew nothing about it. In their experience, the tight link between government, investors, plantation managers, military and police has always been thus. The world they know is one in which savvy workers must look for ways to protect and improve their own positions, and collude with others to that end, but there is no prospect or even concept of structural change. If independent unions were to form, they too would be subject to the predatory pressures I have described: like the sub-district official seeking to serve the people, and the institutions of law and government more broadly, they would find it extremely difficult to remain "outside."

Fixed

Infrastructural violence at its most basic is already present in a plantation's overwhelming spatial extent and material fixity. The radical transformation of the landscape makes it difficult to repurpose the space. Everyone in a plantation zone has to reckon with the fact that, from one generation to the next, the plantations will still be there. More than contracts, licences, or maps; more than the guard house at the plantation gate, or the armed police at the mill; it is the material fixity of the plantation that disciplines surrounding villagers. However much they may dispute or resent the presence of the plantation, villagers know it will not go away. A useful contrast here is with the extraction of timber. Logging also features bulldozers flattening forests, but once the logging company has taken the valuable timber away, the logging roads tend to disintegrate, and villagers reclaim the land for other purposes. Villagers resent the theft and destruction of their resources, but at least timber extraction does not fix anything permanent in place. It is the arrival of a plantation onto village forest and farmland that permanently removes the land from village control and excludes former landholders from future use.

Since villagers, oil palm out-growers, and plantation workers cannot remove a plantation or change the character of their relation to it in any fundamental way, their forms of resistance are deeply circumscribed. Workers and out-growers who see themselves as robbed, or simply underpaid, attempt to take hold of additional shares of plantation wealth they think are properly due to them; displaced landholders steal fruit to compensate themselves for the land they lost. Many actors at all levels of the plantation use whatever powers they have in order to

²⁷ On the fate of the plantation union in 1965 see White (2016) and Stoler (1995).
take what they can. Regardless of the motive or justification, the outcome of these actions is to reinforce the predatory system. Ironically, theft is also used by plantations to justify their own practices: since colonial times plantation managers have blamed low on-the-books profit on the laziness and criminality of workers and villagers. These "problems" appear repeatedly in the archives as the rationale for harsh discipline, low wages, and intense surveillance. In other words, workers and surrounding villagers pay a high price for the limited off-the-books wealth they manage to extract from a plantation - often far less than the wealth they lose when their customary land is appropriated, or alternative forms of work and livelihood are foreclosed. In contrast plantation owners, managers, government officials and politicians extract sufficient flows of licit and illicit revenue from plantations to encourage their expansion on a massive scale.

Periodically, plantation workers, out-growers or villagers do engage in more overt, collective protest action, but this too is quickly absorbed into the predatory system. The typical protest format is for a disgruntled group to blockade the mill, which is the choke point of a plantation and the place where protesters have most leverage. It is a site where the physical channel narrows, as the mill usually has only one road leading to it, and one gate. It is also a temporal funnel, as the fruit must be milled within 48 hours of harvesting, or the oil content drops. The need to channel harvested fruit quickly through a fixed grid might seem to offer protest leverage comparable to the infrastructure surrounding coal, which has sometimes enabled unionized miners and railwaymen working together to achieve significant gains. But protest in Indonesia's plantation zone does not work that way. Managers anxious to settle a dispute soon call in the leaders of the blockade to offer them an *ad hoc* settlement (some money, a promise to resolve grievances, a small grant from the "corporate social responsibility" fund), only to have the cycle repeat a few months later. Managers refer to this mode of handling recurrent protests as "applying panadol" (*dipanadol*). It is a temporary fix that cools temperatures and makes a headache go away, but leaves the underlying condition unchanged. Managers can also claim "operational expenses" for their trouble. Hence for both protesters and managers, collective protests may be transformed into another source of rent.

Villagers, out-growers and workers alert to the way blockades become sites of predation often suspect protest leaders of being double agents, people who claim to be working to get grievances addressed, but are actually "company men." Outsiders are really insiders; protest is really extortion, another attempt to gain a share of plantation wealth. Indeed, the creation of

28 See Breman (1989, 2015); Li (2017); Li, Pelletier, and Sangadji (2016); Stoler (1995).
29 See Mitchell (2009:405-8).
30 Recurrent protests and short term, ad hoc fixes have been described in oil palm plantation zones in other parts of Indonesia (Colchester and Chao 2013), and also in relation to mining (Welker 2009) and forestry (McCarthy 2009).
such double agents, and the sowing of mistrust among villagers, is a routine part of plantation strategy. A few years before plantation corporations begin the process of land acquisition in a new area, they send out scouts to identify customary and other charismatic leaders who may oppose their arrival, and make arrangements to hire them as company liaison officers. The job of liaison officers is to persuade kin and neighbours of the benefits the plantation will bring, and where that fails, to issue a threat: the company is coming anyway. To oppose its arrival is not to stop it, but simply to exclude themselves from a share in the future flow of wealth.\textsuperscript{31} In the plantation zone we studied, the social dislocation that resulted from the plantations' land acquisition strategy was severe and enduring. It undermined villagers' confidence in their leaders, weakened customary institutions, created factions, and fractured kin relations. Far from resolving over time, the social disarray had intensified over the decades as initial promises of plantation-based prosperity fell short. Villagers who ended up impoverished turned their anger not just on the plantations, but on fellow villagers, especially those who had been involved in signing away land that did not belong to them, or accepting payments to promote company interests. The ambiguity of the "double agent" was also sustained well beyond the period of land acquisition: the same men who held official positions as company liaison officers also led protests against the plantations, demanding funds and extracting promises that grievances would be redressed. Several candidates for election to the position of village head ran on platforms of seeking a better deal from the companies, but villagers said it was difficult to know for certain where they stood. There were rumours that the companies paid to fix elections.\textsuperscript{32}

Migrant out-growers tied to the company through co-ops faced a similar problem: they did not trust the co-op leaders, who were positioned ambiguously as both elected representatives and as company men. Lack of trust was enduring and it, too, had far reaching effects since planners had designed the co-ops to be more than vehicles for the flow of funds: they were supposed to become the primary governance units for each out-grower settlement block, binding 250 ethnically-diverse households together and advancing their prosperity as a group. The farmers groups assigned to manage each 50 ha block were also supposed to become a real social groups, in which members co-operated to maintain and harvest their plots. But the new, designed social relations did not take hold. Instead, social relations among co-op and farmers members remained thin, and often tense and predatory. The thicker social relations and functional groups that did emerge within the multi-ethnic settlements were mono-ethnic. Groups mobilized for social and religious events (prayers, feasts, births, weddings, funerals),

\textsuperscript{31} This tactic has been widely reported. See Sirait (2009); Semedi and Bakker (2014).

\textsuperscript{32} On ambiguity and predatory doubling see Roitman (2006); Mbembe (2001); Bakker (2015); Baker (2015).
and also for the purpose of taking control of the co-op, or engaging in other forms of predation and defense.

Since the infra-structure, the "basic underlying underlying framework" of a plantation zone is fixed, the only recourse for an individual unwilling to accept the built-in social, political and economic violence is to exit the zone entirely. The migrant out-grower who described the alienated, predatory, "mafia system" as he had experienced it over two decades living in the Kalimantan interior was appalled by it, but he could not figure out a way to change it. He was intimidated by thugs working for the head of the co-op, who ransacked his oil palm grove and threatened to kill him. He felt his only option was to quit and return to his island of origin, which he did. Neighbours suffering similar intimidation noted that the nearest police station was quite far away from their assigned housing block: "We are really squeezed here, the government has no reach." Even if the police came, the farmers noted, the police might back the other side. Faced with these odds, their tactic was to tolerate abuse, and avoid attracting attention: "If you are in a goat pen, you had better bleat," one farmer observed. These were migrant farmers being intimidated by local strongmen seeking to coerce them into running off, and selling up their out-grower plots and any other plots they had managed to purchase, but there were other configurations.

Overall, in the plantation zone we studied there was a pervasive sense of threat. Few of the migrant workers or migrant out-growers planned to stay for good. Those who had been able to use their positions in the plantation system to make good money were able to buy their way out: they educated their children in anticipation of office jobs, preferably in town; they also bought land alongside major roads where they would be less isolated, socially and spatially, and free from the predations of the plantation zone. They planned to plant oil palm, but on their own terms. In contrast, impoverished former landholders who had lost both their land and territorial control when plantations arrived had no way out: they were locked together with the plantations in a relation of antagonistic stasis. They lacked the funds to educate their children, or buy replacement land. Our surveys confirmed that young people who had no prospect of becoming independent smallholders had not been able to leave the crowded enclaves to find better prospects elsewhere: most of them were still there. Like their parents, they were fixated on the plantations; caught between anger at their loss, and determination to find a way to capture a share of the riches generated by oil palm. Although it was decades since the plantations that took over their land had been established, they had no plan to give up on their

See Li (2017a). The situation of young people in Malaysia is quite different: they may have no interest in, or need for, plantation work, since the national economy is diverse and increasingly urban. In Malaysia it is migrant Indonesians who do most of the plantation work (Cramb and McCarthy 2016; Cramb 2007).
claims. Indeed their desperation had intensified, as more plantations had taken over the surrounding area, closing down the land frontier and monopolizing still more space.

Plantation managers interpreted the refusal of former landholders to accept the finality of the plantation presence and drop their claims as evidence of their racialized backwardness. This was racism among Indonesians, as plantation managers (mainly Bataks, from northern Sumatra) held the local Malay and Dayak population in low regard. Technical mastery was part of the managers' sense of superiority. As one manager observed, "when we started this plantation it was all forest here, the locals had not built anything; we are the ones who created this." Patronizing scorn was another manifestation, as we learned from the boast of a company public relations officer: "This Dayak guy came to my office, claiming that 100 hectares of the plantation belonged to his family. He asked for a lot of hectares and palms as compensation. I asked him why he was making the claim now, not in 1981? He came back several times. I gave him tuak (Dayak rice wine) to drink. Others came too. After a while, they started to say I was good man because I gave them tuak, and they forgot about their claims. It is an art to manage them..."

The public relations officer handing out tuak omitted to mention that resisting land acquisition under Suharto's New Order had been impossible, as villagers were intimidated and bulldozers arrived suddenly, sometimes at night, accompanied by soldiers and government officials. Plantation managers we interviewed regretted the loss of clarity New Order rule once supplied: in those days, plantations were right, villagers were wrong. Since the ouster of President Suharto in 1998 and the onset of "reform," villagers had become bolder: "they say all this belongs to them. If there is any small problem they make demands or impose 'customary' fines and put up blockades." Recognizing the impasse, plantations hang tough. In the words of one manager, "if we want to be rolled-over, we might as well just lie down. But I am ready to fight. We are outsiders here and if we start losing it will just get worse, because they will think we are afraid." He had just returned from a district level meeting of plantation managers in which they shared information about their problems, namely blockaded mills, and theft of palm fruit. Like colonial officials in centuries past, these managers located the source of their problems outside

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34 Both plantations in our study had Batak managers. I provide data on workforce ethnic composition in Li (2015). The dominance of Batak managers, and the role of ethnic stereotypes in shaping relations between plantation managers, workers and surrounding villagers are discussed in Dove (1999, 2011).
35 The use of violence in land acquisition is still widely reported; land purchase is often coercive as well. Different modes of land acquisition, with different outcomes for farmers, are discussed in Rutten et al. (2017), Sirait (2009), and Rist et al (2010). A third of Indonesia's reported land conflicts concern plantations, and many of these conflicts are decades-old. See KPA (2016).
the plantation, in the surrounding villages where greedy, ignorant and ungrateful villagers failed to understand the benefit of living in a plantation zone.

Conclusion

In Indonesia, promises of good governance, respect for human rights, corporate social responsibility, and "sustainable palm oil" ring hollow in the context of the infrastructural violence I have described. The built infrastructure that obliterates previous forms of life, and the monopoly of livelihood resources that intensifies as plantations expand are violent enough. To this is added a built-in set of predatory relations that make mafia out of everyone, and the absorption of law and government into the plantation system that leaves all parties - from lowly workers to model corporations - obliged to defend themselves without formal means of recourse. Industry proponents stress the efforts they are making to correct deficiencies by means of regulations and standards, but I have shown that proliferating rules are self-defeating as they become further toll booths, choke points for the capture of plantation wealth.

Thus far, no program of corporate social responsibility involves returning land to customary landholders, or distributing more than token shares of corporate profit. No sustainability standards require corporations to stop expanding plantations, strengthen indigenous institutions, encourage independent unions, or help independent smallholders develop autonomous production on their own land. The effect of such standards is, rather, to render plantation expansion more acceptable by announcing the intention to correct the more egregious forms of abuse. Child labour, for example, and infringement on protected areas are singled out as evils to be prevented. But infrastructural violence of the kind I have described here is not of this especially evil kind. It is pervasive, routine, and built-in. It is nigh impossible to "reverse engineer" virtue into Indonesia's plantation zones. Heroic attempts at retrofit stumble on the material presence of thousands of hectares of corporate palm, and the violent political, social and economic relations that plantations enable, and fix in place.

More oil palm is coming to Indonesia. In addition to the 11 million hectares already planted, companies hold preliminary licenses for another 7 million hectares in so-called "land-banks," and government land surveys estimate that 25 million hectares are suitable for this crop (USDA 2010, 2013). As I noted at the outset, independent smallholders who are not tied to plantations can grow this crop successfully, so long as they have access to good planting material, roads, mills and credit. Although there are significant challenges, many studies have shown that the social, ecological and economic impacts of smallholder oil palm are much less damaging.36 The political relations are also completely distinct: independent smallholders living

36 See McCarthy (2010); Li (2017b); Li (2011); Feintrenie, Chong, and Levang (2010); Molenaar (2013); Rist, Feintrenie, and Levang (2010); Potter (2016).
in their own villages, farming on their own land, have access to the normal apparatus of rural citizenship which is flawed, but has far more diverse channels of organization, action and redress than those available in a zone dominated by large scale plantations. Yet these are precisely the reasons why independent smallholders receive very little support: an oil palm sector dominated by independent smallholders would cut off the income streams of many parties that currently benefit from plantation expansion, and vigorously promote it. It is not the technical superiority of plantations but their lucrative system of on-the-books profit and private predation that leads companies, investors and state officials to argue that only orderly, efficient plantations can meet global demand. My exposition of the infrastructural violence built into these "orderly, efficient plantations" is intended as a contribution to urgent, ongoing efforts to stop plantation expansion now.


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37 See Berenschot, Schulte Nordholt, and Bakker (2016) and Aspinall (2013).

38 See Cramb and McCarthy (2016) and Varkkey (2012).


KPA. Catatan Akhir Tahun: Liberalisasi agraria diperhebat, reforma agraria debelokkan.


USDA 2010 *Indonesia: Rising Global Demand Fuels Palm Oil Expansion*

USDA 2013 *Indonesia: Palm Oil Expansion Unaffected by Forest Moratorium*


